

Our vision	Delivering valued solutions for a growing Australian sugar industry				Our purpose	Undertaking targeted RD&E solutions for the sugar industry			
Our key focus areas	1. Optimally-adapted varieties, plant breeding and release	2. Soil health and nutrient management	3. Pest, disease and weed management	4. Farming systems and production management	5. Milling efficiency and technology	6. Product diversification and value addition	7. Knowledge and technology transfer and adoption	8. Capability development, attraction and retention	
Our objectives	<ul style="list-style-type: none"> World-class variety development. Enhanced variety breeding, selection and release. Collaborative, interdisciplinary and systems approach to RD&E. 	<ul style="list-style-type: none"> Understood and improved soil health issues. Understood impacts of on-farm practices on water quality. Improved methods and tools to enable, or improve, cane production on poor performing or marginal soils. 	<ul style="list-style-type: none"> Enhanced biosecurity capability. Minimised economic and environmental impacts of pests, diseases and weeds through targeted research. 	<ul style="list-style-type: none"> Research leading to the optimal use of inputs on-farm. Research on planting technologies, ratoonability, break-crop and fallow practices to optimise yields. Practical application of the value chain model to enhance grower, harvester and miller interfaces and improved adoption of harvesting best-practices. 	<ul style="list-style-type: none"> Review of logistics management to reduce operational costs and improve mill capacity utilisation. New or improved processes, technology and/or infrastructure to increase mill processing efficiency. Possible solutions to address quality issues. 	<ul style="list-style-type: none"> Ongoing research to identify and/or develop alternative products or uses for sugarcane and determine the basic requirements for adoption. Economic feasibility studies of identified industry by-products, their use and likely market viability. 	<ul style="list-style-type: none"> Coordinated extension that optimises innovation and adoption at the farm level and encourages research that meets the needs of the industry. Inclusion of extension mechanisms in research proposals. Enhanced communication and transfer tools to disseminate research findings to end-users and facilitate their uptake by growers and millers. Assessment of the uptake of developed technologies and evaluate the effectiveness of technology transfer tools. 	<ul style="list-style-type: none"> Review of current and future RD&E skills and capacity needs for the sugarcane industry. Development and retention of current industry participants, as well as attraction of new participants to the sugarcane industry. Fostered collaboration for cross-industry and cross-sectoral skill development, innovation and networks. 	
Our deliverables	<ul style="list-style-type: none"> Locally-adapted cane varieties. Enhanced collaboration with growers, millers and productivity services groups. Increased regional trials and releases. Earlier communication and dissemination of information, including variety selection tools. Diagnostic and advisory services. Research collaborations. 	<ul style="list-style-type: none"> Identification of soil health factors. This will include R&D covering crop nutrition; soil biology; soil fertility; regional soil factors; chemical utilisation; and reduction of soil pathogens and nematodes. Practices to reduce chemical inputs and nutrient losses. Review of Six Easy Steps™. Rapid soil screening technologies. 	<ul style="list-style-type: none"> Plant and molecular screening. Integrated pest and weed management systems. Pest and weed control strategies and technologies. Herbicide-resistant cane varieties. Alternative chemical treatments. Updated management dossiers on key exotic threats. 	<ul style="list-style-type: none"> Precision-agriculture techniques and resources. Best-practice information. Improved planting technology and crop establishment. Harvesting best-practice regional trials and demonstration. 	<ul style="list-style-type: none"> Optimised milling processes and technology. 	<ul style="list-style-type: none"> Industry supply chain analysis. Exploration of alternative processing options and products. Feasibility analysis of alternative products. 	<ul style="list-style-type: none"> Translational research approach. Collaborative extension. Enhanced research and technology extension. Multi-media extension. 	<ul style="list-style-type: none"> Industry RD&E skills and capability assessment. Scholarship program. Participative and collaborative partnerships. Succession planning. Performance management framework. 	
Our measures of success	<ul style="list-style-type: none"> 3 varieties which meet the above expectations released per 5-year period for each region. Percent production from new varieties (<7 years since release). Rate of genetic gain (tonnes of cane per hectare (TCH), commercial cane sugar (CCS), tonnes of sugar per hectare (TSH)). Weighted average disease ratings for varieties in each region. 	<ul style="list-style-type: none"> Soil health indicators developed for sustainable sugarcane production. Guidelines, mechanisms and/or varieties identified for increasing nutrient use-efficiency within plant and ratoon crops. Guidelines and mechanisms developed for minimising chemical and nutrient losses and understanding water quality. SIX EASY STEPS™ nutrient management program reviewed with improvements made where necessary. Guidelines for implementation of PA developed. 	<ul style="list-style-type: none"> Industry supported through effective pest, disease and weed diagnostic capabilities and awareness and training programs. Development and adoption of SRA-developed packages for integrated management of key pests, diseases and weeds. Weighted average disease ratings for varieties in each region. Up-to-date dossiers to support contingency plans to minimise threats and impacts of key exotics. Capability to provide entomology, pathology and weed expertise to meet the pest, disease and weed diagnostic and management needs of the industry. 	<ul style="list-style-type: none"> Methodology for more rapid and efficient bulking of sugarcane varieties. Adoption of a better sugarcane planting technology. Improved crop performance over longer cropping cycles. Better crop management under conditions of water stress (too much and too little). Adoption of PA technology and techniques. Adoption of harvesting best-practice. 	<ul style="list-style-type: none"> Adoption of improved or novel milling processes and technology. 	<ul style="list-style-type: none"> Sugar industry supply chain analysis completed. Identification of new opportunities in product diversification and innovation. 	<ul style="list-style-type: none"> Joint planning of research translation and extension programs with other stakeholders. Effective delivery of extension messages, as demonstrated through research uptake. Increased awareness of technological innovations, locally and internationally. Research outputs' key RD&E messages are promoted in a timely manner through various channels. Increased support for and participation in SRA delivery networks, events and extension programs. 	<ul style="list-style-type: none"> Published results of industry RD&E skills and capability assessment and recommended strategies in National Sugarcane Industry RD&E Strategy. SRA participation and investment in relevant collaborative and cross-sectoral RD&E programs. Increased availability of skilled industry personnel. SRA sponsored Young Industry Participants' Forum held annually. Development and uptake of new and existing knowledge transfer or training programs or resources. Scholarships awarded to current and future industry participants. 	
Industry benefits	<ul style="list-style-type: none"> Increased cane and sugar yields. Climate tolerant varieties. Pest and disease resistance. Reduced inputs. Improved ratoonability. Increased regional trials and releases. Faster varietal adoption. 	<ul style="list-style-type: none"> Improved soil health. Reduced impact of off-farm run-off. Improved production on marginal soils. Improved reputation and relationship with community and environmental groups. 	<ul style="list-style-type: none"> Enhanced capacity to deal with incursions of exotic pests, diseases and weeds. Minimised economic and environmental impacts. 	<ul style="list-style-type: none"> Adoption of agronomic and harvesting best-practices. Optimised yields. Optimised use of inputs. Reduced operational costs. 	<ul style="list-style-type: none"> Improved mill capacity utilisation. Improved mill processing efficiency. Improved quality. Optimised mill transport and logistics. 	<ul style="list-style-type: none"> Alternative products or uses for sugarcane. Economic feasibility of industry by-products. 	<ul style="list-style-type: none"> Skilled advisory sector that drives the adoption of new technology and practices. Improved collaboration and coordination of extension services. Improved communication, knowledge transfer and adoption. 	<ul style="list-style-type: none"> Attraction and retention of industry participants. Highly-skilled industry workforce. Cross-industry and cross-sectoral collaboration. Connected and respected. 	
Industry outcomes	Industry growth		Profitability		Economic viability		Sustainability		Diversification