

SOIL CRC

Performance through collaboration



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ABOUT THE SOIL CRC

The Cooperative Research Centre for High Performance Soils (Soil CRC) is the biggest collaborative soil research effort in Australia's history.

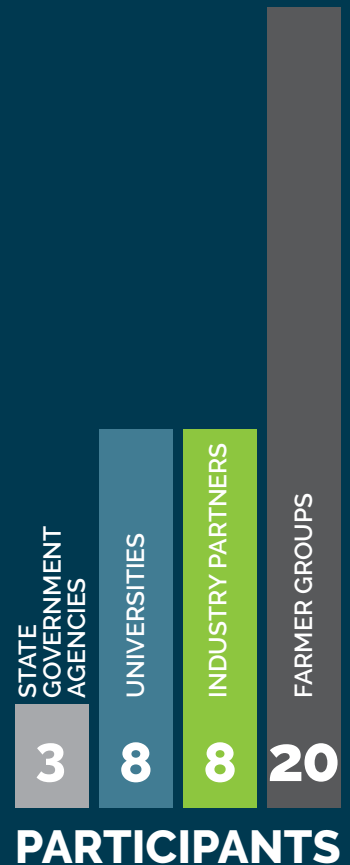
The Soil CRC was established in 2017 to give farmers the knowledge and tools they need to make decisions on extremely complex soil management issues.

It bridges the gap between soil science and farm management, bringing together scientists, industry and farmers to find

practical solutions for improving the performance and productivity of Australia's soil. This enables farmers to optimise their productivity, yield and profitability, and ensure the long-term sustainability of their farming businesses.

The profitability of Australian farmers can be increased by improving the productivity of their soil.

Through its soil research and innovation program, the Soil CRC will develop new solutions that will unlock the potential of Australia's agricultural sector.



2018 IN REVIEW



\$39.5 million
Commonwealth investment



\$127 million
cash and in-kind industry support



10
Years funding



6
staff employed



4
programs



12
projects approved



15
Milestones achieved

MAJOR PARTNERS



PARTNERS



ASSOCIATES



CHAIR'S REVIEW



The Soil CRC, announced in March 2017, was established in July of that year with funding for **10 years of \$39.5 million** from the Commonwealth and **\$127 million in cash and in-kind** from its participants.

With this level of investment, the Soil CRC represents the **largest soil-focussed research effort in Australia's history**.

Our **39 participants** range from small farmer groups to large government agencies and universities. The diversity of farming systems along with the geographical coverage of our farmer groups means this CRC is well represented across Australia.

From the beginning of the program, a feature of Cooperative Research Centres has been the involvement of all CRC participants not just in taking up the research outputs, but in helping choose the directions of the research and becoming engaged in the research process itself.

So it is with the Soil CRC.

The Soil CRC research program is shaped by these collaborations, which have identified a number of key barriers to improving soil performance and which strongly influenced the initial research program:

- 1.** Limited returns on investment in sustainable soil management
- 2.** Inability to measure soil characteristics and performance in a timely manner and at an appropriate scale
- 3.** Limited set of products to solve complex soil constraints
- 4.** Limited guidance on total and integrated solutions to soil-related issues for farms.

BEGINNINGS

In bringing the Soil CRC into being, I would like to acknowledge the enormous effort made by the bid team and interim Board, led by Malcolm Buckby, Kevin Hall, Diana Parsons and Ravi Naidu and our interim CEO, Professor Roger Swift. Likewise, the ongoing support provided by the University of Newcastle as host of the Soil CRC is greatly appreciated.

A Board of nine governs the CRC, with five of these being independent and four coming from participants. The Board members were chosen to ensure all the necessary skill-sets were present. It meets quarterly in-person and by teleconference between the quarterly meetings if it is necessary.

I would like to thank all Board members for their contributions and for their robust but constructive debate over the past 12-18 months (depending on when a Board member joined).

Likewise, two Board Committees – Audit and Risk Management Committee (ARMC) and Research and Adoption Committee (RAC) deserve special mention for their significant workload.

In September 2017, Dr Michael Crawford was appointed the Chief Executive Officer of the Soil CRC. In the 12 months or so that he has been with the CRC, Michael has brought sound judgment, a huge work ethic and a direct but collaborative style to the leadership of the organisation.

He lost no time in building a small but effective team at head office, in ensuring the necessary sign-offs on all participant agreements and in building the foundation for the next 10 years of activity.

Between these activities, he managed to visit the majority of participants, including all the major partners around Australia and New Zealand, to listen to their issues and expectations and to introduce the CRC. I was able to accompany him on a small number of these, which greatly improved my understanding of the challenges facing our farming communities.

We were very honoured when Major General the Honourable Michael Jeffery accepted our offer to be our Patron. He brings not only his incredible passion for soil health, but in his role as the National Soil Advocate, he is able to bring the issues of soil health to a wide audience.

FUTURE

The Soil CRC does not exist in a vacuum. There are other research agencies, other researchers and other farming groups that are addressing agricultural research questions which involve soil issues.

The Board and management of the Soil CRC will ensure that there is not duplication of effort or unnecessary competition – the key word is "collaboration".

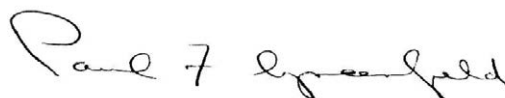
With a ten-year time horizon, but with end-users focussed on practical, sustainable outcomes, we believe the Soil CRC has a unique niche in the system. This uniqueness will be demonstrated in the specific CRC research programs and in its collaborative approach.

Having been involved with CRCs for 27 years, I am greatly encouraged by the start of the Soil CRC.

Over the last 12 months we have made steady progress towards meeting our milestone commitments to the Australian Government. Out of 90 milestones over the life of the CRC, we have already completed 15 with a further 33 currently underway.

More significantly, I see partnerships that did not exist before start to develop, farming groups from different sectors discuss common problems and genuine efforts at collaboration.

In conclusion, let me on behalf of the Board thank all our participants for their efforts and congratulate them on their achievements to date.



Dr Paul Greenfield AO FTSE
Chair Soil CRC

CHIEF EXECUTIVE OFFICER'S REPORT

Agriculture in Australia faces a very exciting future.

Agriculture in Australia faces a very exciting future. Demand for Australian produce is increasing, especially from expanding Asian export markets. The increasing use of digital technologies is also opening up new frontiers for farmers.

There are challenges from rising input costs and changing climates, but Australia's farming businesses are well placed to respond and reap the benefit of the new opportunities.

Integral to the future success and prosperity of the Australian agricultural sector is a sustainable, high performing soil resource.

Australian Government support for the CRC for High Performance Soils was announced in March 2017, and the CRC officially commenced operations in July.

The successful bid was the culmination of many years of hard work, persistence and vision, led by the University of Newcastle, and involving many contributors from across Australia.

The bid team are to be congratulated for communicating and implementing their vision so effectively such that it received the positive support of the Australian Government and so many prospective partners.

Successfully establishing a new organisation involving 39 participants from all states of Australia is a major achievement.

Bringing together the combined capacity and capabilities of eight universities, three state agencies, eight industry organisations and 20 farmer groups with a common focus of undertaking soil research to find practical solutions for Australia's underperforming soils, was clearly a significant accomplishment.

The Soil CRC has experienced an exciting and productive first year of operation. We have implemented partnership agreements with the Commonwealth and with all 39 participants, established sound governance arrangements through the Board and its committees, recruited a business team to support the administrative aspects of the Centre, and created a logo, branding, website and social media presence to create a broad public awareness of the CRC.

Most importantly, we commenced our research operations with the establishment of our **4 programs**:

1. Investing in high performance soils
2. Soil performance metrics
3. New products to increase fertility and function
4. Integrated and precision soil management solutions.

In support of these, we developed and completed eight scoping studies across all four programs, enabling us to take a systematic and comprehensive look at the options and opportunities for the research activities of the CRC.



As CEO, I travelled to all states of Australia and to New Zealand to visit many of our participants to better understand their needs, aspirations, capabilities and capacity.

From the wheatbelt of Western Australia to the canefields of Queensland and all areas in between, I have been inspired and heartened by the goodwill and commitment that all participants are showing to the vision of the CRC.

The CRC's Board of Directors, chaired by Dr Paul Greenfield, is a highly skilled and committed group of individuals who deeply appreciate the opportunities that a Soil CRC provides for farmers in Australia.

The Board's input and guidance has been instrumental in ensuring a successful first 12 months, and developing a strong strategic and governance foundation for the years ahead. I thank them all for their leadership, support and immense contribution.

I would also like to thank our Patron, Major General the Honourable Michael Jeffery for his encouragement and public advocacy; the Program Leaders – Catherine, Richard, Nanthi and Lukas – for giving direction and leadership to the program;

Professor Roger Swift for his work as Interim CEO prior to my commencement in September 2018; the University of Newcastle for providing office accommodation and other support services; and importantly, all the participants of the Soil CRC for their input to our organisation.

Finally, I would like to thank and acknowledge the staff – Kathy, Mark, Jodi, Jessie and Katherine – who have worked diligently and passionately to assist me in bringing the CRC to life.

I commend this inaugural annual report to you as a formal record of a successful establishment year and a platform for future growth in capacity and achievements for the benefit of Australia's farmers.

A handwritten signature in black ink that reads "Michael Crawford". The signature is written in a cursive, flowing style.

Dr Michael Crawford
Chief Executive Officer Soil CRC

EXECUTIVE SUMMARY

ACHIEVEMENTS

- **All Commonwealth and participant agreements were executed.** This included our Funding Agreement with the Commonwealth and agreements with all **39 Participants**, including the signing of the Major Partners Agreement with our **11** largest contributors.
- The full **Soil CRC Board was established** along with the Research and Adoption Committee (RAC); the Audit and Risk Management Committee (ARMC), the Nomination and Selection Committee (NSC) and the Remuneration Committee. Board meetings were held around Australia, in Newcastle, Adelaide, Hobart and Perth.
- **Inaugural Program workshops were held in Wagga Wagga and Melbourne** with a combined attendance in excess of 100 scientists, farmers and industry representatives.
- **Eight scoping studies were completed.** These short term projects across all our programs involved extensive collaboration from all participants, reviewed the state of knowledge in each program area and identified options for future investment and activity.
- **A process for transparent, equitable and competitive process for developing,** assessing and approving projects was introduced. The first call for proposals was announced, and proposals were assessed by the Research and Adoption Committee who then made their recommendations to the Board for endorsement.
- **Major General the Hon. Michael Jeffery,** National Soil Advocate and former Governor-General, was **appointed as Patron** of the Soil CRC.
- The **CEO personally visited 25 participant organisations in all states of Australia and in New Zealand,** meeting in person with all of the research partners and many of the farmer group partners, to better understand their capabilities and their aspirations for the CRC.
- The **Soil CRC brand was launched in February 2018** with a bold, distinctive logo, a new website with a member's portal, a social media presence and associated marketing materials.
- The CRC's business team was established and moved to a **dedicated office space at the University of Newcastle in May 2018,** creating a permanent 'home' for the CRC's head office.

RISKS AND IMPEDIMENTS

The Audit and Risk Management Committee (ARMC) assists the Board in fulfilling its responsibilities relating to the accounting and reporting practices of the Company and in providing oversight of the risk management activities of the Company.

In support of this, the Management Team maintains a Risk Register which is updated quarterly for the ARMC and emerging risks are noted and reported to the Board if necessary.

A significant risk emerged early in the establishment of the CRC as the Major Partners Agreement was being finalised in September 2017. Three participants withdrew from the CRC, citing an inability to meet the financial commitment made at the time of CRC application in late 2016.

The net impact of these withdrawals was to reduce the total aggregate participant contributions from \$135.9M to \$126.8M over the 10 year life of the CRC.

The Soil CRC immediately sought to mitigate this risk by:

- communicating quickly and openly to the CRC Program Office and all other participants
- commencing a program to attract additional external investment to the CRC, and
- curtailing and reducing discretionary management and administration expenditure.

Importantly, all remaining participants maintained their original commitment to the Soil CRC, executed the relevant participant agreements and fully met their agreed cash contributions. Further, any loss in capability was compensated for by the involvement of other participants and consequently, all 15 scheduled Commonwealth Milestones were achieved in 2017-18.

In establishing a new organisation, a large emphasis was placed on developing and approving a range of policies and procedures to ensure consistency, transparency, integrity and good governance in all aspects of the CRC's business. These policies and procedures now inform the everyday management and operations of the CRC.

A potentially significant business risk was identified in relation to the management and administration of a large project portfolio as the CRC's activities begin to escalate in scale and intensity. Pro-actively, a plan was developed to introduce an electronic, online cloud-based research management system. Potential providers were assessed and a suitable provider, F1 Solutions, was identified with the system (SoilCentral) expected to be operational in late 2018.

PERFORMANCE AGAINST ACTIVITIES

RESEARCH

The overarching objective of the Soil CRC is to increase the productivity and profitability of Australian farmers by providing them with the knowledge and tools to improve the performance of their soils.

In the first year, we made progress towards reaching this objective. Eight scoping study projects were completed. Their objectives were to undertake review studies involving desktop, workshop and survey activities to scan existing environments and to identify needs, gaps, issues and opportunities for the Soil CRC to pursue in future years across the four programs.

Before the end of the year, another four small projects had been proposed, agreed to and plans made to commence early in the next year with additional funding through the NSW Department of Industry's Research Attraction and Acceleration Program (RAAP).

The first major investment call for proposals was released at the end of the reporting period, these proposals were being assessed by the Research and Adoption Committee prior to making recommendations to the Board.

The Soil CRC is currently on track to meet all research output targets, with all 15 milestones due for completion during 2017-18 being achieved on time. This is testament to the speed and effectiveness with which CRC participants came together, with leadership and direction being provided by the Program Leaders, to work collaboratively to complete some early deliverables.

There were high levels of industry and participant involvement in the Soil CRC research. The ratio of participant in-kind contributions to Soil CRC cash committed to the scoping study projects averaged at 5.9. This reflected the high level of consultation with participants and industry to determine their needs, issues, gaps and collectively identify opportunities for future projects.

The scoping study projects all identified potential areas for future research but it is expected that this will occur within the boundaries of the existing outputs and milestones. At this stage, there are no changes proposed for future research directions diverging from the outputs and milestones.

The research activities of the Soil CRC are being delivered through four research programs:

1

**PROGRAM 1:
Investing in high performance soils**

Supporting farmers to maintain the long-term integrity and fertility of soils for future generations.

2

**PROGRAM 2:
Soil performance metrics**

Developing tools linked to soil management products that allow farmers to monitor and assess the performance of their soils, and take corrective action where needed.

3

**PROGRAM 3:
New products to increase fertility and function**

Developing a range of new products to better address challenges in soil management.

4

**PROGRAM 4:
Integrated and precision soil management solutions**

Synthesising our current understanding of soil science and how it should be applied to the key soil types and farming systems across Australia.

PROGRAM 1

Investing in high performance soils

Associate Professor Catherine Allan
Charles Sturt University



Program 1 aims to assist farmers achieve their land stewardship and profitability goals with two main disciplinary strands (economic and social).

At the farm scale, the Program assists land managers to optimise the returns on their investments in improved soil management, and supports sound decision making. Lasting improvement, however, requires institutional change, and this in turn requires new and robust collaborations among Soil CRC partners, and means to influence policy settings.

This Program therefore operates at multiple scales: assisting members from across the Soil CRC to better integrate soil science with practical farming needs; seeking financial rewards for sustained soil stewardship; and shifting the focus of the soils program from soil, to innovation and long lasting, positive practice change.

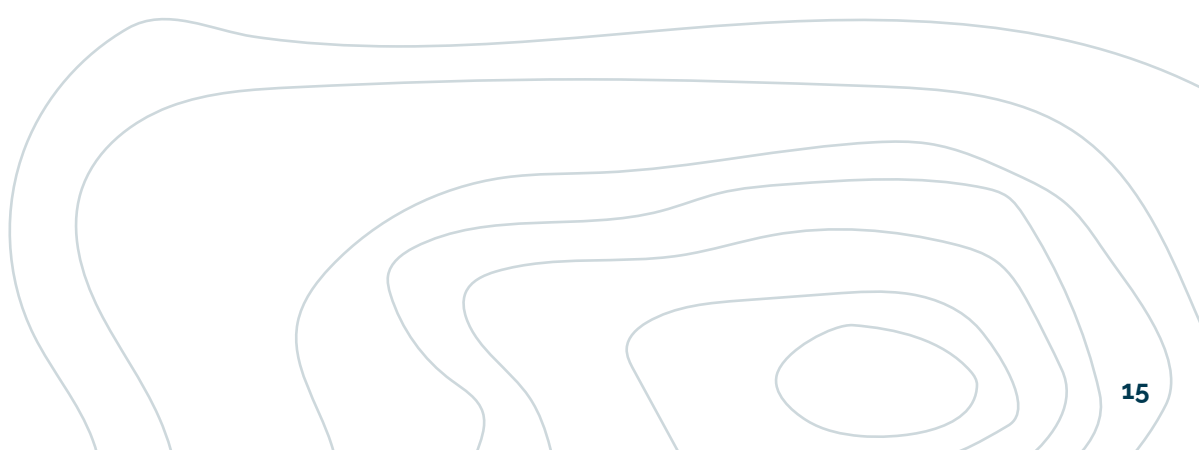
Expertise for this approach comes from more than 40 economists, social scientists, extension practitioners, farming systems entrepreneurs and farm management experts.

In the first year the emphasis has been on developing collaborative partnerships and scoping. Two scoping study projects have identified key economic and social issues for improving soil performance. An initial stakeholder workshop for Program 1 was held in May 2017 in Wagga Wagga, NSW. This was the first opportunity for Soil CRC participants to meet and discuss the program, outputs and milestones in further detail.

Research

First year milestones were met for Program 1. Two scoping studies have produced reports that provide clear direction for future research, with two short term projects to commence early 2018-19 – one in the social science strand, the other in economics.

An online tool to provide information about adoption and adoptability has been published, and will continue to develop through the life of the Soil CRC. Based on these activities, priorities for the next research call were identified during this year.



PROGRAM 2

Soil performance metrics

Dr Richard Doyle
University of Tasmania



Program 2 will define the metrics of a high performing soil and create the instruments for farmers to measure their soils on the farm.

The Soil CRC will use advanced instrumentation, optimisation, sensor and data fusion and big data analytics methodologies to deliver practical tools ready for farmers to use.

Program 2 took part in a stakeholder meeting in Melbourne in July 2017. This was held concurrently with Programs 3 and 4. The aims of the face-to-face meeting (and embedded workshops) were to provide a clearer direction on the nature of the major research topics to be funded under the program.

Following this workshop, Program 2 financially supported two scoping study projects to help identify the actions and research priorities for the major projects for funding rounds. These included actions around farmer and stakeholder education projects. During the scoping studies, three Steering Committees of farmers, scientists and industry representatives were established.

The Soil CRC will continually monitor and review committee membership, with plans for transitioning to an overlapping single committee for Program 2 in the second year.

Research

First year milestones were met for Program 2. Two review-scoping studies were undertaken – *Indicators of soil health* and *Soil sensor technologies for smarter farming*. These two projects involved collaborative efforts from five major partners as well as partners and associate partners.

The key outputs were two significant reports summarising the methods, materials and approaches from multiple global sources. These included reviews on all common soil indicators and methodologies in particular those relating to assessing soil health.

The reviews also covered a wide range of current and emerging sensor technologies likely to be of value in soil management and assessment. The reviews were undertaken in a collaborative manner with many phone conferences along with a major workshop held in March 2018 in Melbourne.

A total of 40 project participants including seven farmer and industry groups and state government and university partners were all actively involved. Following the call for major projects released in April 2018, four projects were proposed with one recommended for funding.

Plans were made for another project to commence early in 2018-19 and priorities for the next research call identified for planned release in the next year.

PROGRAM 3

New products to increase fertility and function

Professor Nanthi Bolan
The University of Newcastle



Program 3 aims to develop a range of new fertilisers, soil amendments and delivery mechanisms for farmers to enhance the performance of their soils. These products will harness conventional intervention approaches and introduce emerging technologies such as polymers, nanotechnology and biotechnology, as well as using innovative ways to mine nutrients from waste streams.

In July 2017, a stakeholder meeting was held for Program 3 concurrently with Programs 2 and 4 in Melbourne. Whilst it was agreed that there was sufficient research and industry expertise within the Soil CRC participants to undertake the work required to deliver all four outputs in Program 3, it was recognised that there is some potential overlap with research work supported by other agencies, which will require coordinated collaboration by the Soil CRC to work closely with external scientists.

Stakeholders also discussed and recognised that this Program will have to consider and address regulatory issues when developing projects to meet specific milestones. Following on from this initial meeting, two scoping study projects have been completed which identified major recommendations for research to be undertaken to meet the milestones in this Program.

During the scoping study projects, a Steering Committee comprising waste industry, growers and researchers was established at a workshop held in March 2018 in Sydney. The Soil CRC will continually monitor and review the committee membership.

Research

First year milestones were met for Program 3. Two scoping studies were completed for the program to identify future research directions for soil constraints, new fertilisers and effective delivery of pesticides. During these reviews, over 50 Soil CRC project team members and external representatives across research, industry and farmers worked collaboratively to provide thorough analyses for each of these program output areas.

One review highlighted the need for consistent national, regional and industry-wide products for several key soil constraints. It also highlighted the need to better understand the mechanisms underpinning crop and pasture response to current soil ameliorants in order to guide improvement and development of new and alternative ameliorant products.

A workshop was held in March 2018 in Sydney. Following this, industry surveys were undertaken over four weeks. The second review focused on three key areas (1) high performance waste-derived fertilisers; (2) low residual pesticide/herbicide delivery systems and (3) microbial carriers for delivering beneficial microorganism and moisture retention.

A one-day workshop was held in February in Brisbane. At the workshop, six recommendations for future research were identified. Future activities prepared for in this year which are planned for commencement early next year include the RAAP funding planned project and identification of the next set of research call priorities.

PROGRAM 4

Integrated and precision soil management solutions

Dr Lukas Van Zwieten
NSW Department of Primary Industries



Program 4 aims to achieve cost effective and sustainable solutions to address complex soil problems. This will include new diagnostic frameworks; hybrid systems of machine learning and modelling; ground truthing, sensibility testing and improvement; and development, deployment and evaluation of decision support tools.

Program 4 held a meeting for Soil CRC participants in July 2017 in collaboration with Programs 2 and 3. The aim of the meeting was to describe the milestones in some detail to participants; to develop collaborative linkages and to better understand capabilities and capacity of the various organisations; and to identify key areas of work that may occur under the milestones.

The meeting had around 50 attendees, representing 24 participants from the CRC. There was also a follow up meeting in October 2017 in Perth to build collaborations and create the initial Steering Committee of the Program.

The CEO and Program 4 Leader presented more broadly on the Soil CRC and Program 4 activities at a series of workshops in WA "Talkin' Soil Health" which was organised by Soil CRC partners. Two scoping study projects were successfully completed, which brought together a wide cross section of the Soil CRC partnership.

The first study *Scoping study to identify and prioritise regional soil constraints* was led by farmer groups. This study included a workshop in Sydney with over 20 participants, and a series of 11 regional farmer group meetings with a survey and grower discussion session. Each regional meeting included between 8 and 10 participants. The project delivered key information to the Soil CRC and has established lines of communication between researchers, farmer groups and their members.

The second scoping study project *Soil models, tools and data: Current state of play*, future directions mapped, reviewed and assessed the landscape of Decision Support Systems (DSS), models and data relevant to improving the performance of agricultural soils in Australia. It also analysed developmental pathways of models and DSS that have outlived their initial research projects and have had an impact in industry. It made recommendations to the CRC as to how DSS developed through the CRC can build on past research to have impact and longevity beyond the Soil CRC.

Research

First year milestones for Program 4 were met. Two scoping study projects were implemented which included multiple Soil CRC participants. The scoping study projects have assisted in the development of communication between participants, and the framework for assessing the success of DSS has been completed.



SOIL CRC PROJECTS 2017-2018

PROGRAM 1

1.1.01 *Activating markets to create incentives for improved soil management: Literature Scoping Study*

Lead Organisation: Charles Sturt University

Project Leader: Mark Morrison

Soil CRC Participant Organisations Involved: CSU, USQ, UTas, UON, Murdoch Uni, FedUni

Project Dates: 15/12/2017 – 31/05/2018

1.2.01 *Scoping systems of acceptance of improved soil management, with a focus decision support systems and tools*

Lead Organisation: Charles Sturt University

Project Leader: Catherine Allan

Soil CRC Participant Organisations Involved: CSU, USQ, FedUni, UTas, UON, WANTFA, NSW DPI, SCU

Project Dates: 10/12/2017 – 31/05/2018

PROGRAM 2

2.1.01 *A review of indicators of soil health and function: farmers' needs and data management*

Lead Organisation: Federation University

Project Leader: Peter Dahlhaus

Soil CRC Participant Organisations Involved: FedUni, UTas, USQ, Griffith Uni, UON, Landcare NZ, SCU, SPAA, RPI, SFS, WANTFA, Liebe, MSF, DEDJTR, NSW DPI

Project Dates: 18/12/2017 – 31/05/2018

2.2.01 *Soil sensor technologies – which ones are most useful for smarter farming?*

Lead Organisation: University of Tasmania/University of Southern Queensland

Project Leader: Marcus Hardie / John Bennett

Soil CRC Participant Organisations Involved: UTas, USQ, Griffith Uni, SCU, UON, Landcare NZ, FedUni, SFS, DEDJTR, PIRSA, WANTFA, HCPSL, Burdekin, Holbrook

Project Dates: 15/12/2017 – 31/05/2018

SOIL CRC PROJECTS 2017-2018 cont.

PROGRAM 3

3.1.01 *Review and meta-analysis of waste-derived fertiliser products, nano-porous materials for pesticide delivery, and moisture retention and microbial carrier technologies*

Lead Organisation: Griffith University

Project Leader: Chengrong Chen

Soil CRC Participant Organisations Involved: Griffith Uni, UON, Murdoch Uni, UTas, Landcare NZ, AORA, SEW, Burdekin, HCPSL, CWFS, NSW DPI

Project Dates: 15/12/2017 – 31/05/2018

3.3.01 *Mapping projects on ameliorating soil constraints, and review of soil constraints, products and technologies*

Lead Organisation: NSW Department of Primary Industries

Project Leader: Susan Orgill

Soil CRC Participant Organisations Involved: FedUni, CSU, UON, Griffith Uni, USQ, Murdoch Uni, UTas, CWFS, RPI, NSW DPI, DEDJTR, PIRSA, SCU

Project Dates: 15/12/2017 – 31/05/2018

PROGRAM 4

4.1.01 *Scoping study to identify and prioritise regional soil constraints*

Lead Organisation: Central West Farming Systems

Project Leader: Diana Parsons

Soil CRC Participant Organisations Involved: SCU, USQ, UON, Murdoch Uni, RPI, Landcare NZ, MSF, Griffith Uni, Burdekin, SPAA, EPARF, Holbrook, Soils for Life, Wheatbelt NRM, CWFS, FarmLink, Hart Field, BCG, SFS, WANTFA, MFMG, HCPSL, CFGI, Facey, Gillami, Liebe, WMG, NSW DPI, DEDJTR, PIRSA, NC CMA, WCMA

Project Dates: 1/12/2017 – 31/05/2018

4.3.01 *Soil models, tools and data: Current state of play, future directions and setting up for longevity and a legacy from the CRC for High Performance Soils*

Lead Organisation: University of Southern Queensland

Project Leader: Keith Pembleton

Soil CRC Participant Organisations Involved: USQ, UON, FedUni, UTas, Farmlink, NSW DPI

Project Dates: 1/12/2017 – 31/05/2018

COMMONWEALTH MILESTONES ACHIEVED

| Output | Milestone |
|--|---|
| <p>1.1 Development of a manual that will guide governments, financial institutions and value chain participants in developing and implementing market-based instruments to capture and distribute financial returns from good soil stewardship.</p> | <p>1.1.1 Complete review of market mechanisms for rewarding soil stewardship. Identify most feasible options.</p> |
| <p>1.2 Development of an online tool which will allow policy-makers, entrepreneurs and suppliers to readily assess how new soil products and policies will be taken up and used by farmers. This will allow for rapid prototyping of soil management policy design and product development.</p> | <p>1.2.2 "Go live"/publish on the web a decision support tool for farmer organisations, policy-makers (and managers), researchers and businesses to assess the social acceptability of practices and technologies aimed at improving soil performance.</p> |
| <p>2.1 Identification of data and thresholds defining a high performance soil and determine key indicators of high performance soils, including microbial functionality across key soil types.</p> | <p>2.1.1 Establish steering committee of farmers, scientists and industry representatives.</p> |
| <p>2.2 Development of 'use appropriate' sensors to provide actionable information on soil water, nutrients and microbial function. This may include the novel re-configuration of existing sensors or the creation of new sensors to fill any identified technology gaps.</p> | <p>2.2.1 Establish steering committee of farmers, scientists and industry representatives.</p> |
| <p>2.3 Development of back-end capability to analyse raw soil data and assess the interactions within it and provide the results to farmers and agronomists. The analytics will be driven by intelligent and machine learning algorithms to process a continuous multi-source data stream.</p> | <p>2.3.1 Establish a project steering committee comprising, growers, scientist, agri-business, and other stakeholders.</p> |
| | <p>2.3.2 Run a workshop to engage key researchers, stakeholders to identify limitations and options for server based storage, analysis and retrieval of soil sensory data.</p> |
| <p>2.4 Development of user-friendly and informative app-based user interfaces in consultation with farmers.</p> | <p>2.4.1 Establish steering committee of farmers, scientists and industry representatives.</p> |

COMMONWEALTH MILESTONES ACHIEVED cont.

| Output | Milestone |
|---|---|
| <p>3.1 Identification of the most cost-effective ways of recovering and concentrating nutrients from solid and liquid wastes to create new organic nitrogen fertiliser products that have an immediate and growing market in Australia.</p> | <p>3.1.1 Establish a steering group comprising waste industry, growers and researchers.</p> |
| | <p>3.1.2 Complete a review of prioritising solid and liquid waste based on nutrient contents, and technologies on nano-fertilisers.</p> |
| <p>3.2 Development of pesticide delivery mechanisms that are more targeted and less wasteful, to reduce off-site impacts of pesticides on cropping systems and the broader environment.</p> | <p>3.2.1 Complete a review on technologies of nano-porous materials for pesticide delivery.</p> |
| | <p>3.2.2 Conceptualise new pathways to encapsulate pesticides.</p> |
| <p>3.3 Development of soil amendments to address constraints such as soil acidity, soil sodicity and poor soil structure without physically disturbing the soil. Novel mechanisms will also be developed for placing amendments at depth while minimising disturbance.</p> | <p>3.3.1 Complete a review on technologies for advanced organic-based materials for ameliorating subsurface acidity and sodicity constraints.</p> |
| | <p>3.3.2 Conceptualise new pathways to deliver soil ameliorating materials in subsoils covering the root zone.</p> |
| <p>3.4 Development of delivery systems and seed coatings that increase the effectiveness of desirable, beneficial microorganisms in the soil which help fix nitrogen, protect against root diseases, act as symbionts with plants or produce growth promoting chemicals.</p> | <p>3.4.1 Complete reviews on moisture retention and microbial carrier technologies, physiological processes, their utilization to enhance soil health.</p> |
| <p>4.1 Development of high performance soils based on system/ agronomic and rhizosphere re-engineering approaches that include: inter- and cover- cropping, legumes and biofumigants, rhizosphere inoculation and rotations to enable farmers to address difficult and multiple soil constraints while continuing profitable production.</p> | <p>4.1.1 Conceptual framework developed for Programs 4.1 – 4.3 and Program 4 steering committee established.</p> |

COMMERCIALISATION

In its first year of operation, the Soil CRC focused on establishing and embedding key structures and processes. In this year, there has not been any significant commercialisation or utilisation activity. Nonetheless, management have commenced planning how commercialisation and utilisation will occur when projects start to deliver outputs.

Much of the output of the Soil CRC will be 'public good' – i.e. not easy to patent or protect, capture and return a commercial value to the CRC. In fact, the objectives of the CRC will best be met by ensuring that these public good outputs are ultimately adopted as broadly and fully as possible, which is where the utilisation plans are critical. All project proposals and agreements require that the pathway to adoption and utilisation plan is implemented and documented. A key contributor to successful utilisation of Soil

CRC research outputs will be the 20 farmer group participants, who are well placed to provide a conduit through to end-users, the farmers.

One of the research projects planned to commence early in 2018-19 will investigate various models of innovation partnership agreements and will complete innovation strategic plans with CRC partner farmer groups. Innovation programs are often generic, so to avoid this, a program will be tailored to the needs of the Soil CRC participants (including farmer groups) and innovations will be targeted towards achieving greater economic returns on investment in good soil stewardship.

Over the longer term, it is intended that this innovation capacity building program will integrate across all of the Soil CRC Programs, creating an innovation eco-system targeted at high performance soils.

EDUCATION AND TRAINING

Training courses and workshops

Delivery of training courses and workshops across the nation for farmers, farmer groups, extension officers, consultants, agronomists and soil scientists is a key education milestone for the Soil CRC. The first twelve months have seen early work done on identifying the needs, gaps and opportunities, and was a key focus of some of the scoping study projects. This area will be given more attention in coming years as the Soil CRC ramps up its activity.

Production of online information sheets and course materials

In the first year of the Soil CRC, the main objective was to identify gaps, opportunities, and issues that Australian farmers are facing, i.e. undertake desktop studies. The recommendations of the scoping study projects have influenced investment priorities in subsequent calls for projects that will create, collate and present information fact sheets and course materials.

Through delivery of the first round of research projects (Call 17-1, scoping studies) a dynamic online tool was launched through Program 1 for assessing the social acceptability of practices and technologies aimed at improving soil performance. This tool will be extended as Soil CRC activities are delivered over subsequent years.

PhD students

The Soil CRC is aiming to deliver at least 40 PhD graduates over its lifetime. To ensure postgraduate students experience industry collaboration and the opportunity to be part of larger research projects, the CRC decided to seek students through a major investment call rather than a separate student call in the first year. Call 18-2 was the first opportunity for project proposals containing students to be submitted to the Soil CRC for consideration. Through this call, requests for 17 PhD scholarships were received across 15 project proposals.

INTELLECTUAL PROPERTY MANAGEMENT

The legal and beneficial ownership of all intellectual property (IP) generated through Soil CRC funded activities is vested in the Soil CRC on creation.

In the first year of operation, there was no commercially valuable intellectual property (IP) generated. The IP generated through the scoping studies will be used to inform future investment priorities of the Soil CRC and is available to all participants for research purposes.

In preparation for future IP generation that may occur, the Soil CRC has commenced taking steps to ensure that IP management arrangements and essential mechanisms are in place to ensure adherence to the National Principles of IP Management (2018) when needed.

These steps will complement the provisions that have been available from commencement of the Soil CRC, as outlined in the Commonwealth and the Soil CRC Participants' Agreements which provide the key elements for IP management.

All Soil CRC Project Leaders and teams are responsible for identifying and reporting all IP and commercialisation potential to the Soil CRC, before commencement, during implementation and upon completion of projects.

Furthermore, it has been clearly communicated in calls for proposals that all Soil CRC research conducted must confirm to the principles outlined in the Australian Code for the Responsible Conduct of Research (2007 and 2018 versions).

Furthermore, all Soil CRC research undertaken involving humans or animals, must observe and comply with all relevant ethics codes and guidelines adopted by the Australian Research Council (ARC), National Health and Medical Research Council (NHMRC), the Office of the Gene Technology Regulator (OGTR) and all other relevant regulatory agencies operating in Australia and any place in which the research is being conducted. This ensures that all data generated can be utilised to its full extent.

COLLABORATION

Collaboration is the key to a successful CRC and is reflected in the tagline of the Soil CRC – 'Performance through collaboration'.

The 39 Participants of the Soil CRC collaborated extensively through the eight scoping study projects undertaken in 2017-18.

Collaborations took a number of forms. Some strong collaborative partnerships emerged amongst research providers including the eight university participants, the three state agencies and Landcare Research New Zealand.

Importantly, strong collaborations began to develop between the research participants, the industry organisations and the 20 farmer group participants.

The most significant example of effective collaboration in the first year of the Soil CRC was the scoping study to identify and prioritise soil constraints, led by Central West Farming Systems.

Through workshops and other activities, this project directly involved 28 of the Soil CRC participants including eight of the CRC's research participants and 20 farmer groups.

In total, 111 farmers had the opportunity to have direct input into the identification and prioritisation of soil constraints through eight workshops that were held in all six states and in New Zealand.

In coming years, opportunities will be sought to collaborate with other funding and delivery organisations, to add value to the activity of the Soil CRC and to maximise its impact.

SME ENGAGEMENT

More than half of the Soil CRC's participants are Small to Medium Enterprises (SMEs) in their own right, both profit and not-for-profit. Many of them such as the farmer group and industry organisation participants represent farmers and producers who are all SMEs. These SMEs are from every state of Australia, with a large representation from regional and rural areas. Consequently, the CRC's engagement with SMEs is a very critical part of the CRC's program.

The end-user focus of the Soil CRC means that SMEs have every opportunity to get engaged in project design, development and implementation, and are critical to the interpretation of results and the dissemination of findings.

Through the scoping study projects and the project development processes, representatives of SME organisations were able to sit at the same table as research scientists and other contributors, and ensure that their input was valued. All project proposals are asked to describe their engagement with end-users and the extent of end-user engagement is one of the criteria used in assessing projects for CRC investment.

SMEs are directly represented on the Board via the role of Diana Parsons as a Director. Diana is associated with the Central West Farming Systems group in NSW.

COMMUNICATIONS

Internal and external communication activities in the first year of the Soil CRC were primarily based on raising awareness and understanding of what we will achieve over the next ten years. We did this through our website, marketing materials, the media, social media, conferences and stakeholder events.

Katherine Seddon commenced as Communications Manager in December 2017 and engaged a brand agency to develop our brand identity. This included developing the Soil CRC logo, suite of stationery, marketing materials, a prospectus and brand guidelines.

The brand identity and logo were completed and released in February 2018. The brand identity incorporates clean lines, modern typefaces and fresh imagery to imbue a sense of cutting edge ideas, innovation and knowledge. The identity also takes visual cues from terrain and topography to create contemporary patterns and textures to complement the logo. The tagline 'Performance through collaboration' was selected to link back to the Soil CRC's full name (CRC for High Performance Soils) and the particular emphasis on collaboration between farmers, industry and researchers.

The website project also commenced, with a complete upgrade of the interim site that had been established in July 2017. The new Soil CRC website was launched in March 2018, with both a public and members-only section for the participants of the Soil CRC.

Twitter and LinkedIn accounts were set up and we began to build our audience on both these platforms. Social media will be one of the channels used to disseminate the research of the Soil CRC to our participants and end-users.

Our stakeholders were engaged through the media with articles in Waste Management Review magazine (June), Soil Science Australia Profile newsletter (November) as well as coverage on ABC Radio Country Hour in WA and South Australia and an article in The Countryman (WA). We produced short articles for our participants to include in their own newsletters which were distributed to seven farmer groups.

We had representations at two conferences, Talkin' Soil Health in Dalwallinu and Katanning, WA (March 2018) and the Australian Organics Recycling Association Conference in Brisbane (May 2018). At these conferences we were able to share the plans of the Soil CRC with participants and end-users. We also participated in two-way conversations which were invaluable in gaining insight into our participants, end-users and their needs.

At both the Hobart (February) and Perth (May) Board meetings, we held stakeholder information events. Both the Chair, Dr Paul Greenfield and the CEO, Dr Michael Crawford made presentations which were followed by questions and discussion.

Many members of participant organisations as well as end-users attended these events and we received positive feedback. Again this was a valuable time of sharing and listening.

To ensure all the participant organisations were well informed about the operational activities of the CRC, the CEO sent out a regular Communique. There were 14 CEO Communiques sent out during the period to 226 people, all of whom were staff or members of our participant organisations.

MEDIA/NEWSLETTERS FOR 2017-2018

| Date | Title | Publication | Type |
|-------------|--|----------------------------------|--------------|
| 1 Nov 2017 | New Soil CRC up and running | Profile – Soil Science Australia | Newsletter |
| 7 May 2018 | Interview with Michael Crawford about survey for Project 4.1.01 | SA Country Hour ABC Radio | Radio |
| 8 May 2018 | Soil CRC | CWFS Newsletter | Newsletter |
| 18 May 2018 | Practical solutions to soils | The Graham Centre | e-Newsletter |
| 28 May 2018 | Interview with Michael Crawford about Soil CRC in relation to WA Board meeting | WA Country Hour ABC Radio | Radio |
| 31 May 2018 | NSW Department of Primary Industries collaborating nationally in the Soil CRC | All the Dirt | e-Newsletter |
| 7 Jun 2018 | Riverine Plains collaborating nationally in the Soil CRC | Riverine Plains Newsletter | e-Newsletter |
| 13 Jun 2018 | Facey Group collaborating nationally in the Soil CRC | Facey Group | e-Newsletter |
| 14 Jun 2018 | Soil CRC | The Countryman | Newspaper |
| 15 Jun 2018 | Wheatbelt NRM collaborating nationally in the Soil CRC | Wheatbelt NRM | e-Newsletter |
| 15 Jun 2018 | Liebe Group collaborating nationally in the Soil CRC | Liebe Group | e-Newsletter |
| 18 Jun 2018 | Organic Growth: 2018 AORA Annual Conference | Waste Management Review | Magazine |
| 18 Jun 2018 | Mackillop Farm Management Group collaborating nationally in the Soil CRC | MFMG Newsletter | e-Newsletter |

PARTICIPANTS AND THIRD PARTIES

The Soil CRC has 39 participants as at 30 June 2018. During the reporting period, four organisations departed the CRC at formation and agreement signing (Arris Pty Ltd, Ecocatalysts Pty Ltd, HLM Asia Group Limited and Kansas State University) and one organisation was admitted (Griffith University).

The NSW Government, through its Department of Industry, provided additional cash resources (\$280,000) from its Research Attraction and Acceleration Program (RAAP) to support the activities of the CRC.

| Participant Name | Participation Type | ABN | Organisation Type |
|--|--------------------|----------------|-------------------|
| Australian Organics Recycling Association Limited | CRC Participant | 17 158 519 736 | Individual SME |
| Birchip Cropping Group Incorporated | CRC Participant | 92 087 981 510 | Individual SME |
| Burdekin Productivity Services Limited | CRC Participant | 18 107 846 060 | Individual SME |
| Corrigin Farm Improvement Group | CRC Participant | 73 411 548 004 | Individual SME |
| Charles Sturt University | CRC Participant | 83 878 708 551 | University |
| Central West Farming Systems Incorporated | CRC Participant | 37 814 703 505 | Individual SME |
| Department of Economic Development, Jobs, Transport and Resources (Agriculture Victoria) | CRC Participant | 69 981 208 782 | State Government |
| Department of Primary Industries (NSW) | CRC Participant | 72 189 919 072 | State Government |
| Eyre Peninsula Agricultural Research Foundation Incorporated | CRC Participant | 94 833 615 975 | Individual SME |
| Facey Group Incorporated | CRC Participant | 59 136 484 550 | Individual SME |
| Farmlink Research Limited | CRC Participant | 23 109 837 505 | Individual SME |
| Federation University Australia | CRC Participant | 51 818 692 256 | University |
| Griffith University | CRC Participant | 78 106 094 461 | University |
| Hart Field Site Group Incorporated | CRC Participant | 72 015 164 228 | Individual SME |
| Herbert Cane Productivity Services Limited | CRC Participant | 71 100 551 826 | Individual SME |
| Holbrook Landcare Group | CRC Participant | 64 092 836 658 | Individual SME |
| Landcare Research (New Zealand) Limited | CRC Participant | - | Other |
| Landmark Operations Limited | CRC Participant | 73 008 743 217 | Large Industry |
| MacKillop Farm Management Group Incorporated | CRC Participant | 60 685 776 966 | Individual SME |
| Mallee Sustainable Farming Incorporated | CRC Participant | 99 557 839 332 | Individual SME |
| Murdoch University | CRC Participant | 61 616 369 313 | University |
| North Central Catchment Management Authority | CRC Participant | 73 937 058 422 | Individual SME |
| Primary Industries and Regions South Australia (SA) | CRC Participant | 53 763 159 658 | State Government |

PARTICIPANTS AND THIRD PARTIES cont.

| Participant Name | Participation Type | ABN | Organisation Type |
|--|--------------------|----------------|-------------------|
| Riverine Plains Incorporated | CRC Participant | 95 443 809 873 | Individual SME |
| Society of Precision Agriculture Australia Incorporated | CRC Participant | 43 553 215 627 | Individual SME |
| Soils for Life Trust | CRC Participant | 23 744 512 660 | Individual SME |
| South Australian Grain Industry Trust Fund | CRC Participant | 23 116 814 640 | Individual SME |
| South East Water Corporation | CRC Participant | 89 066 902 547 | Large Industry |
| Southern Cross University | CRC Participant | 41 995 651 524 | University |
| Southern Farming Systems Limited | CRC Participant | 54 093 170 631 | Individual SME |
| The Gillamii Centre Incorporated | CRC Participant | 16 887 295 206 | Individual SME |
| The Liebe Group Incorporated | CRC Participant | 44 748 432 382 | Individual SME |
| The University of Newcastle | CRC Participant | 15 736 576 735 | University |
| University of Southern Queensland | CRC Participant | 40 234 732 081 | University |
| University of Tasmania | CRC Participant | 30 764 374 782 | University |
| West Midlands Group Incorporated | CRC Participant | 47 325 820 894 | Individual SME |
| Western Australian No-Tillage Farmers Association (Incorporated) | CRC Participant | 33 0388 186 13 | Individual SME |
| Wheatbelt Natural Resource Management Incorporated | CRC Participant | 61 661 518 664 | Individual SME |
| Wimmera Catchment Management Authority | CRC Participant | 83 900 830 261 | Individual SME |
| Department of Industry (NSW) | Third Party | 72 189 919 072 | State Government |

GOVERNANCE

BOARD, COMMITTEES AND KEY STAFF

Soil CRC structure

The CRC is an incorporated company limited by guarantee. It is registered as a not for profit public company which is not listed. It is governed by its constitution. The company has a board of nine directors one of whom acts as Chair. There are five independent and four non-independent directors. There are four committees that govern research, risk, appointments and remuneration. The CEO reports to the Board on the management of the CRC. The CEO has a team that reports to him to run the CRC. The company has been given a private ruling by the ATO that confirms the company is income tax exempt and FBT rebatable employer.

Patron

Major General the Hon. Michael Jeffery AC, AO (Mil), CVO, MC is Patron of the Soil CRC. General Jeffery served as Governor-General of the Commonwealth of Australia from 2003 to 2008. Prior to that, he had an illustrious military career before retiring in 1993, and was then appointed Governor of Western Australia until 2000.

In 2013, General Jeffery was appointed by the Prime Minister as Australia's Advocate for Soil Health. As national Soil Advocate, he has worked to raise public awareness

of the critical role soil plays in underpinning sustainable productivity, delivering high quality ecosystem services and helping to meet global challenges including food security and climate change.

His role as Patron of the Soil CRC aligns with his advocacy role and allows him to promote the objectives and capabilities of the CRC, whilst also providing valuable input to its directions and activities. The role of Patron is an honorary appointment and has no direct role in the governance of the organisation.

The Board

The Soil CRC is governed by a skills-based Board of Directors with an independent Chair and a majority of independent directors. The Board provides oversight of the Soil CRC activities, performance and strategic direction.

The inaugural Directors were nominated by the bid team and subsequent Director appointments were recommended by the Nominations and Selection Committee and approved by Members.

The Board of CRC High Performance Soils Ltd ("the Company") has the responsibility for establishing, maintaining and monitoring an appropriate level of governance in relation to the core tasks of the Company.

ELECTION OF DIRECTORS, DATES & ELECTION OUTCOMES

| Name | Role | Appointed | Number of meetings held while in office | Number of meetings attended |
|-------------------|----------|-------------------|---|-----------------------------|
| Paul Greenfield | Chair | 10 July 2017 | 9 | 8 |
| Malcolm Buckby | Director | 4 May 2017 | 9 | 8 |
| Kevin Hall | Director | 4 May 2017 | 9 | 5 |
| Ralph Hardy | Director | 28 June 2017 | 9 | 9 |
| Diana Parsons | Director | 4 May 2017 | 9 | 6 |
| Roger Swift | Director | 10 July 2017 | 9 | 9 |
| Robbie Sefton | Director | 28 August 2017 | 8 | 8 |
| Anna Lavelle | Director | 14 September 2017 | 6 | 5 |
| Kate Lorimer-Ward | Director | 24 January 2018 | 3 | 2 |
| Charles Wong* | Director | 26 July 2017 | 3 | 3 |




*Charles Wong, a non-independent Director from HLM Asia Pty Ltd, resigned on 21 September 2017.

BOARD MEETINGS




Board meetings were held at locations associated with our participant organisations, or by teleconference. Board meetings will continue to be held at different locations across Australia in order to maximise interactions with our participants in all states.

| Number | Date | Location |
|--------|-------------------|---|
| 1 | 26 July 2017 | University of Newcastle, Newcastle, NSW |
| 2 | 28 August 2017 | Adelaide Showground, Adelaide, SA |
| 3 | 11 September 2017 | Teleconference |
| 4 | 16 October 2017 | Teleconference |
| 5 | 29 November 2017 | University of Newcastle, Newcastle, NSW |
| 6 | 17 January 2018 | Teleconference |
| 7 | 21 February 2018 | University of Tasmania, Hobart, TAS |
| 8 | 8 April 2018 | Teleconference |
| 9 | 30 May 2018 | Murdoch University, Perth, WA |




DIRECTORS

| Name | Board Position | Key Skills |
|--|--|--|
| <p>Dr Paul Greenfield AO FTSE</p>  | <p>Chair Independent</p> | <p>Dr Paul Greenfield is a chemical engineer who worked at the University of Queensland holding senior roles including Vice-Chancellor (2008-2011), Deputy Vice-Chancellor (Research), Senior Deputy Vice-Chancellor and Provost.</p> <p>Dr Greenfield has extensive experience as a Board Director on company and CRC boards. He has worked widely with industry on projects spanning the biotechnology, water and energy sectors.</p> <p>Dr Greenfield was awarded an Order of Australia in 2006 for service to science and engineering. He is a Fellow of the Australian Academy of Technology and Engineering (FTSE), and the Institution of Chemical Engineers, UK and an Honorary Fellow of the Institution of Engineers, Australia. Dr Greenfield is Chair of the International Water Centre and is on the Board of the Great Barrier Reef Foundation.</p> |
| <p>Malcolm Buckby</p>  | <p>Director South Australian Grains Industry Trust</p> | <p>Malcolm Buckby is the Manager of the South Australian Grain Industry Trust (SAGIT), responsible for SAGIT's investment in research and development projects to support the South Australian grain industry.</p> <p>He is also the Manager for Rural Services for the Royal Agricultural and Horticultural Society of South Australia. His office provides financial and administration services to 28 state and national agricultural groups.</p> <p>Malcolm was elected as a State Member of Parliament from 1993 to 2006 in the South Australian electorate of Light. He graduated from the University of Adelaide with a Bachelor of Agricultural Science. As a former research economist and farmer, Malcolm brings a strong knowledge of agricultural issues to the Board.</p> |
| <p>Prof Kevin Hall</p>  | <p>Director University of Newcastle</p> | <p>Professor Kevin Hall is the Senior Deputy Vice Chancellor (Research and Innovation) at the University of Newcastle and was formerly the Vice-President for Research and External Partnerships at the University of Guelph in Canada.</p> <p>He has held senior academic leadership positions at Queen's University Canada. Professor Hall's research career focussed on water quality modelling, development of environmental monitoring and pathogen detection systems, syndromic surveillance, and water and health in marginalised communities.</p> <p>Professor Hall has been a board member for the Sydney School of Entrepreneurship, Intersect, Newcastle Innovation, Hunter Medical Research Institute, Newcastle Institute for Energy and Resources, CRC CARE, Bioconversion Network and a number of leading Canadian research organisations, partnerships and spin-off companies.</p> |

DIRECTORS cont.

| Name | Board Position | Key Skills |
|--|--|---|
| <p>Ralph Hardy</p>  | <p>Director Independent</p> | <p>Ralph Hardy is a director and senior manager with extensive finance, commercial, and systems experience in the manufacturing and service industries. He currently leads multinational finance teams for the Ampcontrol Group, a role which provides the strategic direction, finance policies and governance framework to all companies in the Group.</p> <p>He is responsible for provision of consolidated financial and management accounting support and reports, multinational shared service centres, treasury, finance funding, tax compliance, statutory compliance and mergers and acquisitions, together with financial management and advice.</p> <p>Ralph has strong financial management experience in a number of jurisdictions in Australia, Asia and Europe. Ralph is also a Director of CRC CARE.</p> |
| <p>Dr Anna Lavelle FTSE</p>  | <p>Director Independent</p> | <p>Dr Anna Lavelle has 25 years' experience serving on Boards. From 2005 to 2016, Dr Lavelle was the CEO of AusBiotech.</p> <p>She has a PhD in Genetics from the University of Melbourne and is a Graduate of the Australian Institute of Company Directors (GAICD). Dr Lavelle is a Fellow of the Australian Academy of Technology and Engineering (FTSE) and the Leadership Victoria Program. In 2015, she was ranked in the global top 100 "World Visionaries" in biotechnology by Scientific American World View.</p> <p>Dr Lavelle is the Independent Chair of Medicines Australia, a Non-executive Director of Haemokinesis, Chair of Australia National Digital Health initiative and Independent Director of ATSE Audit and Risk Committee.</p> |
| <p>Diana Parsons</p>  | <p>Director Central West Farming Systems</p> | <p>Diana and her husband own and manage a livestock, cropping and irrigation farm. Up until June 2018, she was the Chief Executive Officer of Central West Farming Systems.</p> <p>Diana founded "Hear the Bush Beat" in 2009 to provide important community links to government departments and industry. She took part in the RIRDC "Women Affecting Change" program and undertook a Federal bipartisan internship designed to develop skills, strategies and networks to facilitate positive change in rural communities.</p> <p>Diana is a Committee Member of Regional Development Australia Central West NSW and has served on many committees, including the NSW GRDC Farm Business Update Steering Committee and the South East Australia Barley Council. Diana has a Diploma of Agribusiness Management.</p> |

DIRECTORS cont.

| Name | Board Position | Key Skills |
|---|--|--|
| <p>Robbie Sefton</p>  | <p>Director Independent</p> | <p>Robbie Sefton is the Managing Director of strategic communication company Seftons and a farmer of wool, meat and grains. Robbie's strategic communication skills include issues management, corporate social responsibility, stakeholder analysis and engagement, media relations, community consultation, training, corporate image and brand identity, leadership, sponsorship and special interest/advisory group expertise.</p> <p>In 2015, Robbie was named as a Westpac Australian Financial Review Woman of Influence and in 2002, she was RIRDC NSW Rural Woman of the Year.</p> <p>Robbie is also Deputy Chair of the National Australia Day Council, and has sat on advisory panels for the Australian Taxation Office, the Reserve Bank of Australia and Woolworths.</p> |
| <p>Prof Roger Swift FTSE</p>  | <p>Director Independent</p> | <p>Professor Roger Swift is Emeritus Professor of Soil Science at the University of Queensland, where he was previously Executive Dean of the Faculty of Natural Resources, Agriculture and Veterinary Science.</p> <p>He has held a number of academic and research positions in soil science and agriculture at leading institutions in the UK, Australia and New Zealand and was Chief of the CSIRO Division of Soils and Chief Research Scientist (1993-2000).</p> <p>Professor Swift is a world-renowned, extensively-published soil scientist whose major research interests lie in the area of soil chemistry. He is a Fellow of the Australian Academy of Technology and Engineering (FTSE) and the Royal Society of Chemistry (FRSC) and is a long-serving Board Member of the International Union of Soil Science (1990-94 and 2006-18).</p> |
| <p>Kate Lorimer-Ward</p>  | <p>Director NSW Department of Primary Industries</p> | <p>Kate Lorimer-Ward has high level strategic planning and corporate governance skills and has been responsible for managing small and large programs, including RD&E units. She is a senior executive in the NSW public service, with the NSW Department of Primary Industries.</p> <p>She has extensive knowledge of agriculture and agricultural communities from her roles in the NSW public sector over the past 25 years, has held positions on Boards and inter-jurisdictional committees, and is a member of the Australian Institute of Company Directors.</p> <p>Kate has a Bachelor of Arts majoring in soils and social geography, an Executive Masters in Public Administration and a Post Graduate Certificate in Climate Change for Primary Industries.</p> |

AUDIT AND RISK MANAGEMENT COMMITTEE (ARMC)

The primary purpose of the ARMC is to assist the Board in fulfilling its responsibilities relating to the accounting and reporting practices of the Company and provide oversight in respect of the risk management activities of the Company.

| Name | Role | Key Skills |
|----------------|-----------------|-----------------------|
| Ralph Hardy | Chair, Director | See Board description |
| Malcolm Buckby | Director | See Board description |
| Robbie Sefton | Director | See Board description |

The ARMC met on five occasions in 2017-18.

RESEARCH AND ADOPTION COMMITTEE (RAC)

The primary role of the RAC is to provide oversight of the research, adoption and education activities of the Soil CRC and review and advise the Board and the CEO on proposals for project funding.

| Name | Role | Key Skills |
|------------------|---|--|
| Roger Swift | Chair, Independent Director, Researcher | See Board description |
| Michael Crawford | CEO | |
| Neil Ballard | Independent End-User | Farmer, seed grower, consultant, Western Australia |
| Hong Di | International Researcher | Professor of Soil and Environmental Science, Lincoln University, New Zealand |
| Anna Lavelle | Independent Director | See Board description |
| Ann McNeill | Australian-based Researcher | Adjunct Associate Professor, University of Adelaide, South Australia |
| Diana Parsons | Non Independent Director, End-User | See Board description |
| Chris Sounness | End-User | CEO of Birchip Cropping Group |

The RAC was established in February 2018 and met on one occasion in 2017-18.

NOMINATIONS AND SELECTION COMMITTEE (NSC)

The NSC meets on an as-needs basis to make recommendations regarding the appointment of the Chair, the CEO and Directors.

| Name | Role | Key Skills |
|-----------------|-----------------|-----------------------|
| Paul Greenfield | Chair, Director | See Board description |
| Malcolm Buckby | Director | See Board description |
| Roger Swift | Director | See Board description |

Three meetings were held in 2016-17 subsequent to the announcement of the CRC and a further three were held in 2017-18.

REMUNERATION COMMITTEE

The purpose of the Remuneration Committee is to give the Board comfort that:

- Executives occupying senior management positions within the Company receive sufficient incentive to motivate enhanced performance and that they are fairly rewarded for their individual contributions to the Company's overall performance having due regard to the interests of the shareholders and the financial position of the Company.
- Levels of remuneration are sufficient to attract and retain executives of the quality required to successfully manage the Company.
- A succession plan is in place for the Company, noting that some of the key individuals may not be in the direct employ of the Company.

| Name | Role | Key Skills |
|-----------------|-----------------|-----------------------|
| Paul Greenfield | Chair, Director | See Board description |
| Kevin Hall | Director | See Board description |
| Roger Swift | Director | See Board description |

The Remuneration Committee met on one occasion in 2017-18.

COMPANY SECRETARY

Company Secretary services are provided to the Company by an external organisation, CooperConsult, specifically Catherine Cooper and Nick Baldock.

STAFF OF THE SOIL CRC

Staff

| Name | Organisation | CRC Position / role | Time commitment (FTE) |
|---------------------|--------------|-------------------------|-----------------------|
| Dr Michael Crawford | Soil CRC | Chief Executive Officer | 1.0 |
| Jodi McLean | Soil CRC | Operations Manager | 1.0 |
| Mark Flick* | Soil CRC | Finance Manager | 0.5 |
| Katherine Seddon | Soil CRC | Communications Manager | 0.8 |
| Kathy Stokes | Soil CRC | Executive Assistant | 1.0 |
| Jessie Xu* | Soil CRC | Finance Officer | 0.4 |

Program Leaders**

| Name | Organisation | CRC Position / role | Time commitment (FTE) |
|----------------------------|--------------------------------------|---------------------|-----------------------|
| Assoc Prof Catherine Allan | Charles Sturt University | Program 1 Leader | 0.5 |
| Dr Richard Doyle | University of Tasmania | Program 2 Leader | 0.5 |
| Prof Nanthi Bolan | University of Newcastle | Program 3 Leader | 0.5 |
| Dr Lukas Van Zwieten | NSW Department of Primary Industries | Program 4 Leader | 0.5 |

*Mark Flick and Jessie Xu are employed by CRC CARE and provide support to the Soil CRC under a Shared Financial Services agreement.

**Program Leaders are provided by their host organisation as an in-kind contribution to the Soil CRC.

FINANCIAL MANAGEMENT

The Soil CRC depends on the continued support from its participants and the Commonwealth Government for its ongoing operations.

During the 2017-18 financial period, 71% of the Company's contributions (cash/ in-kind) were sourced from participants and 29% from the Commonwealth.

The Company had collected all the contracted participants' cash contributions for the period by 30 June 2018 resulting in no accounts receivable position for participant's contributions at that date.

Four bid partners did not proceed to contract and the Company was able to mitigate the financial impact by: contracting Griffith University as a new participant, attracting third party funds and tight cost control. Subsequent to the reporting period, the Company has signed a Deed of Variation with the Commonwealth on 13 August 2018 that reflects the contracted participant position and the commitment of the company to achieve the milestones of the activities.

The overall financial performance of the Soil CRC is on track to achieve its milestones for the activities within the committed contribution levels. Strategies during the 2017-18 financial year included maintaining tight cost control and seeking additional participant contributions.

As for all CRCs, the continuing financial sustainability of the Soil CRC and its ability to support existing and new projects are dependent on the Company being successful in:

- receiving the continuing support of its participants and the Commonwealth of Australia
- negotiating additional funding
- achieving sufficient future cash flows to enable its obligations to be met.

The Directors believe that the Company will be successful in the above matters and, accordingly, the accounts have been prepared on a going concern basis.

The overall financial management of the CRC is provided by way of a shared financial services arrangement with CRC CARE Pty Ltd. The shared financial service provides a Finance Manager, Mark Flick a Chartered Accountant, and a Finance Officer, Jessie Xu. By leveraging the existing systems and controls of CRC CARE, the Company has fast tracked its financial systems and controls during the start-up phase, while reducing administration costs.

The recent audit of the company noted that there were no control issues or recommendations for improvement identified during the 2018 audit process. The shared financial service reports to the CEO provides quarterly financial updates to the Board and its Audit and Risk Management Committee.

The independent auditor's report to the members of the Soil CRC for the financial period ending 30 June 2018 has expressed the opinion that the financial report of Soil CRC has been prepared in accordance with the Corporations Act 2001.

Their opinion further states that the financial report as at 30 June 2018 gives a true and fair view of the Company's financial position as at that date and of its performance for the period ended on that date, and complies with Australian Accounting Standards.

OTHER ACTIVITIES

CRC future plans and transition arrangements

In the first year of the Soil CRC, the focus has been on establishing the structures and processes to ensure that we deliver the agreed outputs over the 10-year life of the CRC, and maximise the utilisation of these outputs by our participants, collaborators and end-users.

Consequently, not much attention has been specifically directed towards post-CRC activity (2027 onwards), but this will have an increased focus as the CRC progresses.

Monitoring and review activity update

The Soil CRC has not been subject to monitoring or review during the reporting period.

Activities not covered by the Funding Agreement

There have been no additional activities undertaken by the Soil CRC during the reporting period outside of the activities covered by the Funding Agreement.





FINANCIAL REPORT

CRC for High Performance Soils Limited

ACN 618 897 224

Cooperative Research Centre
For High Performance Soils

Financial Statements

For the Financial Period Ended
30 June 2018

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DIRECTORS' REPORT

The Directors present their report on CRC for High Performance Soils Limited for the financial period from incorporation to 30 June 2018.

Directors

The names of the Directors in office at any time during, or since the end of, the financial period are:

| Name | Position | Appointed |
|------------------------------|----------|-------------------|
| Paul Greenfield | Chairman | 10 July 2017 |
| Anna Lavelle | Director | 14 September 2017 |
| Diana Janet Hazelton-Parsons | Director | 04 May 2017 |
| Kate Alexandra Lorimer-Ward | Director | 24 January 2018 |
| Kevin Hall | Director | 04 May 2017 |
| Malcolm Robert Buckby | Director | 04 May 2017 |
| Ralph Hardy | Director | 28 June 2017 |
| Robbie Sefton | Director | 28 August 2017 |
| Roger Samuel Swift | Director | 10 July 2017 |

Charles Wong Appointed 26 July 2017 and resigned 21 September 2017.

Directors have been in office from incorporation to the date of this report unless otherwise stated.

Principal activities

The company was incorporated on 4 May 2017.

The principal activity of CRC for High Performance Soils Limited during the financial period was to fund research programs, to help farmers bridge the gap between soil science and farm management giving them the tools and knowledge to make decisions on complex soil management issues.

No significant changes in the nature of the Company's activity occurred during the financial period.

Members' guarantee

CRC for High Performance Soils Limited is a company limited by guarantee. In the event of, and for the purpose of winding up of the company, the amount capable of being called up from each member and any person or association who ceased to be a member in the from date of commencement of operations prior to the winding up, is limited to \$100 per member subject to the provisions of the company's constitution.

At 30 June 2018 the collective liability of members was \$200.

DIRECTORS' REPORT cont.

Review of operations

The Company specialises in research and development of technologies to provide farmers with knowledge and tools they need to make decisions on extremely complex soil management issues. During the period, the Company received cash contributions of \$5,744,000 and in-kind contributions of \$6,192,220.

Events after the reporting date

No matters or circumstances have arisen since the end of the financial period which have significantly affected or may significantly affect the operations of the Company, the results of those operations or the state of affairs of the Company in future financial years.

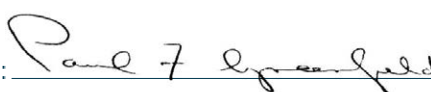
Future developments and results

Likely developments in the operations of the Company and the expected results of those operations in future financial years have not been included in this report as the inclusion of such information is likely to result in unreasonable prejudice to the Company.

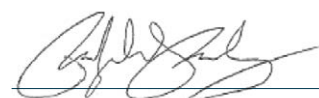
Auditor's independence declaration

The lead Auditor's independence declaration in accordance with section 307C of the Corporations Act 2001, for the financial period ended 30 June 2018 has been received and can be found on page 45 of the financial report.

Signed in accordance with a resolution of the Board of Directors:

Chairman: 

Paul Greenfield

Director: 

Ralph Hardy

Dated : 8 October 2018

AUDITOR'S INDEPENDENCE DECLARATION UNDER SECTION 307C OF THE CORPORATIONS ACT 2001

I declare that, to the best of my knowledge and belief,
during the period ended 30 June 2018, there have been:

(i) no contraventions of the auditor independence
requirements as set out in the Corporations Act 2001
in relation to the audit; and

(ii) no contraventions of any applicable code
of professional conduct in relation to the audit.

PKF

PKF

Martin Matthews

Martin Matthews

Partner

8 October 2018

Newcastle, NSW

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the financial period ended 30 June 2018

| | Note | 2018 \$ |
|--|------|-------------|
| Revenue | 4 | 7,862,588 |
| Other income | 4 | 344,737 |
| Consultants fees | | (39,167) |
| Employee benefits expense | | (739,640) |
| Finance costs | | (771) |
| IT expenses | | (11,008) |
| Legal expenses | | (85,353) |
| Other expenses | 5 | (377,492) |
| Research expenditure – cash | | (437,702) |
| Research expenditure – in-kind | | (6,192,220) |
| Travel expenses | | (31,245) |
| Bid expenses | | (292,727) |
| Surplus before income tax | | - |
| Income tax expense | 2(i) | - |
| Surplus after income tax | | - |
| Other comprehensive income | | - |
| Total comprehensive income for the year | | - |

The accompanying notes form part of these financial statements.

STATEMENT OF FINANCIAL POSITION

As at 30 June 2018

| | Note | 2018 \$ |
|-----------------------------|------|------------------|
| Assets | | |
| Current assets | | |
| Cash and cash equivalents | 6 | 4,672,812 |
| Trade and other receivables | 7 | 788,000 |
| Other assets | | 7,622 |
| Total current assets | | 5,468,434 |
| Non-current assets | | - |
| Total assets | | 5,468,434 |

| | | |
|----------------------------------|---|------------------|
| Liabilities | | |
| Current liabilities | | |
| Trade and other payables | 8 | 526,385 |
| Employee benefits | | 16,417 |
| Deferred revenue | 9 | 4,925,632 |
| Total current liabilities | | 5,468,434 |
| Non-current liabilities | | - |
| Total liabilities | | 5,468,434 |
| Net assets | | - |

| | | |
|---------------------|--|----------|
| Equity | | |
| Accumulated surplus | | - |
| Total equity | | - |

STATEMENT OF CHANGES IN EQUITY

For the financial period ended 30 June 2018

| 2018 | Accumulated Surplus \$ | Total \$ |
|----------------------------------|------------------------|----------|
| Balance at incorporation | - | - |
| Surplus for the financial period | - | - |
| Balance at 30 June 2018 | - | - |

The accompanying notes form part of these financial statements.

STATEMENT OF CASH FLOWS

For the financial period ended 30 June 2018

| | Note | 2018 \$ |
|--|------|-------------|
| Cash flows from operating activities | | |
| Cash contributions received from Commonwealth (inclusive of GST) | | 3,764,200 |
| Cash contributions received from all participants (inclusive of GST) | | 2,554,200 |
| Payments to suppliers and employees | | (1,666,827) |
| Interest received | | 22,010 |
| Finance costs | | (771) |
| Net cash provided by operating activities | 13 | 4,672,812 |
| Cash flows from investing activities | | |
| Net cash provided by/(used in) investing activities | | - |
| Cash flows from financing activities | | |
| Net cash provided by/(used in) investing activities | | - |
| Net increase/(decrease) in cash and cash equivalents held | | 4,672,812 |
| Cash and cash equivalents at end of the financial period | 6 | 4,672,812 |

The accompanying notes form part of these financial statements.

NOTES TO THE FINANCIAL STATEMENTS

For the financial period ended 30 June 2018

The financial report covers CRC for High Performance Soils Limited as an individual entity. CRC for High Performance Soils Limited is a not-for-profit Company limited by guarantee, incorporated and domiciled in Australia.

The functional and presentation currency of CRC for High Performance Soils Limited is Australian dollars.

There are no comparatives as the entity was incorporated in May 2017.

1 Basis of preparation

In the Directors' opinion, the Company is not a reporting entity since there are unlikely to exist users of the financial statements who are not able to command the preparation of reports tailored so as to satisfy specifically all of their information needs. This special purpose financial report has been prepared to meet the reporting requirements of the Corporations Act 2001.

The financial statements have been prepared in accordance with the recognition and measurement principles of all applicable Australian Accounting Standards and Interpretations issued by the Australian Accounting Standards Board and the Corporations Act 2001.

2 Summary of significant accounting policies

(a) Revenue and other income

Revenue is measured at the fair value of the consideration received or receivable. Amounts disclosed as revenue are net of returns, trade allowances, rebates and amounts collected on behalf of third parties.

The Company recognises revenue when the amount of revenue can be reliably measured, it is probable that future economic benefits will flow to the entity and specific criteria have been met for each of the Company's activities as described below. The Company bases its estimates on historical results, taking into consideration the type of customer, the type of transaction and the specifics of each arrangement.

Grant revenue

Grants from the government are recognised at their fair value where there is a reasonable assurance that the grant will be received and the Company will comply with all attached conditions.

Government grants relating to costs which have not yet been incurred are included in deferred revenue in current liabilities and are credited to the statement of comprehensive income in the period necessary to match them with the costs that they are intended to compensate.

Government grants relating to the purchase of property, plant and equipment are included in non-current liabilities as deferred revenue and are credited to the statement of comprehensive income over the expected lives of the related assets.

Participants' contributions

Contributions received in cash (recorded as deferred revenue on receipt - for further information refer note 9) and in-kind from the Participants during the financial year are applied to expenditure incurred in carrying out the affairs of the Company under the terms of the Participants Agreement between the Company and the entities who have undertaken to provide contributions to the Company (other than the Commonwealth of Australia).

Contributions as detailed in note 15 are calculated on a cash basis for reporting purpose to Commonwealth of Australia.

(b) In-kind contributions

In-kind contributions of staff by research providers are valued in accordance with the Commonwealth Agreement, as per Table 1 of the Schedule 4 of the Agreement.

Non-staff in-kind contributions are valued on the following bases:

1. Buildings - a reasonable estimate of the commercial rental value related to the area and time period of occupation related to the activities of the Company.
2. Capital equipment - either an allocation of the replacement cost of the equipment apportioned over the proportion of the useful life utilised by the activities of the Company or an agreed value determined with reference to the cost of an equipment service from a commercial operator.

NOTES TO THE FINANCIAL STATEMENTS cont.

For the financial period ended 30 June 2018

Office accommodation is provided by the University of Newcastle as part of the Participants Agreement and are treated as in-kind contributions.

Where a value cannot be readily obtained by applying the policy rules set out above, a Directors' valuation is used.

(c) Cash and cash equivalents

Cash and cash equivalents includes cash on hand, deposits held at call with financial institutions, other short term, highly liquid investments with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

(d) Financial instruments

Financial assets

Financial assets relate to term deposits held to maturity with an original maturity of more than three months at the inception of the instrument.

Trade and receivables

Trade receivables are recognised initially at fair value and subsequently measured at amortised cost, less provision for doubtful debts. Trade receivables are due for settlement no more than 30 days.

Collectability of trade receivables is reviewed on an ongoing basis. Debts which are known to be uncollectible are written off. A provision for doubtful debts is used when there is objective evidence that the company will not be able to collect all amounts due according to the original terms of the receivables. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. The amount of the provision is recognised in the statement of comprehensive income.

(e) Impairment of assets

Assets that are subject to depreciation or amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units).

(f) Trade creditors

All trade creditors unpaid as at the reporting date are recognised at the amount invoiced, net of any applicable taxes. The Company's policy is to pay trade creditors no more than 30 days from the date of invoice.

(g) Employee benefits

(i) *Wages and salaries, annual leave and sick leave:*

Liabilities for wages and salaries, including non-monetary benefits, accumulating sick leave and annual leave expected to be settled within 12 months of the reporting date are recognised in respect of employee's services up to the reporting date and are measured at the amounts expected to be paid when the liabilities are settled.

Liabilities for non-accumulating sick leave are recognised when the leave is taken and measured at the rates paid or payable.

NOTES TO THE FINANCIAL STATEMENTS cont.

For the financial period ended 30 June 2018

(iii) Long service leave:

The liabilities for long service leave and annual leave are not expected to be settled wholly within 12 months after the end of the period in which the employees render the related service. They are therefore measured as the present value of expected future payments to be made in respect of services provided by employees up to the end of the reporting period using the projected unit credit method. Consideration is given to expected future wage and salary levels, experience of employee departures and periods of service.

Expected future payments are discounted using market yields at the end of the reporting period of corporate bonds with terms and currencies that match, as closely as possible, the estimated future cash outflows. Remeasurements as a result of experience adjustments and changes in actuarial assumptions are recognised in profit or loss.

(h) Research expenditure

Research expenditure are recognised as incurred and consist of costs incurred as part of day to day research and development activities for research programs. The main items of expenditure are salaries, equipment, consumables and travel costs.

Salaries relate to research and non-research staff working directly on research programs. In some instances salary costs may be allocated between research expenditure and employee benefits when it is identified that time can be specifically attributed to research programs.

(i) Income tax

The Company is exempt from income tax under Division 50 of the *Income Tax Assessment Act 1997*.

(j) New accounting standards and interpretations

None of the new standards and amendments to standards that are mandatory for the first time for the financial period affected any of the amounts recognised in the current period and are not likely to affect future periods.

The Company has not elected to apply any pronouncements before their operative date.

3 Critical accounting estimates and judgments

The preparation of financial statements requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Company's accounting policies. Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectation of future events that may have a financial impact on the entity and that are believed to be reasonable under the circumstances.

The areas involving a higher degree of judgement or complexity, or areas where assumptions or estimates are significant to the financial statements are detailed below.

Key estimates – in-kind contributions

Staff contributions are valued in accordance with guidelines and the multiplier set by the Commonwealth of Australia and as detailed in note 2(a). The actual time recorded on project work requires a certain level of estimate and judgement by Project Leaders. In applying that judgement, consideration is given to project budgets and agreements, as set out and approved by Participants and the Company.

The capital and equipment rates and useful lives used for contributions are based on estimations and agreements as calculated by project Participants and the Company. Valuations are generally based on estimates of the percentage utilisation of capital and equipment depreciation directly related to project output.

The Company believes that the estimates and assumptions in relation to in-kind contributions result in recognition of amounts that represent the fair value of contributions received.

NOTES TO THE FINANCIAL STATEMENTS cont.

For the financial period ended 30 June 2018

4 Revenue and other income

Revenue from continuing operations

| | 2018 \$ |
|---|------------------|
| Contributions revenue | |
| Allocated contributions from Commonwealth/Participants – cash | 1,670,368 |
| Allocated contributions from Participants – in-kind | 6,192,220 |
| Total contributions revenue | 7,862,588 |
| Other income | |
| Bid revenue | 322,727 |
| Interest received | 22,010 |
| Total other income | 344,737 |
| Total revenue and other income | 8,207,325 |

5 Other expenses

| | |
|-----------------|----------------|
| Board expenses | 207,659 |
| Insurance | 19,503 |
| Communication | 54,424 |
| Compliance fees | 15,140 |
| Marketing | 46,136 |
| Other expenses | 34,310 |
| | 377,492 |

6 Cash and cash equivalents

| | 2018 \$ |
|------------------|------------------|
| Cash at bank | 1,672,812 |
| Deposits at call | 3,000,000 |
| | 4,672,812 |

7 Trade and other receivables

| Current | |
|-------------------|----------------|
| Trade receivables | 788,000 |
| | 788,000 |

8 Trade and other payables

| Current | |
|------------------|----------------|
| Trade payables | 69,641 |
| GST payable | 97,193 |
| Accrued expenses | 359,551 |
| | 526,385 |

9 Deferred revenue

| Current | |
|--|------------------|
| Contributions from Commonwealth and Participants | 4,659,132 |
| Other deferred revenue | 266,500 |
| | 4,925,632 |

As per the accounting policy in note 2, contributions from the Commonwealth of Australia and Participants (both cash and in-kind) are treated as deferred revenue until matched against expenditure in the course of the Company's activities.

NOTES TO THE FINANCIAL STATEMENTS cont.

For the financial period ended 30 June 2018

In the event of a wind up of the Company, any deferred revenue not matched against expenditure is required to be returned to the Commonwealth of Australia and individual Participants in accordance with the terms of the Agreements.

Deferred revenue arising from obligations to make contributions to the Company and not allocated to program expenses at balance date has been included as a current liability as it is anticipated that the relevant sum will be matched against expenditure during subsequent financial years.

10 Members' guarantee

The Company is incorporated under the Corporations Act 2001 and is a Company limited by guarantee. If the Company is wound up, the constitution states that each member is required to contribute a maximum of \$100 each towards meeting any outstandings and obligations of the Company. At 30 June 2018 the number of members was two.

11 Auditors' remuneration

| | 2018 \$ |
|--|---------------|
| Remuneration of the auditor PKF, for: | |
| Auditing the financial statements | 17,500 |
| | 17,500 |

12 Contingencies

In the opinion of the Directors, the Company did not have any contingencies at 30 June 2018.

13 Cash flow information

(a) Reconciliation of result for the period to cashflows from operating activities

| | 2018 \$ |
|---|---------|
| Reconciliation of surplus to net cash provided by operating activities | |
| Surplus for the financial period | - |

| Changes in assets and liabilities: | |
|---|------------------|
| (Increase)/decrease in accrued revenue | (788,000) |
| (Increase)/decrease in other current assets | (7,622) |
| Increase/(decrease) in deferred revenue | 4,925,632 |
| Increase/(decrease) in trade and other payables | 526,385 |
| Increase/(decrease) in employee benefits | 16,417 |
| Cashflows from operations | 4,672,812 |

14 Events occurring after the reporting date

The financial report was authorised for issue on 8 October 2018 by the Board of Directors.

No matters or circumstances have arisen since the end of the financial period which significantly affected or may significantly affect the operations of the Company, the results of those operations, or the state of affairs of the Company in future financial years.

NOTES TO THE FINANCIAL STATEMENTS cont.

For the financial period ended 30 June 2018

15 Participants' contributions

(Cash basis ex GST as per note 2a)

| | 2018 \$ |
|--|--------------|
| Australian Organics Recycling Association Limited | |
| Cash contributions | - |
| In-kind contributions (Staff) | 7,500 |
| In-kind contributions (Other) | - |
| Total | 7,500 |

| | 2018 \$ |
|--|--------------|
| Corrigin Farm Improvement Group | |
| Cash contributions | - |
| In-kind contributions (Staff) | 5,000 |
| In-kind contributions (Other) | - |
| Total | 5,000 |

| | |
|-----------------------------------|---------------|
| Birchip Cropping Group Inc | |
| Cash contributions | 5,000 |
| In-kind contributions (Staff) | 55,000 |
| In-kind contributions (Other) | 8,650 |
| Total | 68,650 |

| | |
|--|----------------|
| Department of Economic Development, Jobs, Transport and Resources | |
| Cash contributions | - |
| In-kind contributions (Staff) | 385,000 |
| In-kind contributions (Other) | 199,000 |
| Total | 584,000 |

| | |
|---|---------------|
| Burdekin Productivity Services Limited | |
| Cash contributions | - |
| In-kind contributions (Staff) | 15,000 |
| In-kind contributions (Other) | 1,000 |
| Total | 16,000 |

| | |
|---|----------------|
| Department of Industry Skills and Regional Development | |
| Cash contributions | 75,000 |
| In-kind contributions (Staff) | 595,000 |
| In-kind contributions (Other) | 308 |
| Total | 670,308 |

| | |
|---|----------------|
| Central West Farming Systems Inc | |
| Cash contributions | - |
| In-kind contributions (Staff) | 130,000 |
| In-kind contributions (Other) | 23,535 |
| Total | 153,535 |

| | |
|---|----------------|
| Department of Primary Industries and Regions | |
| Cash contributions | 100,000 |
| In-kind contributions (Staff) | 60,000 |
| In-kind contributions (Other) | 5,805 |
| Total | 165,805 |

| | |
|---------------------------------|----------------|
| Charles Sturt University | |
| Cash contributions | 200,000 |
| In-kind contributions (Staff) | 345,000 |
| In-kind contributions (Other) | 3,600 |
| Total | 548,600 |

NOTES TO THE FINANCIAL STATEMENTS cont.

For the financial period ended 30 June 2018

| | 2018 \$ |
|--|---------------|
| Eyre Peninsula Agricultural Research Foundation Inc | |
| Cash contributions | - |
| In-kind contributions (Staff) | 10,000 |
| In-kind contributions (Other) | 2,000 |
| Total | 12,000 |

| | 2018 \$ |
|---|---------------|
| Hart Field Site Group Incorporated | |
| Cash contributions | - |
| In-kind contributions (Staff) | 15,000 |
| In-kind contributions (Other) | - |
| Total | 15,000 |

| | |
|-------------------------------|----------------|
| Facey Group Inc | |
| Cash contributions | 5,000 |
| In-kind contributions (Staff) | 250,000 |
| In-kind contributions (Other) | 8,500 |
| Total | 263,500 |

| | |
|---|---------------|
| Herbert Cane Productivity Services Limited | |
| Cash contributions | - |
| In-kind contributions (Staff) | 12,500 |
| In-kind contributions (Other) | 4,000 |
| Total | 16,500 |

| | |
|----------------------------------|---------------|
| Farmlink Research Limited | |
| Cash contributions | - |
| In-kind contributions (Staff) | 20,000 |
| In-kind contributions (Other) | 5,000 |
| Total | 25,000 |

| | |
|--------------------------------|---------------|
| Holbrook Landcare Group | |
| Cash contributions | - |
| In-kind contributions (Staff) | 15,000 |
| In-kind contributions (Other) | 1,463 |
| Total | 16,463 |

| | |
|--|----------------|
| Federation University Australia | |
| Cash contributions | 100,000 |
| In-kind contributions (Staff) | 500,000 |
| In-kind contributions (Other) | 80,000 |
| Total | 680,000 |

| | |
|--|----------------|
| Landcare Research (New Zealand) | |
| Cash contributions | 267,000 |
| In-kind contributions (Staff) | 135,000 |
| In-kind contributions (Other) | 2,777 |
| Total | 404,777 |

| | |
|-------------------------------|----------------|
| Griffith University | |
| Cash contributions | 100,000 |
| In-kind contributions (Staff) | 160,000 |
| In-kind contributions (Other) | 67,803 |
| Total | 327,803 |

| | |
|------------------------------------|----------------|
| Landmark Operations Limited | |
| Cash contributions | - |
| In-kind contributions (Staff) | 232,500 |
| In-kind contributions (Other) | 2,250 |
| Total | 234,750 |

NOTES TO THE FINANCIAL STATEMENTS cont.

For the financial period ended 30 June 2018

15 Participants' contributions cont.

| | 2018 \$ |
|--|--------------|
| Mackillop Farm Management Group Inc | |
| Cash contributions | - |
| In-kind contributions (Staff) | 5,000 |
| In-kind contributions (Other) | - |
| Total | 5,000 |

| | 2018 \$ |
|---|----------------|
| South Australian Grain Industry Trust Fund | |
| Cash contributions | 150,000 |
| In-kind contributions (Staff) | 10,000 |
| In-kind contributions (Other) | - |
| Total | 160,000 |

| | |
|---------------------------------------|--------------|
| Mallee Sustainable Farming Inc | |
| Cash contributions | - |
| In-kind contributions (Staff) | 7,500 |
| In-kind contributions (Other) | 250 |
| Total | 7,750 |

| | |
|-------------------------------------|----------------|
| South East Water Corporation | |
| Cash contributions | 30,000 |
| In-kind contributions (Staff) | 80,000 |
| In-kind contributions (Other) | 150,000 |
| Total | 260,000 |

| | |
|-------------------------------|----------------|
| Murdoch University | |
| Cash contributions | 150,000 |
| In-kind contributions (Staff) | 30,000 |
| In-kind contributions (Other) | 6,250 |
| Total | 186,250 |

| | |
|----------------------------------|----------------|
| Southern Cross University | |
| Cash contributions | 200,000 |
| In-kind contributions (Staff) | 655,000 |
| In-kind contributions (Other) | 13,563 |
| Total | 868,563 |

| | |
|---|---------------|
| North Central Catchment Management Authority | |
| Cash contributions | - |
| In-kind contributions (Staff) | 27,500 |
| In-kind contributions (Other) | - |
| Total | 27,500 |

| | |
|---|---------------|
| Southern Farming Systems Limited | |
| Cash contributions | - |
| In-kind contributions (Staff) | 12,500 |
| In-kind contributions (Other) | 5,838 |
| Total | 18,338 |

| | |
|-------------------------------------|---------------|
| Riverine Plains Incorporated | |
| Cash contributions | - |
| In-kind contributions (Staff) | 17,500 |
| In-kind contributions (Other) | - |
| Total | 17,500 |

| | |
|--|---------------|
| Society of Precision Agriculture Australia (SPAA) | |
| Cash contributions | - |
| In-kind contributions (Staff) | 52,500 |
| In-kind contributions (Other) | - |
| Total | 52,500 |

NOTES TO THE FINANCIAL STATEMENTS cont.

For the financial period ended 30 June 2018

| | 2018 \$ |
|-------------------------------|--------------|
| The Gillamii Centre | |
| Cash contributions | - |
| In-kind contributions (Staff) | 2,500 |
| In-kind contributions (Other) | - |
| Total | 2,500 |

| | 2018 \$ |
|-------------------------------|----------------|
| University of Tasmania | |
| Cash contributions | 150,000 |
| In-kind contributions (Staff) | 285,000 |
| In-kind contributions (Other) | 30,000 |
| Total | 465,000 |

| | |
|-------------------------------|---------------|
| The Liebe Group Inc | |
| Cash contributions | - |
| In-kind contributions (Staff) | 12,500 |
| In-kind contributions (Other) | - |
| Total | 12,500 |

| | |
|--|----------------|
| Western Australian No-Tillage Farmers Association | |
| Cash contributions | 10,000 |
| In-kind contributions (Staff) | 100,000 |
| In-kind contributions (Other) | - |
| Total | 110,000 |

| | |
|---|---------------|
| The Trustee for Soils for Life Trust | |
| Cash contributions | 20,000 |
| In-kind contributions (Staff) | 5,000 |
| In-kind contributions (Other) | 3,709 |
| Total | 28,709 |

| | |
|---|---------------|
| Wheatbelt Natural Resource Management Incorporated | |
| Cash contributions | - |
| In-kind contributions (Staff) | 57,500 |
| In-kind contributions (Other) | 12,000 |
| Total | 69,500 |

| | |
|------------------------------------|----------------|
| The University of Newcastle | |
| Cash contributions | 300,000 |
| In-kind contributions (Staff) | 530,643 |
| In-kind contributions (Other) | 96,000 |
| Total | 926,643 |

| | |
|------------------------------------|----------------|
| Wimmera Catchment Authority | |
| Cash contributions | - |
| In-kind contributions (Staff) | 152,500 |
| In-kind contributions (Other) | 15,181 |
| Total | 167,683 |

| | |
|--|----------------|
| University of Southern Queensland | |
| Cash contributions | 150,000 |
| In-kind contributions (Staff) | 417,500 |
| In-kind contributions (Other) | 35,595 |
| Total | 603,095 |

NOTES TO THE FINANCIAL STATEMENTS cont.

For the financial period ended 30 June 2018

15 Participants' contributions cont.

| | 2018 \$ |
|---------------------------------------|------------------|
| Total Participant Contribution | |
| Cash contributions | 2,012,000 |
| In-kind contributions (Staff) | 5,408,143 |
| In-kind contributions (Other) | 784,077 |
| Total | 8,204,220 |

| | |
|--|------------------|
| Total Commonwealth Contribution | |
| Cash contributions | 3,422,000 |
| Total | 3,422,000 |

| | |
|-------------------------------|-------------------|
| Total Contributions | |
| Cash contributions | 5,434,000 |
| In-kind contributions (Staff) | 5,408,143 |
| In-kind contributions (Other) | 784,077 |
| Total | 11,626,220 |

16 Statutory information

The registered office and principal place of business of the company is:

CRC for High Performance Soils Limited

Level 1 IDC Building
The University of Newcastle
University Drive
Callaghan NSW 2308



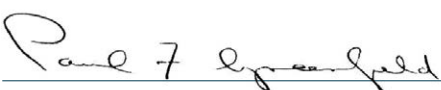
DIRECTORS' DECLARATION

The Directors have determined that the Company is not a reporting entity and that these special purpose financial statements should be prepared in accordance with the accounting policies described in Note 2 of the financial statements.

The Directors of the Company declare that:

1. The financial statements and notes, as set out on pages 46 to 59, are in accordance with the Corporations Act 2001 and:
 - (a) comply with Australian Accounting Standards as stated in Note 1; and
 - (b) give a true and fair view of the financial position as at 30 June 2018 and of the performance for the year ended on that date of is in accordance with the accounting policy described in Note 2 of the financial statements.
2. In the Directors' opinion, there are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable.

This declaration is made in accordance with a resolution of the Board of Directors.

Chairman:  _____

Paul Greenfield

Director:  _____

Ralph Hardy

Dated : 8 October 2018

INDEPENDENT AUDIT REPORT

To the members of CRC for High Performance Soils Limited

Report on the Audit of the Financial Report

Opinion

We have audited the accompanying financial report, being a special purpose financial report of CRC for High Performance Soils Limited (the Company), which comprises the statement of financial position as at 30 June 2018, the statement of profit or loss and other comprehensive income, the statement of changes in equity and the statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, and the directors' declaration.

In our opinion, the accompanying financial report of the Company is in accordance with the *Corporations Act 2001*, including:

- (i) giving a true and fair view of the Company's financial position as at 30 June 2018 and of its financial performance for the year ended; and
- (ii) complying with Australian Accounting Standards to the extent described in Note 1 and the *Corporations Regulations 2001*.

Basis for opinion

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Report* section of our report. We are independent of the Company in accordance with the auditor independence requirements of the *Corporations Act 2001* and the ethical requirements of the Accounting Professional and Ethical Standards Board's *APES 110 Code of Ethics for Professional Accountants* (the Code) that are relevant to our audit of the financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

We confirm that the independence declaration required by the *Corporations Act 2001*, which has been given to the directors of the Company, would be in the same terms if given to the directors as at the time of this auditor's report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of matter — Basis of accounting

We draw attention to Note 1 to the financial report, which describes the basis of accounting. The financial report has been prepared for the purpose of fulfilling the directors' financial reporting responsibilities under the *Corporations Act 2001*. As a result, the financial report may not be suitable for another purpose. Our opinion is not modified in respect of this matter.

Other information

The directors are responsible for the other information. The other information obtained at the date of this auditor's report is included in the Annual Report, but does not include the financial report and our auditor's report thereon.

Our opinion on the financial report does not cover the other information and accordingly we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial report, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial report or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed on the other information obtained prior to the date of this auditor's report, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.



INDEPENDENT AUDIT REPORT *cont.*

To the members of CRC for High Performance Soils Limited

Responsibilities of directors for the financial report

The directors of the Company are responsible for the preparation of the financial report that gives a true and fair view and have determined that the basis of preparation described in Note 1 to the financial report is appropriate to meet the requirements of the Corporations Act 2001 and is appropriate to meet the needs of the members. The directors' responsibility also includes such internal control as the directors determine necessary to enable the preparation of a financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

In preparing the financial report, the directors are responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial report

Our objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial report.

The logo for PKF, consisting of the letters 'PKF' in a bold, stylized, handwritten font.

PKF

A handwritten signature in black ink that reads 'Martin Matthews'.

Martin Matthews

Partner

8 October 2018

Newcastle, NSW

CRC for High Performance Soils Limited

Level 1 IDC Building
The University of Newcastle
University Drive, Callaghan NSW 2308

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Australian Government
Department of Industry,
Innovation and Science

Business
Cooperative Research
Centres Program