

ANNUAL REPORT 2019/2020



FIGHT FOOD WASTE

Cooperative Research Centre

REDUCE - TRANSFORM - ENGAGE



Australian Government
Department of Industry, Science,
Energy and Resources

Business
Cooperative Research
Centres Program



The Fight Food Waste Cooperative Research Centre (CRC) gratefully acknowledges the financial contribution of the Australian Government Department of Industry, Science, Energy and Resources through the CRC program as well as our participants. This report has been prepared to meet the requirements of the CRC program's 2020 annual report guidelines.

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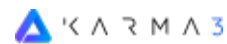
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OUR PARTICIPANTS



2019/2020 MAJOR HIGHLIGHTS

- Transport Canberra City Services Directorate (ACT NoWaste), Western Australia Department of Water and Environmental Regulation, Toowoomba and Surat Basin Enterprise Pty Ltd (Food Leaders Australia), Australian Institute of Packaging Inc and Queensland Department of Environment and Science join the Fight Food Waste Cooperative Research Centre (CRC). Together with increased contributions from existing participants this amounted to near \$1M in additional cash investment.
- First Annual Conference at KPMG in Melbourne. The Hon Dr Katie Allen launches the Food Waste: Australian Household Attitudes and Behaviours National Benchmarking Study on behalf of the Hon Karen Andrews, Minister for Industry, Science and Technology.
- Launch of the Fight Food Waste SME Solutions Centre with the Queensland Department of Agriculture and Fisheries (QDAF) and Food Innovation Australia Ltd at the QDAF Coopers Plains facility.
- 2018-2028 Fight Food Waste CRC Strategic Plan was published following participant consultation.
- International food waste expert Mark Barthel commences.
- Karli Verghese, Mark Barthel and Steve Lapidge represent the Fight Food Waste CRC at the inaugural Global Table event in Melbourne.
- Fight Food Waste CRC wins the academic category of an online global food waste challenge led out of the UK with entries across a range of categories from 15 countries.
- Presentation at the Pontifical Academy of Sciences Food Loss and Waste Reduction Conference at the Vatican, Rome.
- Sponsored the Australian Institute of Food Science and Technology Student Product Development Competition to create new food products out of food loss and waste streams.
- 2018/2033 Impact Assessment Model developed and considered 'best in class' by the CRC Association.
- Fight Food Waste CRC People and Culture Strategy developed to strengthening its greatest asset: its people.

YEAR 2 ACHIEVEMENTS



Collaboration

- 34 projects involved collaboration between research and industry
- 16 projects involved collaboration between industry participants (two or more in a project)
- 7 projects involved collaboration between research participants (two or more in a project).
- Fight Food Waste CRC held up as 'shining example' of national Public Private Partnership at Reduction on Food loss and Waste Conference, Pontifical Academy of Sciences, Vatican City.

Communication

2020

226 online articles.

- 50% increase from 2019

85 presentations

- 23% increase from 2019

1457 social media mentions

- 76% increase from 2019

2 x TV interview

Education and Training

- 6 PhDs, 2 MScs through the program
- 22 additional students working on Fight Food Waste CRC projects

Research

- 34 projects approved; including Reduce 11, Transform 15, Engage 8
- R&D Expenditure \$17.7M (20% of R&D budget at end of Y2).

2018 – 2028 STRATEGIC PLAN ON A PAGE

An Australia without food waste

The Fight Food Waste Cooperative Research Centre will increase industry profitability, address food insecurity and enhance Australia's reputation as a sustainable food producer

By uniting science and industry we will



REDUCE food waste throughout the supply chain



TRANSFORM unavoidable waste into innovative products



ENGAGE with industry and consumers to deliver behavioural change

2018

Baseline

2028

Accumulative

Grant Agreement targets



1/3
of all food produced

Deliver the Grant Agreement

We will first establish our initial 30-project research, development and extension program based on the best science and expertise with our existing participants. We will then develop and deliver new projects with existing and new participants that ensures we effectively deliver on all Grant Agreement performance milestones.

Deliver Future Initiatives

We will identify and target additional food loss and waste opportunities based on the National Food Waste Baseline and other key reports that will deliver significant food waste reduction and industry benefits to help achieve SDG 12.3. Additionally, we will scope and potentially develop a 10-year national behaviour change program that targets the entire food system, particularly consumers, with the Australian and state and territory governments and industry that reduces and prevents food waste from entering landfill.

30 M T
of reduced food waste



\$2 B

Increase in industry profitability

20 M Kg

of rescued food distributed



5200

circular economy jobs

40

Future Leaders graduated

250 industry people trained p.a.

\$20 Bn p.a.
in Australia

7.3 M T
food waste p.a.

298kg
per Australian per year



13.5 M T
of CO2-e

4 M people food insecure

Our Core Values



Collaboration

We will be greater than the sum of our parts



Innovation

Real impact on food waste reduction and commercial outcomes from the CRC activity



Participant Value Creation

Our participants get more than they expected from being part of the FFW CRC



Our People

To be a workplace of choice for our salaried and in-kind staff



Excellence

To deliver the best that we can for our participants



Accountability

We stand behind our people and our work



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CHAIR'S REPORT



A challenging year for all

We started the year focusing tightly on the \$20 billion annual challenge and opportunity of fighting food waste in Australia – then, as with everyone else, we were required to maintain our focus while facing the evolving challenges imposed by COVID-19. The Board remains extremely concerned for the wellbeing of all our participants and our staff as this challenge continues and is immensely appreciative of the ongoing support and commitment from all in such difficult circumstances.

Our first COVID-19 actions were to ensure funding flexibility for participants and safe working conditions for staff – actions which we believe will best enable us all to maintain momentum, even if at a reduced rate in some cases. The Board and management remain open to all suggestions on how best to navigate in this new world.

On behalf of the Board I am pleased to introduce the Fight Food Waste CRC Annual Report 2019/2020

Despite the challenges of COVID-19 the Board is pleased to report an achievement level of 90% against company KPI's. We, collectively, are well on the way to delivering the goals the CRC was established to deliver.

Strategy for long term success

The *2018-2028 Fight Food Waste CRC Strategic Plan* was finalised and released in February 2020. As a Board, we have defined the values that will underpin this 10-year journey and the Strategic Plan provides the roadmap for strategic direction and investment priorities for the life of the CRC. This plan is intended to provide full transparency of the underlying principles under which the CRC operates and highlights our commitment to our participants, the government and the broader community.



Measuring our impact

Measuring the impact of investment in R&D programs is often undertaken after the event to justify future investment of new funds. Your Board believes that, while this is important, it is more important to focus on the intended impact as one of the initial steps in developing a research project and must be undertaken prior to any funding decision being made. This ensures that all research is undertaken with a focus on achieving clearly defined impacts. During the year the Board's Industry Impact Committee oversaw the development of an Impact Assessment Model that collates impact data in seven key areas – reducing food waste, increasing industry profitability, increasing food rescue for hunger relief, achieving greenhouse gas savings, producing circular economy jobs, graduating future leaders and training industry people.

Future focus

Bringing the above two points together means that the Board's focus in coming years will be on delivering the impact expected by our industry participants for the initial projects and that any 'flexible' funds are focussed in areas that deliver the maximum impact against reducing food waste and increasing industry profitability.

Risk focus

The Board's Audit, Risk Management and Compliance Committee developed a detailed risk framework early in the year. While this framework did not forecast a global pandemic it certainly provided a solid foundation for managing the risks as they emerged.

The coming year

My thanks to all my fellow Directors whose commitment was again unwavering as they dropped everything to address the emerging issues during the year. Thank you also to the team whose flexibility and tenacity enabled operations to not only continue but to thrive during this period. The coming year will retain the challenges of last year and your Board is committed to maintaining progress in the fight against food waste on your behalf despite this difficult environment.

John Webster
Chair



CEO'S REPORT/EXECUTIVE SUMMARY



The last 12 months have been some of the most challenging many of us have faced.

Despite this the Fight Food Waste CRC has had a highly successful second year of operation. This is due to the strength of our collaboration and an unwavering commitment to our vision of an *Australia without food waste*. I sincerely thank all our participants, the Board and our staff for their dedication and determination, particularly during the COVID-19 lockdown. Despite the obvious pressures on our participants and our people we have not had any participant, project or staff withdrawals over the last 12 months. We have also managed to deliver 90% of the 2019/2020 Operational Plan and keep most projects on track. Everyone involved is to be congratulated for this. Despite the uncertainty in 2019/2020 there has been a lot to celebrate.

Below are some of the highlights:

- In early 2019/2020 we welcomed five new core participants to the Fight Food Waste CRC family, including Transport Canberra City Services Directorate (ACT NoWaste), Western Australia Department of Water and Environmental Regulation, Toowoomba and Surat Basin Enterprise Pty Ltd (Food Leaders Australia), Australian Institute of Packaging Inc and Queensland Department of Environment and Science. Together with increased contributions from existing participants this amounted to near \$1M in additional cash investment.
- In July 2019 the Fight Food Waste CRC sponsored the Australian Institute of Food Science and Technology Student Product Development Competition which saw three university teams battling it out to turn food loss and waste streams into remarkable new food products. Congratulations to the team from Deakin University for Cauliplus, delicious wraps made from discarded cauliflower leaves.
- August saw Mark Barthel, our Special Advisor – Food Waste, arrive from the UK and commence work with the Fight Food Waste CRC. Mark's first day also saw the launch of the SME Solution Centre at the Queensland Department of Agriculture and Fisheries (QDAF) at the Coopers Plains facility. The SME Solution Centre is sponsored by Food Innovation Australia Ltd (FIAL) and administered by QDAF. The Centre now has five projects underway around Australia.
- September saw the Seeds & Chips Global Table conference come to Melbourne. The conference hosted two prominent panel sessions on food waste, which involved many of the Fight Food Waste CRC team and participants.

- In September and October we conducted our first annual participants survey. With an average 'Agree' or 'Strongly Agree' response rate of over 90% the feedback was encouraging. Importantly, 95% of participants would recommend involvement in the Fight Food Waste CRC to their peers and other companies.
- In October the Fight Food Waste CRC won the academic category of an online food waste challenge led by Barclays in the United Kingdom. We were awarded the prize by a judge from the University of Cambridge.
- In November the Fight Food Waste CRC was invited to present at the Pontifical Academy of Sciences Food Loss and Waste Reduction Conference at the Vatican. We were the only organisation from Oceania. The organisation was also held up by the World Resources Institute as a model of a Public Private Partnership to which other countries should aspire.
- November also saw our first Annual Conference, which was held at the KPMG offices in Melbourne. The well attended series of events over three days culminated in the re-election of directors John Webster and Toine Timmermans at the AGM.
- After a two-month period of participant consultation around the 2019 Annual Conference, the *2018-2028 Fight Food Waste CRC Strategic Plan* was launched at the start of February 2020. The plan will be updated every 2-3 years to keep pace with developments in the global food loss and waste field.
- In February Mark Barthel and Polly Burey from core participant University of Southern Queensland presented at the Food for Thought seminar series at the Australia Academy of Science.

By mid-March all of our offices were closed due to COVID-19 and the team was working from home. We used this challenging time to undertake a staff engagement survey, individual 360 degree analyses and create a *People and Culture Strategy*. The strategy supports a workplace aimed at: valuing learning and building excellence; engaging and enabling staff; supporting the health, safety and wellbeing of its people; developing future skills and capabilities; and improving the Fight Food Waste CRC's ability to attract, retain and nurture the best staff and participants. Ultimately, the Fight Food Waste CRC is committed to strengthening its greatest asset: its people.

ACHIEVEMENTS

Our second year of operation has seen the following achievements made:

Research and collaboration

As detailed at the 2019 Annual Conference and in the *2018-2028 Fight Food Waste CRC Strategic Plan* the focus for year 2 was on the establishment of the remaining initial research portfolio. By the end of June 2020 the Fight Food Waste CRC had 34 projects approved, an increase of 20 projects from June 2019, for a contracted total project value (cash and in-kind) of \$17.7M. Cash involved in the 34 projects (\$8.5M) represents 20% of total research spend (\$41.6M over 10 years) at the 20% mark of the Fight Food Waste CRC, or 2 of 10 years.

While the 34 projects approved is more than the initial research portfolio of 29 projects that were developed through the series of bid workshops, it still did not represent the entire initial research portfolio. Ten new projects have been developed during the first two years of the Fight Food Waste CRC and the remaining five original projects will be developed in 2020/2021.

An important research and collaboration milestone in 2019/2020 was the launch of the Fight Food Waste CRC's first major report at the 2019 Annual Conference. The report *Food Waste: Australian Household*

Attitudes and Behaviours National Benchmarking Study was launched by the Hon Dr Katie Allen on behalf of the Hon Karen Andrews, Minister for Industry, Science and Technology. The report is part of the national 'Designing Effective Interventions to Reduce Household Food Waste' project. The project involves Sustainability Victoria, New South Wales Environmental Protection Authority, Green Industries South Australia, the Queensland Department of Environment and Science, ACT NoWaste, Western Australia Waste Authority, Woolworths, FIAL, Foodbank Australia, OzHarvest, the Waste & Resource Action Program (UK) and Central Queensland University.

With the initial research portfolio now largely underway 2019/2020 saw the development of the Fight Food Waste CRC Impact Assessment Model. The model tracks every project that the Fight Food Waste CRC undertakes to our seven key impact areas, as outlined in the Chair's report. The model was reviewed and improved by numerous global food loss and waste experts. It was also reviewed by the CRC Association, that described it as 'best in class' for a CRC. The process has now shifted to predicted individual project impact assessment calculations, which will all feed into the overall model. The model as it stands will be presented at the 2020 Participants Meeting.

Another key deliverable of 2020 has been the creation of Participant Snapshot Reports. The quarterly reports are currently being generated for core participants contributing over \$350,000 cash to the Fight Food Waste CRC over 10 years. The tailored reports for each participant provide a concise financial overview, including contributions made by the organisation (both cash and in-kind), contracted project

payments and projected return over 3 years, as well as a breakdown of contributions by project. The summary page is followed by the individual project pages, which provides an update of project progress, collaborators and research milestones, as well as issues that may have arisen. Like the Impact Assessment Model, they have been described as 'best in class' by many participants that deal with multiple CRC's, such as our university participants.

Research and collaboration updates have been provided for each project in the following section.

Commercialisation and utilisation

Given the early stage of the Fight Food Waste CRC, commercialisation and utilisation activities from our 34 research, development and extension projects has been limited to date. Notwithstanding, each project must outline its commercialisation and utilisation plans before it is funded. With the first of the Fight Food Waste CRC's projects finishing in 2020, Making Australian Country Choice circular, it is anticipated that there will be more to report in 2021.

One small but noteworthy commercialisation and utilisation project in year two has been the development of the *#TooGoodToThrow®* foodie bag. The foodie bag, a modern take on the doggie bag, is being designed to ensure that no Fight Food Waste CRC workshop or conference attendee or diner is ever caught short with surplus food with no suitable container in which to take it home. Two prototype foodie bags – a collapsible pouch and a more sturdy but bulky recyclable plastic container - were launched at the 2019 Annual Conference, with feedback requested from participants. Feedback was subsequently used by Erin McDonnell at RMIT University to undertake an Honours project that will hopefully develop the perfect foodie bag for commercialisation. The final product will be a staple item in the Fight Food Waste CRC tool box to raise awareness about restaurant and catering food waste and to tackle it head on.

Education and training

A lively and engaging education and training program is essential in attracting and retaining the best new students for the long-term benefit of the Australian food industry.

The Fight Food Waste CRC currently has six PhD (target 30), two Masters (target 12) and one Honours student enrolled, most of whom commenced in 2019/2020. Details on each student project are available from our website fightfoodwastecrc.com.au/our-students/. Our students benefit from scholarship stipends, operational funding and participation in the Future Leaders Program run by Central Queensland University and KPMG.

The Future Leaders Program commenced in 2020 and is designed to build skills in research translation and research leadership and aims to produce candidates who are industry ready. It is being delivered in two integrated streams:

- professional mentoring managed by KPMG that will provide opportunities for students to build connections with industry and gain skills in being an enterprising professional.
- personal development retreats led by Central Queensland University with support from a range of national and international discipline experts.

In collaboration with core participants Food South Australia, the Australian Institute of Packaging and FIAL the Fight Food Waste CRC sponsored the Sustainable Packaging to Reduce Food Waste course in 2020.

**We have six
PhDs, two
Masters and
one Honours
student**

The highly successful Stage 1 of the course involved 30 South Australian food and beverage companies.

The project has been delayed by COVID-19, with Stage 2 currently being delivered virtually.

THE YEAR AHEAD

2020/2021 has commenced where 2019/2020 left off, with uncertainty for our participants and our staff with the ongoing COVID-19 situation. In particular, we feel for our Victorian colleagues who have had to endure a second lockdown.

Key activities to be undertaken in the year ahead will be:

1. The establishment of the final five projects (\$1.4M) in the initial research portfolio to ensure all current core and supporting participants are actively involved in one or more Fight Food Waste CRC projects.
2. Deliver the Fight Food Waste CRC Investment Framework and future initiatives that grow the Fight Food Waste CRC's industry cash contributions back to that of the initial Grant Agreement (\$873k or 2.5%).
3. Attract additional industry participants to grow Fight Food Waste CRC's industry cash contributions by 5% or \$1.75M through the contracting of future initiatives.
4. Undertake the 2020 Participant Satisfaction and the 2021 Staff Engagement surveys with the percentage of 'Agree' or 'Strongly Agree' responses equal to or greater than the 2019 and 2020 results respectively.
5. Complete the roll out of Participant Snapshot Reports to all core participants.
6. Complete initial impact assessments for each project that will feed into the overall Fight Food Waste CRC Impact Assessment Model.

7. Develop the business case for a Fight Food Waste CRC national consumer behaviour change initiative.

8. Deliver the 2020/2021 Operational Plan.

RISKS AND IMPEDIMENTS

2020 has had a substantial impact on many of our industry participants, both in positive and negative ways. While retailers such as Woolworths have recorded record sales in 2019/2020, our abalone industry colleagues are at the other end of the spectrum due to not being able to export and missing key cultural events such as the Chinese New Year. We thank all our participants for sticking with us during this difficult time.

While the Fight Food Waste CRC has managed to escape much of the devastation seen in 2019/2020, with no negative financial changes and only minor project delays, serious risks and impediments from COVID-19 remain. Principal amongst them is the substantial decline in funding received from international students in the higher education sector. As the full impact on university budgets is realised each will be taking steps to re-examine their financial commitments to organisation such as CRC's. The Fight Food Waste CRC has taken a proactive approach to this situation, by rolling out our Participant Snapshot Reports. While these reports do not always reflect the preferred returns to each of our university partners, they do allow for open and honest conversations.

The impending changes to government support programs such as Jobkeeper are also likely to impact our industry participants. We encourage all our participants to speak with us early if they anticipate future negative financial impacts that we can help manage.

One of the biggest risks for any CRC or research organisation is not delivering what participants signed up for. This is of course an ongoing concern for the Board and staff of the Fight Food Waste CRC which keeps us focussed on the job at hand. To manage the risk the Fight Food Waste CRC has been proactive in 2019/2020 in developing multiple 'best in class' tools, such as our quarterly reporting to keep industry participants well informed of the research projects for which they are involved, our *2018-2028 Fight Food Waste CRC Strategic Plan*, our Impact Assessment Model, Participant Snapshot Reports and shortly our 2018-28 Investment Framework. In addition, the Fight Food Waste CRC tracks participant interactions through our Customer Relationship Management software, Hubspot, has created and tracks against our Participant Engagement Framework, and undertakes an annual Participant Satisfaction survey, which has received overwhelmingly positive feedback in our first two years of operation.

We look forward to continuing to build on the success and impact of the Fight Food Waste CRC in 2020/2021 and thank you for your ongoing support.

Steve Lapidge
Chief Executive Officer

OUR IMPACT

The Fight Food Waste CRC is committed to monitoring its impact and meeting accumulative targets set out in its original business case across seven key impact areas:



30 MT
of reduced
food waste



\$2B
increase in industry
profitability



20 M Kg
of rescued food
distributed



5200
circular
economy jobs



40
Future leaders
graduated



250
industry people
trained p.a



44 MT
CO2-eq Greenhouse
gas emission savings

The Fight Food Waste CRC is mapping the benefits of every project to its 7 key impact areas

In 2019/2020, the Fight Food Waste CRC Impact Assessment Model was developed: an excel-based tool which predicts the overall impact of the Fight Food Waste CRC from 2018 to 2048. Increased assessment of impact across the seven key areas was also included in the project development process in 2019/2020. In 2020/2021, all project leaders will be asked to identify key impact areas and also estimate quantitative data for each of them. Impact will be monitored through annual updates during a project's life, plus an additional 5 years after a project has concluded. The Fight Food Waste CRC has mapped impact areas against projects for discussion in 2020/2021 (depicted on the following page).

Project title

DIRECT commercialisation
Understanding the barriers and drivers to reduce store loss and food waste at Woolworths
Save Food Packaging Criteria and Framework
Consumer perceptions of the role of packaging
The opportunities for Australia's packaging and processing machinery sector to tackle food waste
On board processing and packaging innovation in the Australian wild harvest prawn fishery
Supply chain monitoring and improvement to reduce banana quality loss
Reducing canning losses in the abalone industry
Enhancing Foodbank's stakeholder engagement
Foodbank Meals Via Y Waste app
Developing a policy and economic case for changes in the taxation system to incentivise donation of food and facilitate donation of logistics services related to food donation
Make ACC circular
Converting potato waste into pre-biotics and other valuable products
Nutraceutical extraction from Australian wine industry waste
Transformation of surplus/waste tomato and capsicum produce into value added products (Stage 1)
Advancing regional agri-food waste valorisation
Options for utilising apple and pear pulp residue
From food waste to smart compost formulations
Food waste to pig feed – safe and bio-secure
Pilot-scale production of enhanced-value anaerobic digestion waste (digestate) derived bioproducts on the Darling Downs
SME Solutions Centre
Prioritisation of value-adding opportunities to upcycle brewing by-products (SME Solutions Centre project)
Livestock and equine scoping study (SME Solutions Centre project)
Anthocyanin retention in Queen Garnet plums during processing and bottling (SME Solutions Centre project)
Orange Glow – Value adding underutilised/waste pumpkin produce (SME Solutions Centre project)
Production and characterisation of potato protein isolate powder using mild, low cost and healthy extract method (SME Solutions Centre project)
Waste-to-Energy: Fuelling sustainable wastewater treatment with food waste
Future Leaders Program
Industry Connection Hub
Sustainable packaging to reduce food waste
Designing effective interventions to reduce household food waste
Food waste reduction roadmap for Woolworths
WWW (What, Where and Why) of household food waste behaviour
'It's easy as' social media campaign
Social media: the real impact on food waste reduction beyond the swipe or the click

RESEARCH PERFORMANCE

The table below details progress against the Commonwealth Grant Agreement performance milestones that fell due during the 2019/2020 reporting period.

Milestones due by 30 June 2020				
Milestone Number and Description	Milestone Start Date	Milestone End Date	2019/2020 Progress Comments	2020/2021 Strategies for completion
RP1.1 Key data sources identified. Data collection methodologies reviewed. Internal business data systems identified. Data collection system built.	1/7/18	31/3/20	Final component complete - data collection system built. The prototype DIRECT tool has been completed and debugged, ready for piloting.	Milestone completed
RP1.2 Use of the data collection system models and benchmark metrics piloted with interested parties.	1/7/19	30/6/20	Prototype of the DIRECT tool has been built. Debugging took longer than expected but has now been completed. Conversations are also being held with interested parties to pilot.	6 months delayed. Conduct briefing sessions and walk through (demos) with interested parties to pilot DIRECT. Then schedule data collection and run pilots. Every effort being made to have this completed by December 2020.
RP1.8 Design guidelines and frameworks reviewed to consider role of packaging saving food, food safety, food quality, date labelling and shelf life and assemble packaging design features.	1/7/18	31/3/20	Baseline literature review for the Save Food Packaging Criteria and Framework project completed. Insights are captured in 'Baseline Industry' report.	Milestone completed
RP1.9 Insights of packaging functions and design features assembled; Industry case studies compiled; consolidated guidelines drafted and piloted.	1/7/18	30/6/20	The online survey has been written and draft report reviewed by project consortium. Interviews are currently being conducted with analysis to occur. Insights will be used to draft criteria and guidelines with release to pilot in October 2020.	6 months delayed accommodating with COVID-19 delays in accessing interviewees, review of material and scheduling meetings.
RP1.15 Supply chain mapped; for relevant REDUCE projects; issues and opportunities identified (e.g., packaging failures, processing, cold chain); Alternatives and/or modifications identified.	1/7/18	30/6/20	While some projects are collecting this data, due to delays in other projects commencing this milestone is delayed. Insights to be gathered during the piloting of the DIRECT tool will also provide some input into this.	6 months delayed. Strategies to be employed will include how insights from the baseline reviews can inform this milestone.

Milestones due by 30 June 2020

Milestone Number and Description	Milestone Start Date	Milestone End Date	2019/2020 Progress Comments	2020/2021 Strategies for completion
RP1.16 Applicability/feasibility of new and emerging processing and packaging (including cost, performance, food safety, consumer acceptance) researched.	1/7/18	30/6/20	Completion of baseline industry report; research literature and industry knowledge review and online survey. Insights from packaging and processing machinery baseline review.	Milestone completed
RP1.21 Scan food rescue operations to identify opportunities for technology to improve efficiency and increase volumes (eg. iFoodRescue App)	1/7/18	30/6/20	Completion of first semester undergraduate studio at RMIT University.	Milestone completed
RP2.1 Existing waste streams relevant to partner organisations surveyed, including SEQld, South Australian and Victorian regional horticultural produce. Market opportunities and food safety hazards identified. Near-market opportunities reviewed.	1/7/18	30/6/20	The evaluation of waste streams is completed as a requirement of the project application process. Across several projects, for participants who have started research projects with the Fight Food Waste CRC, this process has either been completed or is underway.	3 months delayed, several new projects have started with several in development. We have engaged all horticultural participants to participate in the cross-program DIRECT trial to help achieve this milestone.
RP2.2 Initial proof of concept testing for new solutions completed. Intellectual property for new product solutions registered.	1/7/18	30/6/20	Projects that commenced during 2019 have completed their initial proof of concept testing.	Milestone completed
RP2.7 Technology needs for different waste streams and products reviewed. Existing technologies surveyed. Market opportunities for technologies identified.	1/7/18	31/3/20	Currently 7 projects within the TRANSFORM program are contributing to this milestone. However, the outputs from these projects will only be realised once initial project reviews are nearing completion.	6 months delayed. A specific review will be undertaken to address the milestone within the next 6 months.



Milestones due by 30 June 2020

Milestone Number and Description	Milestone Start Date	Milestone End Date	2019/2020 Progress Comments	2020/2021 Strategies for completion
<p>RP2.13 Initial data set collated on waste composition, potential hazards and volumes relevant to partner organisations. Review of available relevant technologies delivered to partner organisations. Protocols developed and circulated.</p>	<p>1/7/18</p>	<p>30/6/20</p>	<p>Particular projects within this program have had success in not only collecting relevant data sets, but also being able to supply industry partners with technology options that provide innovative solutions. Across all TRANSFORM projects we see a variety of different stages of progress. Milestone completion is likely to be delayed by 6 months.</p>	<p>6 months delayed.</p> <ul style="list-style-type: none"> • The first requirement of this milestone, regarding initial data sets, hazards, and volumes, has been completed for the projects in the TRANSFORM program • The second requirement of this milestone, review of available technologies, is underway for relevant TRANSFORM projects, generally as part of initial milestones • The last requirement can only be completed for a small subset of projects so far and will be a focus for completion in 2020/2021.
<p>RP2.20 Initial review of existing policy and legislation in food waste transformation complete. Stakeholder survey to identify investment barriers for producers conducted.</p>	<p>1/7/18</p>	<p>30/6/20</p>	<p>In addition to two project activities that will address legislation requirements a stakeholder survey has been prepared that will address this milestone.</p>	<p>6 months delayed. We are currently assessing potential projects with participants, such as government agencies and peak bodies to undertake a specific review in this area by December 2020 as no individual project is likely to achieve the milestone by itself.</p>
<p>RP3.3 Industry dissemination and skills training – Needs analysis (Year 1)</p>	<p>1/1/18</p>	<p>31/12/19</p>	<p>Skills training needs analysis completed.</p>	<p>Milestone completed</p>

Milestones commenced, due in later years

Milestone Number and Description	Milestone Start Date	Milestone End Date	2019/2020 Progress Comments	2020/2021 Strategies for completion
RP1.3 Resource flows, mapping and route cause analysis compiled for selected seafood, horticulture and food donation supply chains and products. Outcomes embedded into at least five organisations. Data systems refined.	1/7/19	30/6/21	Current projects continue to gather data on causes of waste within their respective supply chains.	No delays anticipated.
RP1.4 Analyse data and develop new insights; Benchmark metrics released.	1/7/19	30/6/22	This milestone is informed by previous milestones 1.1; 1.2 and 1.3. Early stages now as projects commence and undertake initial mapping and data collection	No delays anticipated.
RP1.10 Australian and overseas consumer perceptions and understanding of packaging reviewed; Consumer study regarding perceptions and understanding of packaging designed and conducted.	1/7/18	30/6/21	Literature and stakeholder engagement currently occurring. Written report regarding journey mapping complete. Online consumer survey data being analysed. On track.	No delays anticipated.
RP1.11 Consumer study insights analysed; pilot use of packaging guidelines reviewed and implemented into New Product Development (NPD) processes.	1/7/19	30/6/22	Literature and Stakeholder engagement currently occurring. Report on packaging stakeholder online survey drafted. Interviews with food and packaging companies currently being undertaken. On track against milestones for quarterly reporting.	No delays anticipated.
RP1.23 Publication of food rescue/hunger report on annual basis.	1/7/18	30/6/28	This is a rolling milestone (goes out to 2028) - Foodbank Hunger Report was published in 2019. For 2020 Foodbank will be undertaking 2 pulse surveys. The first 2020 Pulse survey has been conducted by Foodbank with data currently being analysed.	No delays anticipated.
RP1.24 Develop policy case for changes in taxation to facilitate donation of transport services for rescuing food: Identify funding partners and provide report.	1/7/18	30/6/22	Project underway between Foodbank, KPMG and Woolworths. This approved project will undertake and develop the policy case for changes in taxation to facilitate donation of transport services for rescuing food.	No delays anticipated. Project to start Q1 (2020/2021) and be completed May 2021.

Milestones commenced, due in later years

Milestone Number and Description	Milestone Start Date	Milestone End Date	2019/2020 Progress Comments	2020/2021 Strategies for completion
RP1.25 Develop policy case for changes in taxation to facilitate donation of food to food rescue: Identify funding partners and provide report.	1/7/18	30/6/22	Project underway between Foodbank, KPMG and Woolworths. This approved project will undertake and develop the policy case for changes in taxation to facilitate donation of transport services for recusing food.	No delays anticipated. Project will start in Q1 (2020/2021) and go through to May 2021
RP2.8 New conceptual solutions for modular technologies developed and initial proof of concept testing completed.	1/7/19	30/6/21	Being addressed in SME Solutions Centre projects.	No delays anticipated. Project development has started with three equipment manufacturers and a toll manufacturer on a regional hub concept that utilises modular technologies to provide an adaptable process for seasonal crops.
RP2.21 Initial review identifying regulatory barriers and policy settings that limit investment opportunities for producers delivered.	1/7/19	30/6/21	Activities that support this milestone have been included in projects currently underway.	No delays anticipated. Work with RDA on development of opportunities for producers is progressing. Additional projects that help to address this milestone are in development.
RP3.1 Commencement of 30 PhD students.	1/1/19	31/12/23	6 PhD (target 30), 2 Masters (target 12) and 1 Honours student enrolled,	No delays anticipated.
RP3.5 Behaviour change for household members: Undertake survey of food buyers and present findings in report that will be available to Project participants.	1/1/18	30/6/21	First milestone (National survey of food waste behaviours and attitudes in Australian Households) Summary report completed in November 2019, full report completed June 2020.	No delays anticipated. Second milestone (Measurement of food waste in Australian Households) commenced but awaiting post COVID-19 settling of behaviours for collection of data.



REDUCE



Overview

Extent to which the CRC is on target to achieve its research outputs, including strategies in place to address any risks and issues

The challenge of a global pandemic on the tail of a summer of bushfires has had direct impact on project partners in the REDUCE program. Minimal to moderate disruption has been noted. At this stage, the risk that research outputs will not be achieved is low, as timeline and methodological adjustments have been put in place to off-set restrictions in place to COVID-19. With differences emerging in state-based responses we will continue to monitor the situation in partnership with project teams to ensure appropriate strategies are executed to minimise further disruption and delay.

Key research achievements and evidence of the research quality

The REDUCE portfolio has produced a number of publications/outputs in 2019/2020, while work has commenced on a range of journal articles and industry papers over the same period:

1. *Consumer perceptions of the role of packaging in reducing food waste*, Baseline industry report, Langley, Francis, Ryder, Brennan, Verghese, Lockrey, and Fight Food Waste CRC.
2. New project puts supply chain in the spotlight – Australian Bananas Magazine March 2020 Andrew MacNish.
3. WorkingOnnit student team in the RMIT-Foodbank-Y Waste project won their category in the RMIT Adobe UX competition.
4. Numerous industry articles and industry conference presentations by the Australian Institute of Packaging (AIP) regarding Save Food Packaging design.

At the end of the reporting period, an additional REDUCE project was approved to commence in 2020/2021:

- Developing a policy and economic case for changes in the taxation system to incentivise donation of food and facilitate donation of logistics services related to food donation.



Any issues, including technical or scientific impediments

Government and employer-initiated limits to domestic and international travel to undertake research activities is the key issue facing the portfolio. However, to date, research teams have demonstrated a willingness to creatively find ways to maintain momentum – embracing digital options, altering order of activities, and where unavoidable, re-negotiating outputs and timelines.

Level of industry involvement and evidence the research is meeting industry's needs

Industry involvement is central to all projects in the REDUCE portfolio. With strong participation and consultation with industry across each stage of the project we continue to track progress against stated needs. Many of our industry partners attend research team meetings regularly. For those that cannot, our mid-year project meetings were an opportunity to bring academic and industry partners together. These were open and constructive conversations about process and progress and to iron out any differences in expectation or required adaptations. Furthermore, these meetings reinforced the industry-led nature of the research.

Any changes proposed to future research directions and the reasons for the changes

There are no proposed changes to the future research directions for REDUCE. We achieved the completion of four program Commonwealth milestones. There are another ten in progress of which three are delayed by three to six months due to COVID-19 impacts to project delivery. In combination with insights coming through our existing research portfolio, the *2018-2028 Fight Food Waste CRC Strategic Plan* and draft Investment Framework, and consultation with CRC participants and external groups, we continue to identify and develop impactful new projects.

Karli Verghese
Leisha Ryding
REDUCE program



Enhancing Foodbank's stakeholder engagement

June 2019 until December 2023



AIMS

Charities with direct contact to those in need are the lifeblood of Australian food rescue operations. This project will improve Foodbank's understanding of two key stakeholder groups; charities who receive the food, and volunteers. Enhanced understanding of motivations and expectations of volunteers may not only result in the provision of more satisfying volunteer experiences, but also an increase in the donation of free labour by volunteers, money and food.

IMPACT

The Australian food rescue industry currently provides around 100 million meals per annum. An enhanced understanding of Foodbank's key stakeholders will increase the number of annual meals provided by 0.1%. This would equate to an increase of approximately 100,000 meals or redirection of 25,000kg per annum of surplus food; however, we expect higher achievements. Key outputs include the Hunger Report, published annually, and a confidential report for Foodbank on volunteer management.

ACHIEVEMENTS

This project commenced early in the 2019/2020 financial year and during the year recruited an enthusiastic PhD student, Khoulood Kamalmaz who is currently preparing for her confirmation of candidature during the year. The project also engaged Luke Brownlow as a Research Assistant.

Project Leader Upamali Amarakoon won the People's Choice Award of the CQU 5-Minute Research Pitch. This award and subsequent media coverage were a great platform to promote this project.

To better understand Foodbank's customers, the initial survey and fieldwork commenced and was progressing well until, unfortunately, the bushfires and COVID-19 placed an unprecedented demand on Foodbank's services. As a result, the next stage of the project focused on Foodbank's volunteers has been delayed. With a large portion of their volunteers being in a high-risk COVID-19 demographic, many have in fact ceased volunteering.

The project also commenced a review of the Australian legal framework relating to food waste and rescue.

DIRECT commercialisation

August 2019 until July 2023



AIMS

For businesses to reduce food waste, they first need to understand where food loss and waste (FLW) occurs. At harvest, post-harvest, processing or distribution this is called food loss, or in retail, food service or by consumers it is called food waste. Better business decisions can follow such an understanding. The development of a business-ready, digital, cloud-based food waste tool can assist industry in reducing food loss and waste. The tool will integrate with current data, systems, and processes, and operate at global standards/protocols of assessing food loss and waste.

IMPACT

Industry will be able to use DIRECT to benchmark where food loss and waste occurs and identify the opportunities to reduce waste and costs associated with it. With resource efficiency gains of perhaps 5% identified from mapping with DIRECT from the estimated \$10 billion of food loss and waste across Australia pre-consumer per annum, 10% of gains achieved would equate to \$50 million costs saved per annum.

DIRECT now aligns to the global FLW standard developed by the World Resources Institute and the mass/cost flow standard ISO14051, giving companies certainty that they are using world's best practice FLW benchmarking and strategy when using the tool.

DIRECT is expected to be used to create a National Food Waste Index and will underpin the proposed National Food Waste Strategy voluntary agreement.

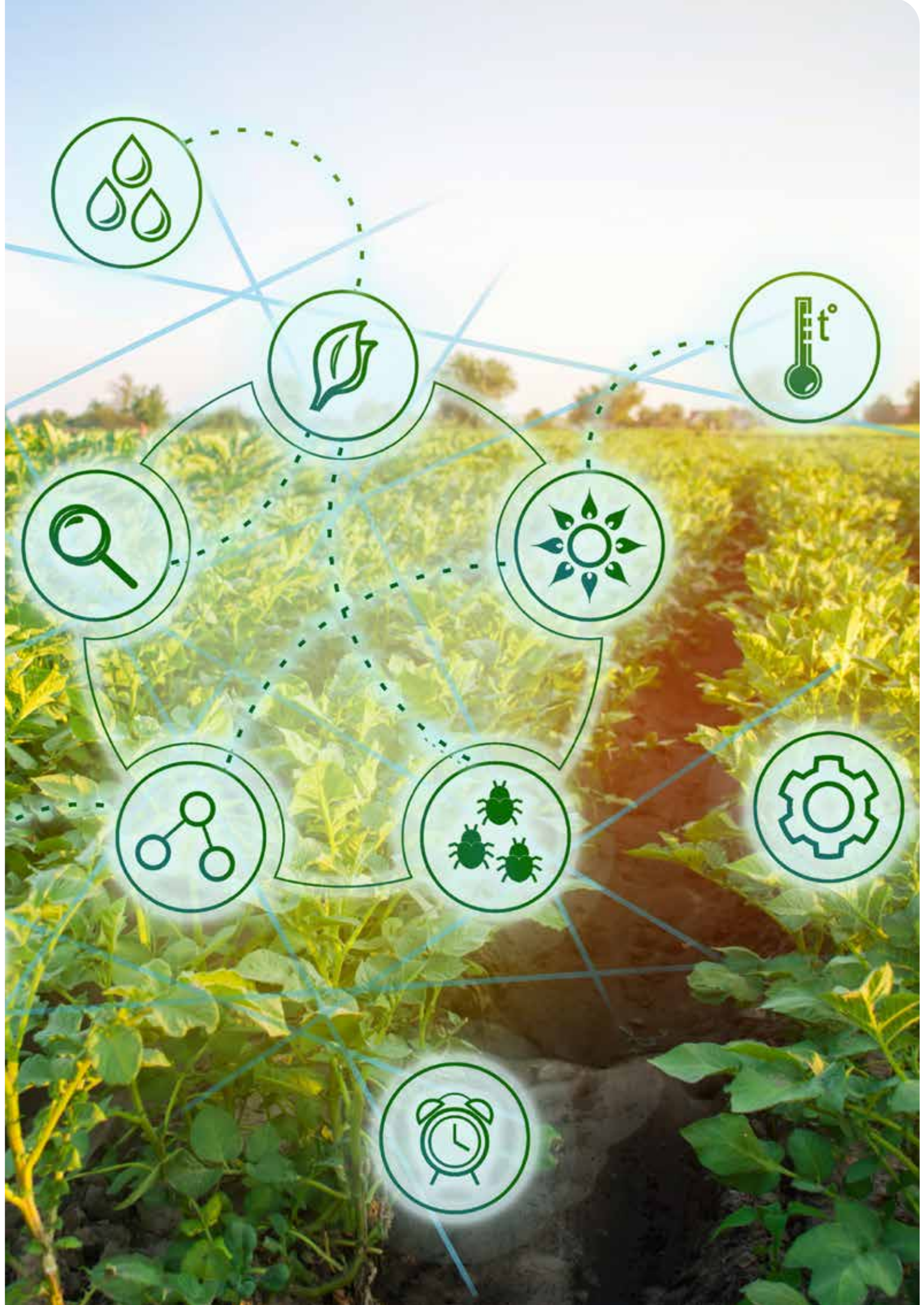
ACHIEVEMENTS

From the original excel spreadsheet, Selerant has commenced and finalised building the online DIRECT prototype. While COVID-19 has presented significant challenges for some, the project team is continuing to take DIRECT to trial. It is the long-term intention of DIRECT for client companies to use this with the assistance of support material.

Selerant CEO Jacopo Colombo attended the 2019 Annual Conference in November, and in early December Head Developer Dejan Popovic flew in to collaborate at a week-long workshop with RMIT, Selerant and industry partners. Many outreach discussions centred around ongoing collaboration for DIRECT with our Industry Connection Hub to secure pilot food businesses for the new tool as well as other potential participant organisations.

The Selerant senior management team have been shown DIRECT and subsequently established a commercialisation working group. Representatives on this working group are from the Milan, New York and Chicago offices.

The project's PhD student, and second Fight Food Waste CRC student, Roland Somlai relocated from Scotland to take up this opportunity. At the end of 2019/2020, he was well on his way to confirming his candidature.



Save Food Packaging Criteria and Framework

August 2019 until August 2023

AIMS

The primary functions of packaging are to contain and protect the content, as well as providing information about the product. Yet the role of packaging in reducing food waste could be better understood by food producers, manufacturers, brand owners and retailers. Improving this understanding underpins this project partnership between the Australian Institute of Packaging (AIP), RMIT University and the Save Food Packaging Consortium.

This project will produce packaging design criteria and communication tools and best practice examples. The Save Food Packaging Design Criteria and Framework will integrate current research literature with industry knowledge regarding the functional properties and role of packaging in saving food from being wasted into simple, usable tools for all stakeholders in food products and packaging design.

IMPACT

The design criteria to be developed and the case studies assembled will be co-designed with the end-users. They will be made publicly available to achieve the highest possible utilisation outcomes. Saving 1% of household food waste through enhanced packaging design would keep \$100 million of food from becoming waste at the household level. Additionally, retail store profits (\$3.2 billion/ pa) could increase through addressing losses resulting from spoilage, age dating, package damage, markdowns. Again, assuming a 1% reduction in this loss, this would equate to a \$32 million increase in profits.

Save Food Packaging Consortium



FIGHT FOOD WASTE
Cooperative Research Centre

REDUCE - TRANSFORM - ENGAGE

Research Partner



AIP Partners



ACHIEVEMENTS

A consortium partner workshop held in August 2019 allowed the members to review the online survey before it was released. This survey received over 100 responses, which has helped the research team to understand the current product packaging design. A complementary academic literature review provided the consortium with global insights. The online survey informed the interviews with a range of industry stakeholders in the next stage of the research which were undertaken over the last quarter of the financial year. The AIP have also made several industry presentations in various forums providing outreach to the food and packaging supply chain.

In the final quarter of 2019, the project welcomed Ruby Chan to the team as the inaugural PhD student to the Fight Food Waste CRC's postgraduate program. Ruby was the winner of the 2017 RMIT Green Innovators Award for her fully compostable single-use tableware. She presented at the 2019 Annual Conference in November with excellent feedback received.

Project Contributors



Extension Network Partners



Reducing canning losses in the abalone industry

August 2019 until July 2023



AIMS

The Australian abalone sector is a low volume, high-value industry. Australian abalone is generally sold in live, frozen or canned/pouch formats. Retorting (packed into cans/pouches and thermally processed) is done to approximately 30% of Australia's abalone production volume, yielding 340 tonnes per annum of drained meat weight. However, the thermal processing results in a loss of weight in the abalone. This reduction in product yield during existing canning operations is typically between 12-30% (equivalent to a loss of 40-102 tonnes per annum).

IMPACT

This project will provide robust scientific evidence enabling the abalone industry to reduce the thermal processing requirements for wild-caught and farmed abalone. This will minimise shrinkage food waste while enabling the sector to continue to meet the regulatory requirements by providing a safe, commercially sterile and shelf-stable product. The abalone industry expects that the modified thermal process will reduce processing losses by at least 1-2% as less abalone will be required per can for the same drained weight. On current production levels this would equate to an increase of at least 3.4-6.8 tonnes per annum, worth approximately AUD \$0.7M-\$1.4M p.a.

ACHIEVEMENTS

COVID-19 has significantly impacted the abalone industry with serious disruptions to their export activities. As a result, this project has experienced some delays. Despite these delays, completion of the Terms of Reference for the Steering Committee and communication plan occurred in May 2020. The project team also prepared and reviewed the experimental approach for the feed challenge study. Identification and invitation of potential external reviewers of these preliminary documents mean that they can soon be engaged.

The Fight Food Waste CRC would like to extend their sympathies to the family and friends for the passing of Spiro Markantonakis from in-kind contributor Dover EX27 Pty Ltd in June 2020. Spiro was an instrumental leader within this project, and his contribution deserves much recognition.

Foodbank meals via Y Waste app

September 2019 until February 2021



AIMS

Y Waste is an app that facilitates the discounted sale of end-of-day food from quick-serve restaurants to consumers, rather than the food going to landfill. RMIT is collaborating with Foodbank to improve the Y Waste app to enhance its impact.

IMPACT

The impact of this project is two-fold; firstly food waste saved from quick-service establishments at the end of trade, and secondly reducing the number of food-insecure people in Australia. If 10% of Australian food outlets ultimately participate in this program offering four meals each day, 20,000 meals will be provided a day to food-insecure people. To put this in perspective, this would increase Foodbank's reach by 11%.

ACHIEVEMENTS

The RMIT industrial design/digital media studio had 18 undergraduate students in the semester one studio embedded into this project, working on redeveloping the current Y Waste app. Working in five groups, the students have tested, evaluated and addressed opportunities and solutions within this prototype over eight weeks.

The students immersed themselves into the design problem, conducted user analysis and delivered new interactive prototypes to address the interactivity and intuitive user experience design issues identified in the app. The students all completed Adobe XD training and used this software for prototyping the app. The best outcomes were put forward to the RMIT Adobe Awards in June 2020 with the WorkingOnnit team winning in its category as judged by industry professionals.

Any recommendations to enhance Y Waste will enable widespread adoption by merchants, charities and people in need to maximise the number of meals going to food relief rather than waste.

Understanding the barriers and drivers to reduce store loss and food waste at Woolworths

December 2020 until July 2021



AIMS

This project aims to understand the barriers and drivers to reduce food loss and waste in food and grocery retail stores. It will provide evidence-based recommendations to Woolworths regarding the composition, form and content of innovations in business processes, employee training and reinforcement tools to reduce food loss and waste. There will be four methods employed to get these insights: desktop analysis, in-store observations, interviews, and co-design workshops.

IMPACT

This project will provide clear, evidence-based recommendations to Woolworths regarding the composition, form and content of new business process innovations and employee training and reinforcement tools needed to reduce store loss and food waste. Using the findings from this project, it is an ambition that it will lead to (1) a 50% reduction in the volume of food waste in-store, (2) associated financial savings for Woolworths (50% of current figures), and (3) all 201,000 store-based employees gaining knowledge and implementing behaviours to reduce food waste. The outcomes can be achieved within 12 months of Woolworths using the findings of this study. They can make changes to procedures and policies, as well as adjusting training methods and materials to better engage with staff.

This project has delayed its start from early 2020 due to COVID-19 as Woolworths has faced significant operational challenges to meet consumer and business needs in maintaining food supply across its value chain.

The opportunities for Australia's packaging and processing machinery sector to tackle food waste

February 2020 until January 2021



AIMS

The Australian Packaging and Processing Machinery Association (APPMA) promotes, integrates and fosters participation and development at all levels of the packaging and processing machinery industry in Australia. Members provide a range of machinery, technologies and services that apply to the harvesting of crops, processing of ingredients, and packaging of the product. There is a limited coordinated understanding of exactly how this sector can promote and best utilise these technologies in the food sector to identify new opportunities to reduce and transform food waste. This project aims to engage the APPMA members with the goal of identifying and consolidating the ways that the Australian packaging and processing machinery can be effectively utilised to help lower and transform food waste.

IMPACT

This project will provide packaging and processing machinery manufacturers and distributors with improved knowledge and understanding of the food waste challenges. One of the key features will be a report that identifies the opportunities where improvements can be made along with quantification of possible benefits. This report will help promote new ideas, improved machinery designs and features to help combat food waste. A possible outcome of the project will be the identification of 1-2 projects that can be the focus of future research driven by the APPMA.

ACHIEVEMENTS

There has been significant progress on the literature review of the industry and valuable industry mapping. By comparative analysis between technology capabilities and business operations, the members within APPMA will more readily understand the ideal resource efficiency, packaging and processing to reduce waste.

In the final quarter of 2019/2020, the granting of ethics approval resulted in the release of the online industry survey to APPMA members. This survey will capture member thoughts and feedback regarding food waste opportunities and challenges. Responses from the survey will help provide content and structure for the upcoming in-depth interviews with member organisations and the development of case studies. The AAPMA looks forward to analysing the food waste trend, opportunities and challenges in food packaging and processing. This information will help equipment manufacturers understand how innovation and technology can further improve reduction of food waste.

Consumer perceptions of the role of packaging

July 2019 until December 2021



AIMS

Understanding the perception and use of packaging by consumers and how this plays a role in household food waste generation is an essential first step in this project. By understanding how people appreciate and use packaging and the food waste they generate, we can design improved packaging and communication that will ultimately reduce food waste.

IMPACT

This increased understanding of consumer perceptions of the role of packaging could lead to:

- enhanced product-packaging design that is fit for purpose, e.g. consumer retail unit packaging.
- enhanced consumer-facing messaging regarding packaging to reduce food waste.
- reduced wastage for producers, processors, retailers, and consumers.
- increased value from extended shelf life.

ACHIEVEMENTS

The project team released an industry baseline report in June 2020. It included a review of the existing literature to scope the recognised knowledge in the fields of food packaging and food waste relating to consumers' expectations. This work informs food producers, packaging designers, and retailers in their strategies and educational campaigns. These findings were prepared for industry Think Tanks to enable discussion around motivation towards designing packaging to meet customer expectations and reduce food waste. These Think Tanks have been delayed until late 2020 due to a combination of COVID-19 pandemic travel restrictions and the considerable shock to the food supply chain as a result of panic-buying.

Despite these interruptions, the second phase of the project involving 39 in-home interviews, and over 1,000 respondents to the consumer online survey was completed. Repeating this survey post-COVID-19 could improve the project team's understanding of the impact that panic-buying and health concerns may have had on these initial results. Gathering data that reflects adaptations during a potential recession and pandemic event would be a unique opportunity.

On-board processing and packaging innovation in the Australian wild harvest prawn fishery

August 2019 until April 2022



AIMS

The wild prawn industry has not yet been able to quantify the percentage change in industry value by reducing specific points of product waste. The supply chain analysis in this project, and a related Australian Council of Prawn Fisheries/Fisheries Research & Development Corporation project, will enable stakeholders throughout the prawn supply chain to benchmark prawn loss volumes and value and identify possible intervention activities. This includes loss, value and activities for on-board operators, transport and storage operators, and food distributors/retailers. A priority will be identifying alternative options for preservation strategies, new consumer-driven packaging, electronic traceability, and on-board processing automation.

IMPACT

The wild prawn industry currently reports 20,500 tonnes of wild prawn catch valued at \$305.8 million averaging at \$14.90/kg across all grades. The end-users in this project are the prawn fishing industry members of the Australian Council of Prawn Fisheries, with most of the Australian wild-harvest prawn fleet aligned with this leading industry association.

An impact of this project is more efficient and optimal processing of larger volumes of prawns under periods of high-volume catch plus new on-board processing automation (such as peeling) to enhance product value. These will increase profitability and the ability to supply a premium grade product as a result of faster processing times. Potential new on-board processing techniques aim to improve shelf-life, enhance market access and reduce discard in supermarkets/retail.

Additionally, new on-board packaging formats and automation technologies that can reduce the waste associated with more extensive volume packaging, reduce on-board labour costs and worker risk, and reduce the need for land-based re-packaging are being explored.

ACHIEVEMENTS

An industry survey has identified priorities in all project areas. Laboratory and land-based seafood processor trials have been conducted on preservation alternatives and sustainable packaging options. The project has further developed strong national partnerships and delivered real value for industry through a multi-fishery visit by international expert Kaj Christensen, KM Fish Machinery in the last quarter of 2019. There have also been productive collaborations with Fight Food Waste CRC Industry Connection Hub member, the Australian Institute of Packaging, which has been able to bring packaging expertise into the project. Two Curtin University Masters of Food Science and Technology students commenced with the project investigating sustainable packaging and alternative prawn preservation compounds.

Industry expressions of interest for on-board trials were delayed by 3-6 months due to COVID-19 restrictions, factory closures affecting prototype construction in Denmark and the impacts of restrictions on the project's research providers. However initial EOI's have now been circulated and responses collated in preparation for on-board trials to commence in October 2020.

Supply chain monitoring and improvement to reduce banana quality losses

March 2020 until February 2024



AIMS

Australian Ecoganic bananas are in significant demand in niche Asian markets. Pacific Coast Produce, a cooperative of five growers in north Queensland, has been exporting Ecoganic and organic 'Cavendish' bananas to Asian markets by airfreight since 2009. Downgrading occurs to an estimated 10% of its consignments because the fruit arrives with chilling injury and other quality issues, representing \$1.75 million in lost revenue.

IMPACT

Less fruit arriving in export markets with compromised quality will enhance the reputation of the Pacific Coast Produce supply chains to deliver consistently high-quality fruit. An increase in customer satisfaction, a decrease in the cost of exports through improved cold chain management, and enhanced fruit arrival quality will support export growth of up to \$2 million over the next ten years for Australian Ecoganic and organic bananas.

This project will reduce fruit waste from 10% to 2%, saving an estimated \$1.4 million in annual losses, and support a shift from unrefrigerated airfreight to higher volume, controlled temperature sea freight.

ACHIEVEMENTS

This project's commencement aligned with COVID-19 related restrictions across the country. This meant the team were unable to travel but quickly recovered and redirected to digital activity to maintain operations. The project has mapped and developed the methods for monitoring export shipments for the three leading banana export supply chains from Australia to Asia. Included in this were the handling conditions and fruit quality. The team also developed the methodology for value chain and economic (break-even/cost:benefit) analysis to identify options to reduce waste and to demonstrate the benefits of monitoring. There has been remote monitoring of two export shipments to Asia, and data analysis is to follow. Another achievement is the completion of the first laboratory trial simulating export handling.



TRANSFORM



Overview

Extent to which the CRC is on target to achieve its research outputs, including strategies in place to address any risks and issues

The TRANSFORM program now has seven projects up and running, with an additional four approved and commencing in the 2020/2021 financial year, and one proposal in the approval process stage. There are also an additional five projects in development. These projects are assisting to deliver a range of the CRC Commonwealth milestones.

The TRANSFORM CRC milestone that was reached in 2019/2020 was 2.2 - Initial proof of concept testing for new solutions completed. IP for new product solutions registered, which was achieved by several projects, including project, Transformation of surplus/waste tomato and capsicum produce into value added products (Stage 1) and From food waste to smart compost formulations. However, projects are not yet progressed enough to have registered IP, and IP will only be registered when it is in the interest of the participants.

Risks that have faced our researchers and industry partners in 2019/2020 have been more extreme than could have been anticipated. We have worked closely with our research teams to develop specific plans to minimise the impacts on the project deliverables. This has included placing projects on hold throughout the worst stages of COVID-19 and adjusting project deliverables and milestones to adapt to the restrictions while still ensuring to deliver the anticipated impacts for the projects. We have also been in constant communication with current and potential industry partners in order to help listen to their rapidly changing needs.

Key research achievements and evidence of the research quality

Project Make ACC Circular is due for completion in early 2020/2021 and has commenced discussions around a second phase for the project to help further utilise the results from this project. Project From food waste to smart compost formulations has delivered early research results showcasing differing results from nutrient combinations based on crop type and are in discussions for a second phase of the project with the existing research partner, potentially drawing in additional participants. Project Fight Food Waste SME Solutions Centre has successfully commenced its first round of projects and has been given additional funding from FIAL for a second round of projects, which are currently in development.

In early 2019/2020, the Fight Food Waste CRC TRANSFORM program welcomed the TRANSFORM Program Coordinator, Meagan Wheeler-Rogers.

Any issues, including technical or scientific impediments

In 2019/2020 the TRANSFORM program had a strong focus on project development. All of the TRANSFORM projects commenced in 2019/2020 and have not experienced any significant technical or scientific impediments outside of the impediments presented by COVID-19. These impediments included interruptions to supply availability for both produce and equipment.

Level of industry involvement and evidence the research is meeting industry's needs

The project development process, project kick-off meetings and subsequent project meetings are designed to ensure that projects are meeting industry needs from the outset and as the project progresses. These are in addition to the quarterly reporting, which is conducted with both research and industry partners. Industry participants have been contacting the TRANSFORM Program team directly or utilising the quarterly reporting to highlight any concerns they may have. We ensure to setup project meetings as soon as possible to discuss and resolve these concerns to ensure that all projects continue to meet industry needs.

Any changes proposed to future research directions and the reasons for the changes

The TRANSFORM program enters 2020/2021 in a strong position, with several projects up and running and several more on course to commence in 2020/2021. These projects are anticipated to significantly assist in delivering on the Fight Food Waste CRC impact targets in addition to the TRANSFORM CRC Commonwealth milestones.

Paul Luckman
Meagan Wheeler-Rogers
TRANSFORM program



SME Solutions Centre

March 2020 until February 2024



AIMS

The Australian food and agribusiness industries have over 56,000 small to medium-sized enterprises (SMEs) that contribute towards Australia's GDP. SMEs have many challenges given their size, one of which is tackling food waste. This program provides access to funding, skills and expertise to find the best food waste solutions for SMEs to assist in their efficiency and sustainability. The Fight Food Waste SME Solutions Centre provides dollar-for-dollar support for short-term research to find answers to agri-food waste problems.

IMPACT

The Fight Food Waste SME Solutions Centre will:

- test new and novel food processing, packaging and agricultural technologies to REDUCE food and agricultural waste.
- identify valuable products in food and agricultural waste streams and TRANSFORM into new commercial opportunities.
- ENGAGE experts from the Fight Food Waste CRC industry and research participants to identify technology opportunities and processes to enhance food and agricultural waste reduction.

ACHIEVEMENTS

Two exciting projects commenced in 2019/2020:

 **Grainstone Pty Ltd and QUT researchers** are developing and deploying advanced manufacturing bioprocessing technology that converts large volumes of brewer's grains, a food waste from beer production, into valuable nutritional ingredients for food manufacturing. These products are rich in protein, dietary fibre, antioxidants, calcium, iron and B Vitamins. Via this SME Solutions Centre-funded project, Grainstone is endeavouring to improve the extractability of nutraceutical products using existing processing technologies all combined to produce further new production art focused on developing and accessing market opportunities for valuable bio-extracts.

 **Banana Feeds Australia Pty Ltd and University of Adelaide Researchers** have found an opportunity for potentially up-cycling on-farm green banana waste to assist in improving equine nutrition and health. A major part of the SME Solutions Centre-funded project is to produce an antioxidant supplement using green bananas as part of an effective nutritional regime for horses. Banana Feeds Australia aims to assess the active compounds in dried green bananas with a view to produce a nutraceutical supplement for horses. Aside from improved equine nutrition the project hopefully will determine if the active compounds present in green bananas are effective as a potential mitigator for equine gastric ulceration syndrome.

Converting potato waste into pre-biotics and other valuable products

November 2019 until December 2021



AIMS

South Australia is the nation's largest producer of fresh market potatoes yet up to 40% of potatoes grown are rejected because they do not meet strict market specifications. Using this substantial waste volume for animal feed will result in payment to the producer of \$10/tonne or alternatively it can be disposed of in landfill at a cost to the producer. However, out-graded potatoes could become products that already have a market such as functional foods, bioplastics, packaging materials, coatings, adhesives and starch.

IMPACT

This project aims in part to produce raw starch here in Australia to reduce the 20,000 tonnes per year that we import as we currently lack a potato starch industry. Given potato starch sells for up to \$1,000/tonne on the global market, and if we consider an average potato waste stream of 100,000 tonnes per annum, this represents an annual potential value of \$20m for raw starch alone. There is also value in proteins and fibres which are by-products of the potato starch industry. Potato skins can also be used in nutraceutical and other applications as they contain valuable bioactives.

ACHIEVEMENTS

Project participants attended a crucial workshop in December 2019 to determine the type of samples to be collected, at which period of the year and from which geographical sites. The sites selected were the Mallee, Riverland, South East and Virginia in South Australia with the three highest volume varieties from each producer included in the sample. The collection of the potato samples commenced in January 2020, representing each company's typical waste'.

A joint media release with the University of Adelaide and the project participants was released in early March 2020. It was 'picked up' by 24 online news sites including the news platform 'Medium', SBS and phys.org with a global reach of 100 million.

*The acquisition of Thomas Foods Fresh Produce by The Mitolo Group will be finalised in August 2020.

Waste-to-Energy: Fuelling sustainable wastewater treatment with food waste

January 2020 until December 2022



AIMS

Urban Utilities has an existing network of trade waste partners and commercial customers, generating food waste including multiple sources of dairy processing, beverage industry, grease trap, meat processing, supermarket and food court waste. All of this food waste could be used in an anaerobic co-digestion process utilising the existing capacity in Urban Utilities digesters. Currently, different operational limits, process risks and cost-benefit factors apply. Understanding these limitations is core to this project, with the principle focus being on scale-up, process integration and optimisation of retrofitted anaerobic co-digestion processes within existing infrastructure constraints.

IMPACT

The project will operate within an existing commercial environment with established market routes, and this allows for direct assessment of anaerobic digestion products (biogas and fertiliser). Adoption of co-digestion at two sites by the Urban Utilities would see around an incremental increase of ~10,000 tonnes of food waste diverted from landfill per annum.

ACHIEVEMENTS

Despite initial site access issues, this project made good progress in the first part of 2020. The establishment of the project steering committee and the technical group comprised of vital stakeholders from both UQ and Urban Utilities. Identifying the initial core questions around the potential storage and process issues that would impact on the commercial application of the approach has been completed.

Next priorities are developing the initial pilot plant design framework, determining the pilot location and assessing the availability of supporting infrastructure. The initial pilot drawings have been drafted (process drawings, general arrangement drawings) and detailed pilot designs are due for completion.

Nutraceutical extraction from Australian wine industry waste

March 2020 until March 2021



AIMS

In 2019, the Australian wine industry crushed 1,730 kilotonnes of wine grapes to produce our wine. From this, 350 kilotonnes of grape skins and seeds (also known as grape marc) were leftover. According to CSIRO, they are the most abundant food loss stream in horticulture in Australia. This project aims to produce a high quality Grape Seed Extract (GSE), a highly sought-after ingredient in the Australian nutraceutical industry, from Australian grape marc.

IMPACT

This project will initially aim to utilise 250 tonnes of predominantly Pinot marc, which is the preferred source of GSE. It will work towards producing fully traceable Australian GSE from the 2020 vintage for premium export markets. This ultra-premium GSE will come from the grape seeds leftover from wine production in the growing regions of Yarra Valley, the Mornington and Bellarine Peninsulas.

ACHIEVEMENTS

The engineering team has designed the seed separation equipment and sourced the necessary components to build the kit, and successfully commission it. Pilot batches have identified unique and optimal conditions for high recovery bioactive extraction rates.

Establishing the smaller scale proof of concept occurred in early 2020, and the project team expects that this will apply to the larger volumes to deliver the target amount of GSE. There were less amounts of grape marc input purchased than initially expected, resulting in the target amounts of GSE not being met. Due to COVID-19, the research team has had difficulty in accessing the laboratories at Swinburne University of Technology due to the strict access and physical distancing restrictions of university management mandated during the global pandemic.

A joint media release from the Fight Food Waste CRC, Swisse, and Swinburne University of Technology launched this project in May 2020. Coverage was gained in 15 online news publications, including The Stock Journal, AuManufacturing, Good Fruit and Vegetables, Food Processing, and Food and Drink Business. This coverage, along with social media mentions, totalled a reach of nearly 900,000.

Transformation of surplus/waste tomato and capsicum produce into value-added products (stage one)

June 2020 until December 2020



AIMS

This project aims to value-add to thousands of tonnes of surplus/waste tomato and capsicum produce that ends up in landfill in Australia every year. Processing this raw material will result in high-value nutrition and bioactive rich powders and liquid extracts for use in the food, health and feed industries. In this project, there will be a quality assessment of the produce and development of a processing protocol. The preliminary pilot-scale trialling aims to produce value-added solid (dried powder), and liquid (clarified extract) products. The Bowen Gumlu Growers Association produce will be assessed for these quality markers to determine the characteristics of the final product.

IMPACT

On successful completion of this stage, the next steps will include conducting a techno-economic analysis of the process and building a commercial plant on a member site as well as further extraction of additional bioactives. The technology pathways of this project will target more than 50% of the surplus/waste tomato and capsicum utilisation in Australia. Approximately 150,000 tonnes of surplus/waste tomato and approximately 23,000 tonnes of surplus/waste capsicum worth about \$300m currently ends up in landfill in Australia every year.

ACHIEVEMENTS

This project commenced on 1 June 2020, and, in this short time, the TRANSFORM Program Coordinator has organised the project kick-off meeting. This meeting enabled all of the project parties to confirm the activities, resources, timelines and reporting requirements. During the first two weeks of June, confirmation of equipment leasing and electrical tagging required to undertake the project were completed.

In undertaking some initial exploration of the processing trials, the industry partners supplied 100kgs of tomatoes and 50kgs of red capsicums. This work was still in progress at the end of the 2019/2020 year.

Making Australian Country Choice circular

October 2019 until September 2020



AIMS

Australian Country Choice aims to supply high quality meat products to domestic and export markets. It is also committed to reducing the volumes of food waste sent to landfill and to increase the effective use of by-products. This commitment is vital to its profitability, to the retailers supplied and to the industry more broadly.

This scoping project with Australian Country Choice will identify and clarify economically feasible closed-loop concepts for the company and their waste streams. The project will model the flow of nutrients, energy and water across the supply chain, identify possible closed-loop solutions and identify research needs and gaps for future initiatives.

IMPACT

The project deliverables will be aiming to encourage spin-off initiatives for application/piloting of closed-loop concepts identified via the project. The purpose of the project is to lay the groundwork that will lead to a future project within the Fight Food Waste CRC. Funding for spin-off funding initiatives could come from targeted Meat and Livestock Australia or Australian Meat Processor Corporation funding pools. The decision to proceed with further research or business development will be considered and also whether solutions can be generalised for other food processing industries.

ACHIEVEMENTS

This project is on track for successful completion in September 2020, and Australian Country Choice has been an enthusiastic industry partner providing the research team with a wealth of information. Significant highlights during the 2019/2020 year include recognising the interconnected nature of the problems facing Australian Country Choice concerning waste, water and energy. Central to this is the potential to maximise savings through decreased energy and water costs by implementing technologies that better manage and transform waste.

Meat processing and milk processing synergies have been identified, specifically with both sectors having significant energy demand. Both sectors could similarly benefit from waste recovery technologies implemented as early as possible within their respective waste production and processing activities. These technologies could provide products with minimal levels of contamination and reduce solid residues from end-of-pipe treatment systems.

From food waste to smart compost formulations

February 2020 until January 2021



AIMS

Healthy, nutritious and plentiful food and animal feed, produced sustainably, is the gold standard for our future. This 12-month project is the first step in designing and characterising the benefits of various smart compost formulations that convert food waste into compost, focussing on nutrient delivery. This research will inform future high-value compost formulations with quantifiable benefits for crops, the environment, producers and consumers. By improving the nutrient delivery of the smart compost granules, the value of compost granules could double from a current \$250-300 per tonne to an estimated \$500 per tonne.

IMPACT

This project will produce a high-value compost product using an extra 50,000 tonnes per year of food waste at three sites around Adelaide. Adoption of this innovation across the industry has the potential to increase utilisation of food and organic waste in compost by more than 200 kilo-tonnes per annum with a market value of \$125 million per year.

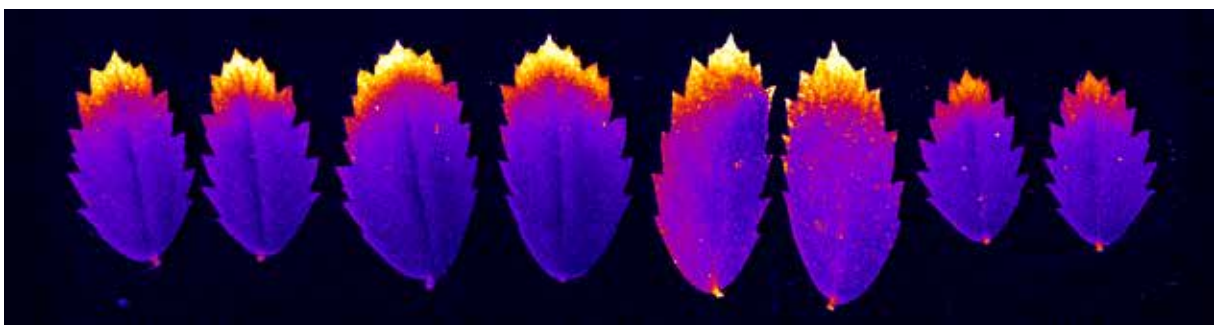
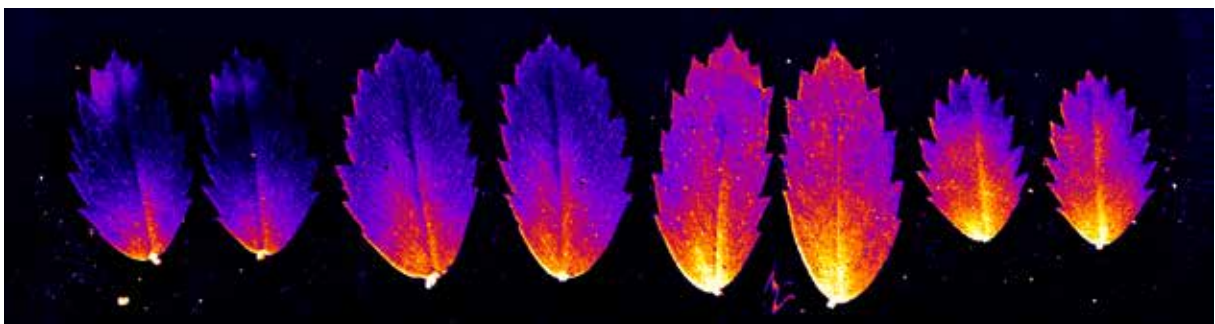
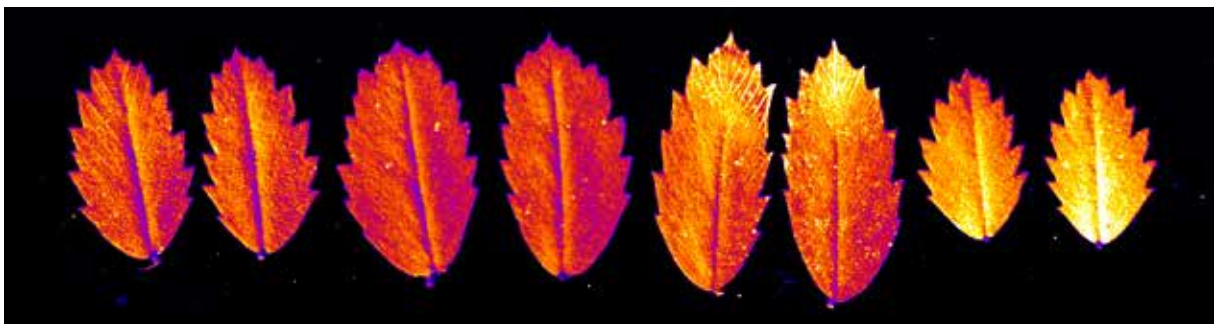
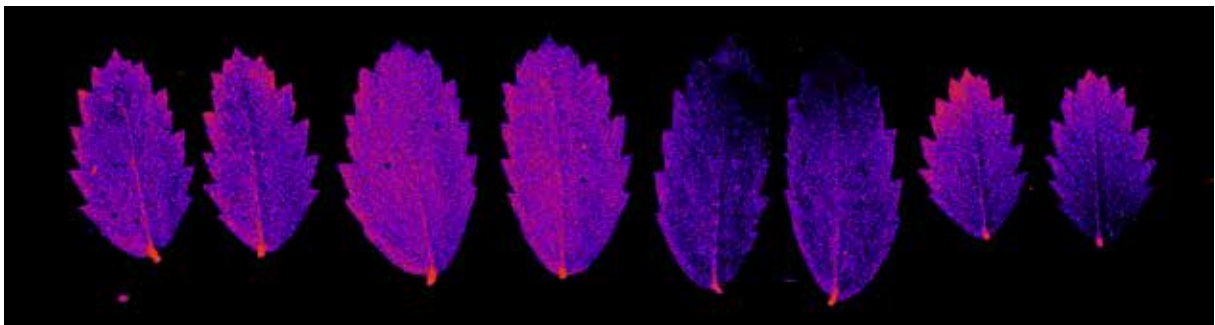
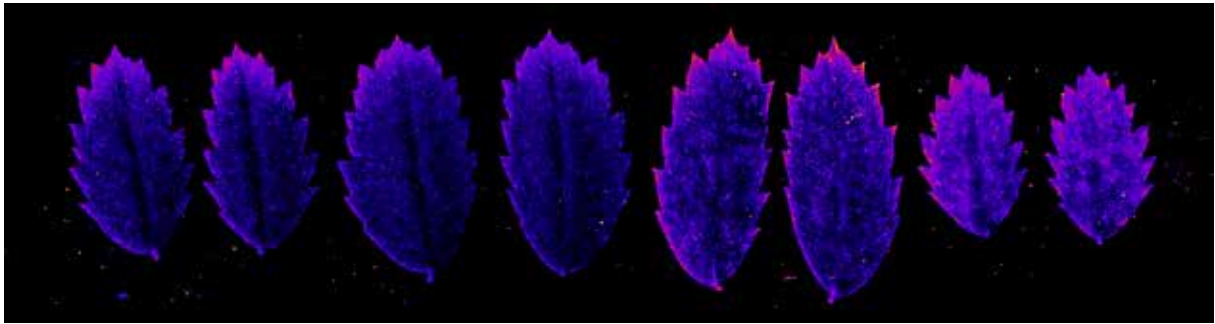
ACHIEVEMENTS

Led by UQ, the project team have completed two compost experiments with three different crops comparing liquid waste streams and inorganic fertiliser. Element analysis is still to follow that will give our industry partner Peats Soils and Garden Supplies some early results. Glasshouse experiments with various compost formulations and seasonally adjusted crops show the crops growing well, better or equal to the benchmark inorganic fertiliser.

This project has experienced delays as a result of COVID-19 with access to the glasshouses and laboratories delayed by six weeks. Irrespective, 12 crops have been screened for their ability to grow with compost formulations which is informing the way forward. A global meta-analysis is also being completed on the benefits of compost for yield, re-carbonising soils while reducing greenhouse gas emissions.

A UQ masters student completed her thesis in May 2020. While not an official Fight Food Waste CRC Masters student, it is always a priority of the CRC to have students associated with our industry-led projects. A UQ Honours student commenced on the project in February 2020 and will complete his research in November.

Our researchers are investigating how, when using smart compost formulations rich in additional nutrients, we can grow more resilient crops and produce foods with greater nutritional value. This is especially important for zinc and iron as many people are deficient in those essential minerals. Using sophisticated x-ray fluorescence microscopy, we can image these nutrients in food to design smart compost formulations for different crops.



ENGAGE



Overview

Providing solutions for industry and households to change deeply engrained human behaviours around food to reduce the amount of food wasted is critical, now more than ever. To support Fight Food Waste CRC's vision of an Australia without food waste, the ENGAGE program is undertaking research providing vital contributions to 'changing the social norm so food is seen as a valuable resource and hence not wasted'.

Extent to which the CRC is on target to achieve its research outputs, including strategies in place to address any risks and issues.

While the challenges of COVID-19 remain, active management of associated changes and risks has resulted in ENGAGE projects experiencing minimal disruption. COVID-19 related adjustments were made to embrace online interactions, Future Leaders Program, Sustainable save food packaging, and Industry Connection Hub and have resulted in delaying until a 'new normal' emerges to allow for collection of data from households, Designing effective interventions to reduce household food waste and WWW of household food waste behaviour. These adjustments are not expected to have material impact on final completion of projects in terms of timing or budget.

The Research Higher Degree (RHD) Student Education Program onboarded 5 PhD and 2 Masters by research students. A student monitoring system and a student education program manual to guide program management have been developed.

At the end of the reporting period, two additional ENGAGE projects were approved to commence in 2020/2021:

- Social media – 'It's easy as' campaign
- Social media - The real impact on food waste reduction beyond the swipe or the click

Key research achievements and evidence of the research quality

ENGAGE welcomed a 0.5 FTE ENGAGE Program Coordinator (Alexandra Guest) and a 0.4 FTE Household Project Program Manager, expanding our team's expertise. ENGAGE also released two publications, both from the Designing interventions to reduce household food waste project:

1. *Food Waste Australian Household Attitudes and Behaviours: National Benchmarking Study – Summary Report* (launched at the 2019 Annual Conference, November)
2. *Food Waste Australian Household Attitudes and Behaviours: National Benchmarking Study – Full Report* (released May 2020). This is the first Australian study of how over 5,000 households manage food, providing insights for industry to guide future behaviour change interventions.



Any issues, including technical or scientific impediments

1. Actively pursuing dialogue with key state and federal government stakeholders, in pursuit of securing funding for the implementation of interventions that will assist households to reduce food waste.
2. Active pursuit of capable and passionate PhD and Masters by Research students to assist industry in profitably managing their food waste issues.

Level of industry involvement and evidence the research is meeting industry's needs

Industry involvement is crucial to success of the ENGAGE program. For example, the Designing interventions to reduce household food waste project includes a coalition of 12 stakeholders. They meet every two months to guide research outcomes towards insights that will shape targeted household and consumer behaviour change interventions. Further, the Industry Connection Hub continues to provide a dynamic platform for involving industry associations in the Fight Food Waste CRC through dialogue and sharing the latest research insights. Its Training Needs Analysis report (launching in September 2020) includes a survey of industry requirements and industry focus group outcomes.

Any changes proposed to future research directions and the reasons for the changes

There are no proposed changes to the future research direction of the ENGAGE program. Thank you to our Fight Food Waste CRC community for your support of the ENGAGE program these past 12 months. This includes Fight Food Waste CRC staff and participants from industry, government and for-purpose-sector throughout Australia. Aristotle was right in that we are greater than the sum of our parts – our impact increases when we work together.

In addition, the ENGAGE program is incredibly grateful for the support received from Central Queensland University (CQU), particularly Vice President - Research (Grant Stanley), Director of Research (Leslie Walker), Dean College Business and Law (Lee Di Milia), former Deputy Dean Research (Julian Teicher) and the entire team at the Office of Research. Their collective guidance, wisdom and encouragement is deeply appreciated.

David Pearson
Alexandra Guest
ENGAGE program

Food waste reduction roadmap for Woolworths

August 2019 until July 2023



AIMS

This project provides Woolworths with access to a global food waste reduction expert, Mark Barthel. Mark is working with Woolworths staff and suppliers to lead the development and implementation of a Food Waste Reduction Roadmap. This Roadmap will build on existing Woolworths initiatives, providing a structured framework for the delivery of food waste reduction opportunities across their farm-to-fork value chain.

IMPACT

The first stage of this project will focus on assisting Woolworths to reduce food waste in its operations. Subsequent stages will expand this to include suppliers and customers. The aim of reducing the amount of food waste is a direct contribution to the profitability of Woolworths and its supply chain partners. This will be achieved by reducing the direct and indirect costs of food waste, improving product availability and quality in-store, and enhancing brand loyalty amongst their customer base.

ACHIEVEMENTS

Despite the significant impact that COVID-19 had on panic buying and subsequent stock management for Woolworths retailers in the second half of the financial year, it has been a substantial achievement to complete nearly all of the initial stakeholder meetings throughout Woolworths. The overarching Food Waste Reduction Roadmap is close to completion, with final input from remaining stakeholders pending once operations return to the 'new normal'. Product category program plans for bakery and fresh produce are close to completion, and it is pleasing to report some interventions are already underway in both product categories.

The project has welcomed one Master by Research student and recipient of a Fight Food Waste CRC scholarship (Josephine Buckman enrolled at Central Queensland University with supervisory team including Mark Barthel) who joined this project in the last quarter of 2020. Jo has developed her research proposal which will focus on mining data from the Fight Food Waste CRC Designing effective interventions to reduce household food waste project to identify insights and provide evidence for targeted support and communications to Woolworth's customers to help them reduce their food waste. A spin-off project with the Queensland University of Technology to better understand the barriers and drivers to reduce food waste and store loss at Woolworths has been contracted and will start later in 2020.

Woolworths has also established an internal 'Fight Food Waste Squad' involving senior business representatives from across the organisation. This squad will champion the food waste reduction cause and help to develop further value from Woolworths partnership with Fight Food Waste CRC.

What, where and why (www) of household food waste behaviour

May 2020 until July 2022

EastWaste



AIM

The focus of this project is on developing a comprehensive understanding of household food waste disposal behaviour, including drivers of household practices and identification of opportunities to deliver behaviour change. The research will include detailed waste auditing, ongoing waste disposal monitoring using bin weighing technology, and household surveys from a broad cross-section of the community in Adelaide.

IMPACT

Findings from the project will be shared with project participant (East Waste), member Councils in Adelaide and actively promoted through the Australian Local Government network and wider waste industry. Research-based experiments in surveys will first assess the cost-effectiveness of the various behaviour change strategies identified. In the second stage of the project, project partners will then seek to implement and test, where possible, various behaviour change strategies in the communities where project participant (East Waste) collects household waste.

Diversion of food waste away from the residual bin has been reported to represent the single most significant financial and environmental opportunity for Councils. The adoption of best-practice programs across the nation would result in less food waste entering landfill.

ACHIEVEMENTS

Commencing in May 2020, the research team have worked on the GIS database, census data, survey development and a literature review. In addition, they have accessed monthly data from collections from three household bin streams since 2006. The audit of household bins is anticipated to take place in early 2021, subject no further disruptions to household food related behaviours from external factors such as COVID-19.

The project has welcomed one PhD student and recipient of a Fight Food Waste CRC scholarship (Trang Nguyen from the University of Adelaide). Trang's research proposal will focus on designing and implementing a survey of households in the Adelaide suburbs being covered by the project.

Designing effective interventions to reduce household food waste

August 2019 until July 2023



AIMS

This project will provide consumer metrics and insights to enable government, industry and non-for-profits to better communicate with households to reduce their food waste. The project will use evidence-based insights into household food waste and the attitudes and behaviours about the purchase, management and disposal of food. These insights will be used to establish potential interventions to reduce food waste from homes and to encourage widespread behavioural change.

IMPACT

Through providing a report on a national consumer survey of over 5,000 households, an Australian-first, this project has begun to provide empirical evidence on behaviours leading to food waste in households. Subsequent work packages will quantify household food waste through household diaries and targeted bin audits and segment households based on the food waste attitudes, beliefs and practices. Understanding these diverse segments will allow industry, government and community organisations to implement targeted interventions seeking to reduce food waste in households. To create further impact, guidelines will be developed for practitioners establishing and running household food waste interventions.



National Steering Committee members with Dr Katie Allen, MP: Launch of the Food waste Australian household attitudes and behaviours – National Benchmarking Study in November 2019.

ACHIEVEMENTS

At the inaugural 2019 Annual Conference in late November, Dr Katie Allen Liberal MP for Higgins, Victoria (on behalf of the Hon Karen Andrews, Minister for Science and Technology) launched the Summary Report for the national household survey.

The next piece of research has been expanded and includes additional funds from new participants in the WA, ACT and QLD governments. This significantly bolsters and will increase confidence in the conclusions drawn, regarding the actual products and total amount of food wasted in Australian homes. The data collection is scheduled to commence in late October 2020.

The project has welcomed two students, both of whom are recipients of Fight Food Waste CRC Scholarships. The PhD student (Esther Landells from Central Queensland University) is investigating the role of local government in encouraging households to reduce food waste. The Masters by Research student (Danica Jobson from Central Queensland University) is investigating ways to ensure changes in behaviour supporting food waste reductions in households become enduring habits.

The representative from project participant Green Industries South Australia (Jessica Wundke) also sits on the Steering Committee of the Fight Food Waste CRC What, Where and Why (WWW) of Household food waste behaviour project. The efficient and effective delivery of each project is enhanced by having this one individual intimately involved in operations of each of them.



Attendees at the Northern Adelaide Waste Management Authority site visit

Sustainable packaging to reduce food waste

February 2020 until December 2020



AIM

This pilot project brings together South Australian food and beverage businesses, packaging experts and government to explore the complexities and challenges of sustainable packaging to reduce food waste. It will involve around 30 industry professionals in discussion around where and why food waste occurs, the role of packaging in minimising loss through the supply chain, as well as crucial packaging design criteria.

IMPACT

This project will provide industry with best practice examples and case studies to encourage adoption. This information has the potential to stimulate significant food waste reduction for the food and beverage industry and to provide case studies for other businesses looking to achieve similar outcomes through the training and upskilling of staff. All project participants involved will be required to benchmark current food waste levels related to the existing packaging and report back to all reductions in food waste associated with the adoption of new packaging formats. The Australian Institute of Packaging (AIP) is the education and training arm of this project.

ACHIEVEMENTS

Stage one of this pilot ran in early 2020 with nearly 30 South Australian food businesses participating. Attendees said that the pilot provided a 'great level of information on what is a complicated topic' and gave 'confidence that we are not on our own in our thoughts and goals.'

Stage two is being delivered entirely virtual due to COVID-19 travel restrictions. Fourteen businesses are participating in a customised and comprehensive way with the two Australian Institute of Packaging (AIP) packaging experts (Ralph Moyle and Keith Chessell). Each week during the final quarter of 2020, two businesses are involved in private sessions before the final group discussion anticipated to occur early July 2020. A surprising success of this project was increased participation due to the online format and reduction in travel time.

Future Leaders Program

April 2020 until March 2025



AIMS

The Future Leaders Program offers training for future industry professionals from research backgrounds to capitalise on careers in the fast-growing food and agriculture areas in Australia. It builds skills in leading and translating research into industry-relevant action. The program includes two streams:

1. Professional student mentoring from KPMG to build networks in industry and gain skills in being an enterprising professional.
2. A bi-annual personal development retreat led by Central Queensland University with support from a range of national and international discipline experts.

IMPACT

The 2015 review of Australia's research training system identified the urgent need to enhance external engagement in research training. The Future Leaders Program develops future industry leaders from the core group of Fight Food Waste CRC's 30 PhD and 12 Master by Research students who will be studying at one of the participating Universities. It will provide a pool of talent for industry partners who seek research leaders with research translation skills. Additionally, it will deliver longer-term benefits, including addressing postgraduate student attrition and improving the ability of graduates to make an impact on industry. The Future Leaders Program will also contribute to the understanding of research training quality methods through publication of refereed journal articles.

ACHIEVEMENTS

After commencing on 1 April 2020, students in the Future Leaders Program had their inaugural virtual meeting. This 'meet and greet' introduced the program and allowed each student to introduce themselves and their research. Students have participated in several focused workshops and discussions on issues ranging from commercialisation to research ethics, with fortnightly 'drop in' sessions hosted by the project leader under way and well attended. Additionally, a closed LinkedIn group has been formed for students in the Future Leaders Program to exchange ideas and share knowledge.

The Project Leader (Assoc Prof Olav Muurlink) has also commenced a research project on 'knowledge translation' and 'PhD employability' amongst new graduates of PhDs to establish gaps in current approaches of preparing students for industry. Working with Australian National University PhD strategy expert (Professor Inger Mewburn), he is investigating employability of PhD graduates (notably general skills and knowledge translation within a social science context). This project is underway, with an ethics application to be submitted to enable data collection.

Industry Connection Hub

June 2019 until June 2028



AIMS

The Industry Connection Hub operates under the principle that we are fundamentally more impactful working together, rather than individually, in extending research results to industry. The principal benefits of belonging to the Hub are the enhanced opportunities for collaboration and access to research outputs from Fight Food Waste CRC in a rapid and timely manner, and in a format that can be understood and applied directly within Hub member businesses. The Hub also provides a platform for researchers and research students to understand industry needs and identify areas where research is able to contribute to offering solutions to these needs.

IMPACT

The Hub is a valuable mechanism for identifying new education and training opportunities, including courses, masterclasses, micro-learning and e-learning. Hub members can develop these together for their members based on the outcomes and recommendations identified in the recently completed Australian Industry Food Waste Training Needs Analysis. The Training Needs Analysis is a critical first step in identifying training opportunities that are available as well as the knowledge gaps that could be addressed by development of new training programs, including online and offline learning channels, for Australian food businesses throughout the entire supply chain. The Hub also extends CRC research results to industry via Hub member communication channels where they can be adopted by industry sectors and businesses in a timely manner.

The Hub will see 250 people trained each year in how to reduce food loss and waste in production, processing, transporting and packaging that prevents or reduces food waste sections of the value chain. In addition, it's predicted that 125 people each year will implement one new piece of knowledge, technology, method or process in their business or place.

ACHIEVEMENTS

The Training Needs Analysis consisted of five pieces of research: an environmental scan to set the context for the research, an audit of nationally recognised and non-nationally recognised training (domestic and international food waste training initiatives), online keyword research to identify what searching is being done online in relation to food waste training, an industry survey and industry focus groups. A summary of the report and recommendations will be shared with Fight Food Waste CRC and Hub members at a virtual workshop in August 2020, with the full report scheduled for release the following month.

The Hub has also met three times since the last reporting period. This included one face to face meeting and two virtual meetings. These meetings are vital to ensure the Hub members remain connected with each other and the CRC, as well as maintaining a solid Hub network.

Food Waste TV has also been created. The Hub Project Leader (Emily Mantilla, Honey and Fox) and Fight Food Waste CRC Communication Manager (Tanya Wilkins) have taken a 'newsroom' approach to presenting results relevant to business across the food supply chain from the national household food waste survey (completed in one of the Fight Food Waste CRC ENGAGE program projects). This video was released to Hub members and attracted nearly 60 views. The public release was delayed due to COVID-19 and is anticipated to be released when disruption to the food service, hospitality and retail sectors is over.

FOOD SAFETY

Our research has already demonstrated that over half of Australian households cannot tell the difference between 'best before' and 'use by' dates, and less than a third cannot tell whether food is safe to be consumed based on seeing, smelling or tasting it. Correct storage, handling and packaging are all crucial in ensuring food safety, as well as, increasing shelf life and reducing avoidable food waste. Awareness and adherence to International and Australian food safety standards, regulations and manufacturing practices are also important in developing new products from waste which may re-enter the human food chain directly, be feed to livestock destined for human consumption or be used in primary horticultural production. Ensuring food safety and integrity is, therefore, a huge part of what we do here at the Fight Food Waste CRC.

Dr Valeria Torok continued in her role as Theme Leader – Food Safety and Integrity for 2019/2020. She had an active role in the development and approval of the projects listed below. Her focus was to mitigate the risks of foodborne contaminants and illness in projects across all three of our program areas.

Fight Food Waste CRC contracted projects with food safety and integrity considerations: Save food packaging criteria and framework

As part of this desktop review it was recommended that there be a food safety and integrity section considering the microbial/chemical risks and shelf-life implications for various food categories (i.e. meat, seafood, fresh fruit, vegetables, dairy and processed foods).

On board processing and packaging innovation in the Australian wild harvest prawn fishery

This project is investigating shelf-life extension and alternative preservative use, approved by Food Standards Australia and New Zealand, during processing of wild harvest prawns.

SME Solution Centre

All research projects submitted in response to industry led expressions of interest were reviewed to ensure food safety and integrity challenges had been identified and adequately addressed.

Development and validation of reduced thermal processing requirements for canned abalone

Implementation of the project findings would be utilised to modify an existing process for food preservation for human consumption. Hence, the process would need to be validated to demonstrate that microbial risk associated with foodborne botulism had been mitigated.

From food waste to smart compost

It was recommended that as part of this project a review be undertaken on how the compost processing conditions utilised impacted on the presence of pathogenic microbial species such as Salmonella and Escherichia coli, which if not eliminated may be transmitted to high risk fresh produce causing foodborne gastroenteritis.

Nutraceutical extraction from Australian wine industry waste

This project will deliver commercial Grape Seed Extract (GSE) for human consumption and hence will need to adhere to the Therapeutic Goods Administration (TGA) guidelines and the United States Pharmacopeia (USP) monograph during manufacture.

Transformation of surplus/waste tomato and capsicum produce into value added products (stage one)

This project will develop value added food product prototypes. These will be produced in a food grade facility with the appropriate food safety accreditations.

Sustainable packaging to reduce food waste

This project will partially review the role of packaging in date labelling and shelf-life extension.

Pilot-scale production of enhanced-value anaerobic digestion waste (digestate) derived bioproducts on the Darling Downs.

This project will need to ensure that biosolids to be used on agricultural land do not present a risk to the environment and that potential contaminants, such as, heavy metals and pathogens are not transferred into the food chain.

Dr Valeria Torok
Theme Leader – Food Safety & Integrity



INTELLECTUAL PROPERTY

The treatment of Intellectual Property (IP) and the closely related issue of commercialisation have been carefully considered in the establishment phase of the Fight Food Waste CRC. In 2019/2020, no formal intellectual property (IP) was generated from research because the research activities had not progressed to an appropriate stage. We anticipate that this situation will change in 2020/2021 as several of the initial projects in the portfolio are finalised and formal IP protection becomes a consideration.

Whilst not directly related to research projects, trademarks have been granted for the Fight Food Waste CRC logo (#1967475 and #1967476) and for the #Too Good to Throw logo (#2042033) which are widely used in our communication activities.

In the development of the policies and processes, it was determined that industry participants within projects will have the first right to submit utilisation plans for the IP developed. Ordinarily, Project IP will be owned by the project parties in shares (based on their respective contributions to the project), and any income from the commercialisation of project IP will be split in accordance with these shares.

Utilisation plans are to be agreed by all project parties (including the Fight Food Waste CRC management team and the Research and Commercialisation Committee) prior to a project commencing and will be reviewed annually to determine ongoing appropriateness and varied if required. Key clauses related to IP and commercialisation from the Core Participants Agreement have been incorporated into the Fight Food Waste CRC Project Guidelines developed to assist participants in developing new projects.

Utilisation outcomes from the Fight Food Waste CRC will include a mixture of public and confidential information, new tools and techniques for identifying, reducing (including innovative packaging) and transforming food and industry waste and gaining access to highly skilled postgraduates and industry professionals for building the future specialised workforce.

To ensure adherence to the National Principles of IP Management for publicly funded research, the Fight Food Waste CRC developed the following mechanisms:

Identification and management of IP

Through quarterly reporting the Program and Project Leaders will identify any emerging IP and report to the Fight Food Waste CRC management team.

Protection of IP

The utilisation plan (agreed at commencement of a project) will outline which party is responsible for managing the protection of IP. Where the Fight Food Waste CRC is responsible, it will engage the services of professionals to put in place the appropriate IP protection. It should be noted that some Fight Food Waste CRC projects will have utilisation plans where IP protection is not appropriate such as those that involve the widespread public promotion of research outcomes and reports.

Ownership of IP

Ordinarily (unless otherwise agreed in the project agreement), upon its creation, project IP will be owned by the project parties in proportion to their respective contributions to the project and protected and used in accordance with the terms of the applicable project agreement.

Assessment of existing IP and sharing of benefits

A project participant making its pre-existing material available to the project will do so on a non-exclusive, royalty-free basis for the term of the project. The contributing party will continue to own and control its pre-existing material (including any improvements); it may also continue to use its pre-existing material freely provided the use is not inconsistent with the terms of the project agreement.

If the party utilising the project IP requires a licence to use pre-existing material, the contributing party will grant them a licence on reasonable commercial terms.

Transparency and reporting

The Fight Food Waste CRC will keep a register of project IP and pre-existing material that specifies who owns the IP and the rights and obligations attached.

Potential conflict of interest

The independent Fight Food Waste CRC Board is responsible for approving all utilisation plans. The Board has processes for dealing with any Directors' conflicts of interest, where if any real or perceived conflict exists then a Director will be excluded from the decision-making process.

Commercialisation of research findings

The utilisation of the project IP will be as agreed and set out in the utilisation plan in the applicable project agreement. Notwithstanding the grant or loss of utilisation rights to a project participant, each project party will be granted a non-exclusive, royalty-free and perpetual right to use the project IP solely for the purposes of internal research, education, awareness campaigns and teaching. The project party must maintain confidentiality and must not prejudice the protection or utilisation of the project IP.

Through the agreements and strategy outlined above, the arrangements will ensure that the IP is identified, protected and exploited to maximise the potential national benefits accruing to Australia.

Intellectual capital

While protection of IP is important, it is the development of IC (intellectual capital) that will possibly be more important in this CRC with the unimpeded sharing of new knowledge being a key factor in achieving the Fight Food Waste CRC's aspirations of reducing food waste in many outcome areas. The Industry Connection Hub is one avenue established to assist in this.

Whilst these principles guide the Fight Food Waste CRC's contracting framework, there is a recognition that these guiding principles can be amended to reflect the commercial and real-world requirements of the projects and can be adjusted through the contracting process prior to any project commencing.

COMMERCIALISATION

The Fight Food Waste CRC was in its establishment phase during 2019/2020 with 20 new project commencements and no project completions. Consequently, there have been no major commercialisation or utilisation outcomes to date. Several initial projects will be completed in the 2020/2021 year, after which we expect to be able to report our first commercialisation and utilisation outcomes.

To set the Fight Food Waste CRC up for success, key steps have been taken to maximise our impact including:

- establishing an industry-based commercially focussed independent Board.
- establishing a Research and Commercialisation Committee with the responsibility to ensure that all research activities include a utilisation plan that aims to maximise benefits to industry participants.
- establishing an Industry Impact Committee with a remit to continuously review the Fight Food Waste CRC's impact on industry and ensuring committed focus on improving that impact.
- establishment of a custom Impact Assessment Model that will be used to estimate, monitor, and report on project impact across key target areas (at project, program, and portfolio levels).
- ensuring that all project proposals address one or more of Fight Food Waste CRC's seven key impact areas and can clearly articulate and quantify these potential impacts.
- development of project proposal evaluation criteria with strong emphasis on impact and commercialisation.
- development of project guidelines for new project proponents that provide clear guidance concerning IP requirements and utilisation within proposals.
- mapping of expected project outputs against the performance milestones in the Grant Agreement (performance milestones derived from the original impact tool forming the CRC business case) to identify gaps in the research portfolio and determine an investment strategy.
- appointing a CEO and CFO with highly relevant recent experience in the commercialisation of IP from CRC projects.

To ensure uptake by industry of the research outputs, all projects will include an industry participant and that industry participant will have the first right to submit a utilisation plan over the research outputs. In some cases, the outputs will be knowledge transfer while in others it will be IP able to be commercialised (e.g. software, method, design). Where possible, to ensure widespread uptake, research outputs will be publicly distributed. The Fight Food Waste CRC has also established the Industry Connection Hub to facilitate the transfer of research results, extension materials, and education and training tools for industry.

SME's participate in the Fight Food Waste CRC as core or supporting participants. It is important to note that unlike many other CRC's, the Fight Food Waste CRC does not require any minimum contribution for participation. These SME's are participating in projects with equivalent rights to all other participants. Commercialisation and utilisation arrangements for SME's have been considered and details can be found in the SME Engagement section of this report.



EDUCATION AND TRAINING

The Fight Food Waste CRC continues to recruit students into its postgraduate education program, with four new talented students joining the team. The program is now home to six PhDs and two Master by Research students, who are on a journey to be our future leaders for the food and agribusiness sector.

Each student is undertaking leading research on industry defined problems whilst being embedded within an industry participant's business. This real-world connection between research and industry builds capacity within businesses and drives on-going commercial innovation. Over the life of the Fight Food Waste CRC, Australia will benefit from having over 40 graduates who will be industry-ready employees, having completed their qualifications whilst working in industry on industry problems, delivering industry relevant solutions.

Fight Food Waste CRC has begun delivery of the formal aspects of its postgraduate education program, providing opportunities for students to expand their horizons and learn from others.

1. Participation in the 2019 Annual Conference. Students shared progress on their research and had the opportunity to hear from and engage with industry experts.

2. Commencement of the Future Leaders Program. The program launched in April 2020 with a virtual 'meet and greet', introducing students to the program, each other, and their research. The students connect through focused workshops and Project Leader hosted drop-in sessions. The first program retreat will be re-scheduled when COVID-19 travel restrictions are lifted.

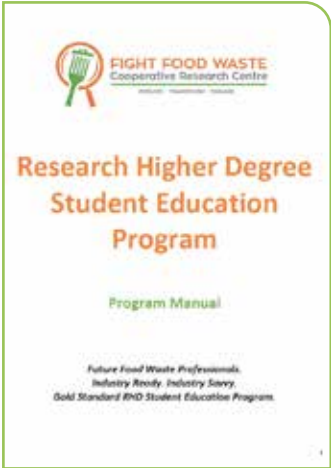
Students continue to provide a significant contribution to research undertaken in specific research projects. Targeted research project expressions of interest for PhD and Master by Research students are developed and will be advertised early in the new financial year. It is expected that these opportunities will increase student recruitment into the postgraduate education program, address critical research milestones and tackle an industry identified problem.



Management of the postgraduate education program continues to strengthen, with the development of the Fight Food Waste CRC Student Education Program Manual, a dedicated resource for information and procedures for managing the Fight Food Waste CRC student cohort. Increased connection with participating research organisations has also been valuable, creating clearer connection points for managing postgraduate education enquiries and student recruitment.

The Fight Food Waste CRC is on track to achieve its education and training outputs, with recruitment of postgraduate students progressing towards the target of 30 PhD and 12 Master by research students. New students are expected to be in the program early in the new financial year through both the expression of interest opportunities and new project approvals.

Many thanks to Future Leaders Program Olav Muurlink (Project Leader), KPMG and our students for the enthusiasm and energy they have injected into the Fight Food Waste CRC postgraduate education program.



RUBY CHAN



ROLAND SOMALI



KHOULOU KAMALMAZ



TRANG NGUYEN



JO BUCKMAN



DANICA JOBSON



ROANNA JONES



ESTHER LANDELLS

COLLABORATION

It has been the collaborative approach of the Fight Food Waste CRC that has resulted in the successful delivery of the research portfolio during 2019/2020. There has been a tremendous effort by our valued 50 industry participants, our 10 research partners, 162 researchers, six PhD students, 2 Masters by Research students, 12 sub-contractors, 7 Directors, 4 committees, 3 Program Leaders, 5 Program Coordinators, Research Director, Theme Leader, Special Advisor, and 4 HQ staff.

At the end of the reporting period, there were 34 approved projects through the project proposal and development process; 27 of these were active and another 7 were approved and going through contracting.

The distribution across the programs is as follows:

11 REDUCE

15 TRANSFORM (including 5 SME projects)

8 ENGAGE

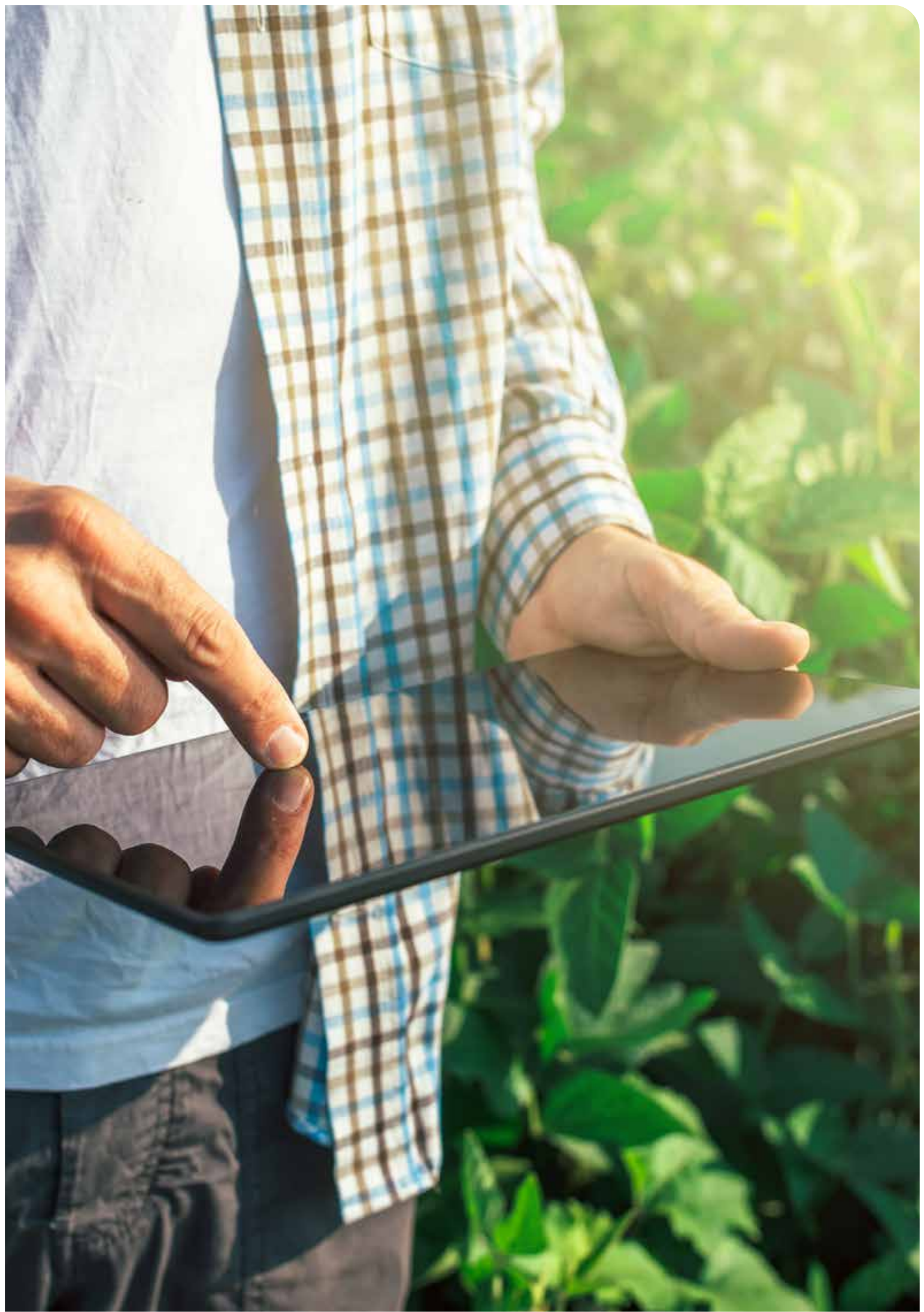
In 2019/2020:

- 34 projects involved collaboration between research and industry
- 16 projects involved collaboration between industry participants (two or more in a project)
- 7 projects involved collaboration between research participants (two or more in a project).

Another example which demonstrates collaboration underpinning everything that we do at the Fight Food Waste CRC is the 2020 New Scientist Live event in Melbourne. This event was postponed due to COVID-19, however during 2019/2020, the Fight Food Waste CRC led a first of its kind partnership for a 'climate change and sustainability' stand. Included in this collaboration was the Bushfire and Natural Hazards CRC, the CRC for Water Sensitive Cities, CRC CARE, the Soil CRC, Developing Northern Australia CRC, iMove CRC, Food Agility CRC and Future Food Systems CRC. It is hoped that this event can be rescheduled and that this strong collaboration can still take place.

The Fight Food Waste CRC will continue to place a strong emphasis on collaboration in 2020/2021 and beyond as it turns its attention to the next phase of project development - future initiatives.





SME ENGAGEMENT

The Fight Food Waste CRC is proud to have many peak industry membership groups spanning across the food supply chain, including:

Industry:



Regional:



Producers:



These groups all have direct connection to Australia's food industry businesses, the vast majority of which are SMEs.

We launched our centralised research extension model – Industry Connection Hub - in 2018/2019, and in 2019/2020 the Hub conducted a food waste Training Needs Analysis for Australian food businesses. Given the dominance of SMEs along the food supply chain, there were some specific recommendations such as the format and cost of any training that took this into account. Full results are to be released in 2020/2021.

There continued to be a strong focus on SME engagement across the 2019/2020 through our SME Solutions Centre (as detailed earlier). As a result of the success in 2018/2019, FIAL provided an additional \$250,000 additional funding for 2019/2020 to fund more SMEs to develop solutions to their agri-food waste challenges. Currently five projects have been approved, with another four or more possible.

The sustainable packaging to reduce food waste project connected the SME members of Food South Australia with the technical knowledge and experience of the Australian Institute of Packaging. This project enhanced their understanding of the relationship between packaging and food waste. The 40 project participants were able to assess the key barriers and associated costs of changing packaging and equipment to be able to meet Australia's 2025 Packaging targets.

In establishing the initial research portfolio during 2019/2020 SMEs have been involved in developing many proposals. This has included collaborating with research scientists and other participants to ensure the right solutions are developed to address SME industry needs.

SMEs continue to be represented on the Fight Food Waste CRC Board by Robbie Davis who is, amongst other roles, an SME food producer.

COMMUNICATION



56k website visits
45k unique page views



226 online articles
143m reach



1457 social media mentions



6 media releases



36 publications



2 videos



2 infographics



85 end-user presentations



28 newsletters
40% open rate,
11% click rate

After an impressive initial year, the Fight Food Waste CRC has continued to build its public presence in 2019/2020 through a broad suite of communication activities. It has not been without a COVID-19 impact though, with less events to attend and sponsor to spread our good news. This included both the CRCA conference in Canberra with the showcase exhibition, and the inaugural New Scientist Live event in Melbourne where we were collaborating on a 'climate change and sustainability' stand with multiple CRCs.

Our CEO Steve Lapidge was interviewed on ABC TV early in the pandemic to outline how consumers can save money by reducing food waste. We had initial media interest from SBS Food, Good Fruit and Vegetables, and The Lead South Australia, however despite what we considered to be a very strong message that consumers can save money by reducing food waste, this did not garner attention from the mainstream media like we had hoped.

The social media presence for the Fight Food Waste CRC did continue to grow over 2019/2020, with both LinkedIn and Twitter starting at only 400 followers each and ending at 1800 and nearly 1000 respectively at the end of the reporting period. A real community has been built on both of these platforms with significant engagement, particularly on LinkedIn where the engagements equal nearly 25 likes, shares or comments per day for the year:

	Twitter	LinkedIn
Posts	377	313
Impressions	190,728	130,118
Engagements	3,945	9,078

We held our inaugural Annual Conference between 19 – 20 November 2019 in Melbourne at the KPMG offices. The success of this event would not have been possible without the support from the great staff at KPMG, for which we share our thanks. With over 100 participants in attendance, participants were able to hear project updates from across the research portfolio. In progressing the aim to develop a narrative culture in how we present results to wider public audiences, the Project Leaders were provided with a template that was underpinned by a narrative framework called the And, But, Therefore¹. As part of her science communication PhD with Australian National University our Communication Manager, Tanya Wilkins, conducted interviews and a focus group to understand the experiences of the Fight Food Waste CRC researchers in using such a communication approach.

Two significant updates were made to the Fight Food Waste CRC website in 2019/2020. The first was the inclusion of a news page for media releases and CRC updates. This functionality on our website, will improve our search engine optimisation through more frequent posts and updates. The second was the publication repository where the range of end-user publications for the CRC will be kept, including journal articles (publicly available abstracts at least) and milestone reports for each of our three program areas REDUCE, TRANSFORM and ENGAGE, as well as corporate documents.

Tanya Wilkins
Communication Manager

¹ Olson (2015) <http://scienceneedsstory.com>



GOVERNANCE

Fight Food Waste Ltd (ABN 90 627 226 537) is an independent organisation that manages the Fight Food Waste CRC and is a company Limited by Guarantee with members being the Fight Food Waste CRC core participants who opted to become members. The company is a registered charity with the Australian Charities and Not-for-profits Commission and is tax exempt. The key legal agreements establishing both Fight Food Waste Ltd and Fight Food Waste CRC are:

- Fight Food Waste Ltd Constitution
- CRC Grant Agreement between the Australian Government CRC Program and Fight Food Waste Ltd
- Core Participants Agreement between all core (cash contributing) participants and Fight Food Waste Ltd
- Individual Supporting Participants Agreements between in-kind only contributing participants and Fight Food Waste Ltd.

There have been no changes to the incorporation structures since establishment.

The governance and management structure of the Fight Food Waste CRC has been designed to deliver commercially driven outputs that will solve industry identified challenges. At the same time, the structure will promote high levels of quality collaboration between the participants and achieve the highest standards of accountability. This will ensure that Fight Food Waste CRC can fully exploit the diversity of expertise and knowledge within the participant group and maximise the opportunity for the outputs to be industry-ready and fully utilised.

Fight Food Waste Ltd has a skills-based board elected by the members of the company. The Board is comprised of seven Directors, independent of the R&D providers, and selected by the members of the company against an agreed skills matrix. This ensures that the Fight Food Waste Ltd Board operates to the benefit of all members and the objectives of the Fight Food Waste CRC. The Board must meet at least six times per year.

Gender statistics for the Fight Food Waste CRC:						
43% women	33%	66%	25%	50%	50%	25%
Board	RCC	RNC	IIC	ARMC	Delivery Team	Mgt

Board meetings:

Date	Location
29 July 2019	Teleconference
28 October 2019	Sydney
21 November 2019	Melbourne
24 January 2020	Teleconference
25 March 2020	Teleconference
30 April 2020	Teleconference
12 June 2020	Teleconference

At each AGM one-third (or number nearest one third) of directors must retire, retiring directors are entitled to renominate. For the initial directors, the Constitution specifies when each is due to retire, thereafter the retirees will be those directors who have been longest in office since last appointment (additionally a director who has served three consecutive years must retire at the 4th AGM).

In November 2019, the first annual Directors' elections were held at the Fight Food Waste Limited AGM. The two retiring and renominating directors (John Webster and Toine Timmermans) were elected for three-year terms. The other initial directors remained in office at the end of the reporting period.

The Fight Food Waste Limited Board is aided by four Board sub-committees, namely:

- Industry Impact Committee
- Audit, Risk Management and Compliance Committee
- Remuneration and Nominations Committee
- Research and Commercialisation Committee.

These sub-committees are each chaired by a Director member and established following ASX and AICD guidelines. They are constituted by the Board, including expertise from both the Fight Food Waste CRC Participants and outside if required. Their role is to provide expert advice and recommendations to the board. While most of these sub-committees are standard to CRCs in general, the Industry Impact Committee is unique to this CRC. It will have a remit to constantly review the CRC's impact on industry as a whole and ensure continual focus on improving that impact. The sub-committees generally meet on a quarterly basis.

Committee Meetings:

	Board	ARMC	RCC	IIC	RNC
Number of meetings held	7	4	6	3	4
Committee Member attendance					
John Webster	7/7	-	6/6	3/3	2/2
Toine Timmermans*	5/7	-	4/6	1/3	1/2
Geoff Starr	6/7	3/4	-	3/3	-
Sandra Hook	7/7	3/4	-	-	4/4
Christine Giuliano	7/7	3/4	3/4	-	3/4
Robbie Davis	7/7	-	6/6	3/3	-
Alain Pillay	6/7	4/4	5/6	-	-

In November 2019, the following Board Committee changes were made; Christine Giuliano joined the RCC, John Webster joined the RNC, Toine Timmermans left the RNC.

**Located in The Netherlands therefore time difference has been a consideration*

During 2019/2020 the Fight Food Waste CRC was structured as follows:



Management team

Name	Organisation	CRC position/role	Time
Dr Steve Lapidge	Fight Food Waste CRC	Chief Executive Officer	100%
Ian Hardwick	Fight Food Waste CRC	Chief Financial Officer	100%
Mark Barthel	Fight Food Waste CRC	Special Advisor- Food Waste	100%*
Dr Valeria Torok	PIRSA (SARDI)	Theme Leader Food Safety	50%
Assoc Prof Karli Verghese	Royal Melbourne Institute of Technology	REDUCE Program Leader	50%**
Dr Paul Luckman	University of Queensland	TRANSFORM Program Leader	50%**
Prof David Pearson	Central Queensland University	ENGAGE Program Leader	50%**
Prof Vincent Bulone	University of Adelaide	Research Director	50%**

* 50% funded from project with Woolworths, 50% funded via sub-contract to Food Innovation Australia Limited

** time provided in-kind by participant organisations

Head office staff

Name	Organisation	CRC position/role	Time
Dr Steve Lapidge	Fight Food Waste CRC	Chief Executive Officer	100%
Ian Hardwick	Fight Food Waste CRC	Chief Financial Officer	100%
Tanya Wilkins	Fight Food Waste CRC	Communication Manager	100%
Carolyn Eggart	Fight Food Waste CRC	Office Manager	100%

Program/Research Coordinators

Name	Organisation	CRC position/role	Time
David Mathews	University of Adelaide	Research Coordinator	30%
Dr Melanie Hand	University of Adelaide	Research System Administrator	100%
Leisha Ryding	Royal Melbourne Institute of Technology	REDUCE Program Coordinator	100%
Meagan Wheeler-Rogers	University of Queensland	TRANSFORM Program Coordinator	100%
Alex Guest	Central Queensland University	ENGAGE Program Coordinator	50%

FINANCE

The Fight Food Waste CRC is in a sound financial situation at the end of 2019/2020 including a cash carry forward at the end of the reporting period (\$5.85M). This carry forward is due to cash contributions having been received from the Commonwealth CRC Program and from many of the participants (in accordance with the Core Participants Agreement) from July 2018, but the research activities having only more recently commenced. Unspent contributions have been recorded as a 'contract revenue liability' in the financial statements rather than a surplus.

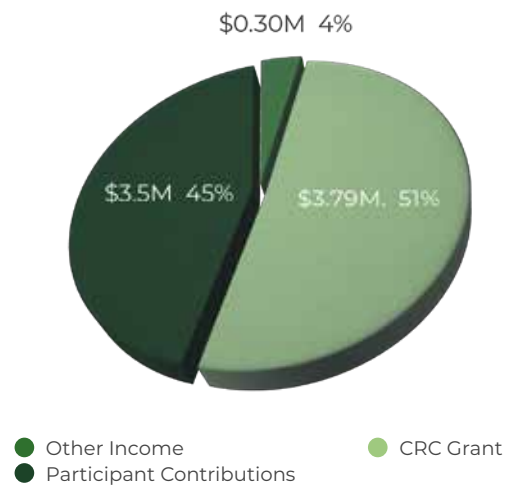
Of these unspent funds, \$1.43M relates to industry/end user participant contributions, \$1.69M to state government research organisation contributions and \$2.63M to CRC Grant funds. Much of this is already committed to contracted research projects and all is expected to be expended in future years.

Revenue received during 2019/2020 was \$7.78M, this included \$3.50M from participant contributions, \$3.97M from the CRC Grant and \$301K of other income. Overall cash contributions from participants up to the end of June 2020 are 86% of the amount budgeted in the original CRC Grant Agreement (\$6.56M versus \$7.67M). The shortfall is primarily due to participant withdrawals (reported last year), which is partially offset by new participants recruited.

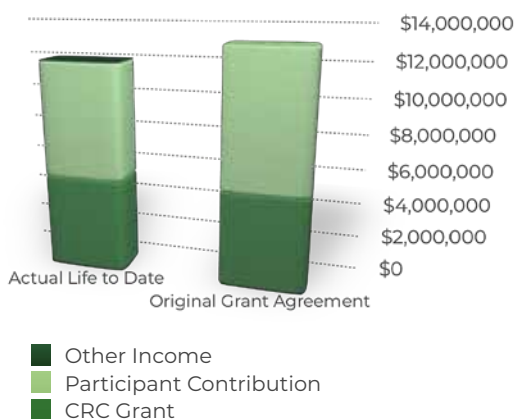
Expenditure during 2019/2020 was \$4.51M comprising \$3.25M of direct expenditure (project expenditure, program coordination support and postgraduate program) and \$1.26M central expenditure (wages, director fees, events/communication, travel, professional services, office expenses).

Central expenditure was therefore 16% of annual income for 2019/2020 and is 20% for the life of CRC to date (including all establishment year costs). The Fight Food Waste CRC is committed to keeping central expenditure to 20% or less of annual income over the life of the CRC, to ensure the maximum financial return to participants for R&D purposes. This is well below the average of around 30% reported by all CRC's over the last six years in CRC Association Benchmark Reports.

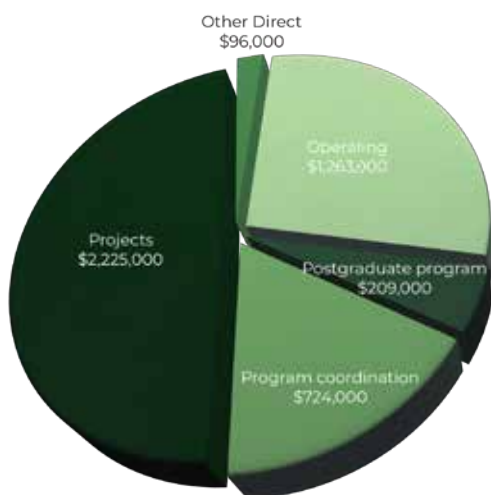
Cash Receipts 2019/2020



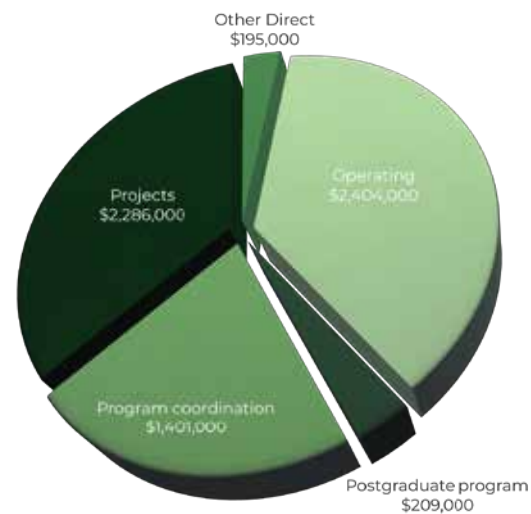
Cash Receipts to Date V's Original Grant Agreement



Cash Expenditure 2019/2020



Cash Expenditure Life of CRC to Date



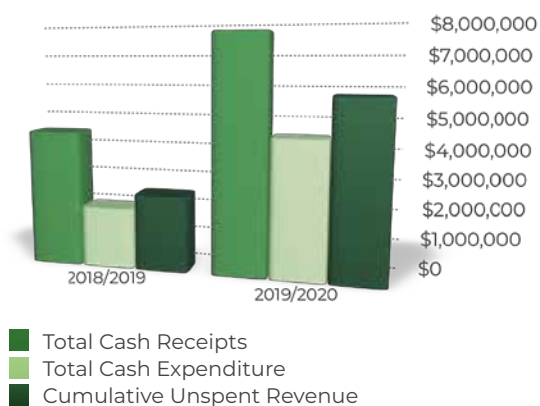
Over the coming year the cash balance is expected to increase slightly from its level on 30 June 2020 as contributions continue to track ahead of expenditure whilst the full research portfolio is being established. Over the medium-term (two-three years), with the research portfolio fully in place, the cash balance is expected to reduce significantly to the \$2M-\$4M range.

In-kind staff contributions from participants for the reporting totalled 13.14 FTE across 53 participant organisations. Non-staff in-kind contributions totalled \$291K. Both staff and non-staff in-kind contributions are behind on the original budget but are expected to catchup as the full portfolio of projects comes online.

The economic effects of the COVID-19 pandemic have led to a small number of participants seeking to reschedule or delay their contributions. Our approach has been to accommodate these requests but there remains a risk of reduction to contributions or participant withdrawal in the future.

The attraction of new industry participants is a key focus for Fight Food Waste CRC management over the coming year(s). This will help offset the participant withdrawals experienced in the prior year and mitigate the risk outlined above. A significant portion of the unspent funding held by Fight Food Waste CRC is attributable to our State Government research partners; South Australian Research and Development Institute (SARDI) and the Queensland Department of Agriculture and Fisheries (QDAF). New industry partners are being sought to match up with these unspent funds, and consequently, business development with SARDI and QDAF is a high priority for 2020/2021.

Cash Receipts versus Cash Expenditure



The audited financial statements for year ended 30 June 2020 are included at Appendix D.

FUTURE PLANS

As outlined in the Executive Summary the key activities to be undertaken in 2020/2021 include:

1. The establishment of the final five projects (\$1.4M) in the initial research portfolio to ensure all current core and supporting participants are actively involved in one or more Fight Food Waste CRC projects.
2. Deliver the Fight Food Waste CRC Investment Framework and future initiatives that grow the Fight Food Waste CRC's industry cash contributions back to that of the initial Grant Agreement (\$873k or 2.5%).
3. Attract additional industry participants to grow Fight Food Waste CRC's industry cash contributions by 5% or \$1.75M through the contracting of future initiatives.
4. Undertaken the 2020 Participant Satisfaction and the 2021 Staff Engagementsurveyswiththepercentage of "Agree" or "Strongly Agree" responses equal to or great than the 2019 and 2020 results respectively.
5. Complete the roll out of Participant Snapshot reports to all core participants.
6. Complete initial impact assessments for each project that will feed into the overall Fight Food Waste CRC Impact Assessment Model.

7. Develop the business case for a Fight Food Waste CRC national consumer behaviour change initiative.

8. Deliver the 2020/2021 Operational Plan.

It should be noted that the ongoing impacts of COVID-19 could have a significant impact on some or all of these planned activities, in particular attraction of new industry participants while economic conditions remain uncertain.

A significant additional task in Quarter 1 of 2020/2021 (July-September 2020) has been the preparation of the \$4M Fight Food Waste Ltd-led Partnership Proposal for the National Food Waste Governance Entity. Our partnership proposal with the Waste & Resource Action Programme (UK), the National Farmers Federation, the Australian Food Cold Chain Council, the Australian Institute of Packaging, the Australian Food and Grocery Council, the National Retail Association, Foodbank Australia and the state governments of New South Wales, Queensland, South Australia and Victoria was submitted on 7 September 2020. Should our proposal progress the Australian Department of Agriculture, Water and the Environment anticipates having the governance arrangements established by the end of 2020. This would mean that the partnership takes on delivery of the National Food Waste Strategy from 2021.

APPENDIX A - PARTICIPANTS AND THIRD PARTIES

Participant Name	Type	ABN/ACN	Org Type*
Abalone Association of Australasia Incorporated	Core	93373883402	Organisation
Abalone Council Australia Limited	Core	14108092271	Organisation
Australian Council of Prawn Fisheries Limited	Core	31052207191	Organisation
Australian Country Choice Production Pty Ltd	Supporting	32079436258	Large Industry
Australian Food and Grocery Council	Supporting	23068732883	Organisation
Australian Food Cold Chain Council Limited	Supporting	15621254448	Organisation
Australian Institute of Food Science and Technology Limited	Supporting	15602767019	Organisation
Australian Institute of Packaging Incorporated	Core	35092354071	Organisation
Australian Organics Recycling Association Limited	Supporting	17158519736	Organisation
Australian Packaging and Processing Machinery Association Limited	Core	62051388053	Organisation
Bowen Gumlu Growers Association Incorporated	Core	35729953455	Organisation
Central Coast Industry Connect Limited	Supporting	51605544223	Organisation
Central Queensland University	Core	39181103288	University
Central SEQ Distributor-Retailer Authority (Queensland Urban Utilities)	Core	86673835011	Organisation
Chameleon Innovations (CI) Pty Ltd	Core	68629148590	SME
Chemistry Centre (WA)	Core	40991885705	State Government
Curtin University	Core	99143842569	University
Eastern Waste Management Authority	Core	18048361442	Other
Empauer Pty Ltd	Core	95614415146	SME
Entopia Biotechnologies Pty Ltd	Core	35168592103	SME
FADA Pty Ltd t/a Pacific Coast Produce	Core	84269588959	SME
Fisheries Research and Development Corporation	Core	74311094913	Australian Government
Food and Fibre Gippsland Incorporated	Supporting	27 546 137 219	Organisation
Food Innovation Australia Limited	Core	50164124609	Australian Government
Food South Australia Incorporated	Core	59149235570	Organisation
Foodbank Australia Limited	Core	58073579254	Organisation

Participant Name	Type	ABN/ACN	Org Type*
Green Industries SA (as a body corporate pursuant to the Green Industries SA Act 2004)	Core	76149388126	State Government
Gretals Australia Pty Ltd	Core	54605253441	SME
Honey and Fox Pty Ltd	Supporting	85606554947	SME
KPMG	Supporting	51194660183	Large Industry
Minister for Primary Industries and Regions South Australia (Acting through the South Australian Research and Development institute)	Core	86123214068	State Government
Mitolo Developments Pty Ltd	Core	86123214068	Large Industry
NSW Environmental Protection Authority	Core	43692285758	State Government
OzHarvest Limited	Supporting	33107782196	Organisation
Peats Soil & Garden Supplies Pty Ltd	Core	40099625555	SME
Planet Protector Packaging Pty Limited	Core	65614861791	SME
Potatoes South Australia Incorporated	Supporting	45568994361	Organisation
Queensland Department of Environment and Science	Core	46640294485	State Government
Queensland University of Technology	Core	83791724622	University
Regional Development Australia Murraylands and Riverland Incorporated	Core	32137252384	Organisation
Royal Melbourne Institute of Technology	Core	49781030034	University
S.M ADAMS & Others (Piper Alderman)	Supporting	42843327183	Large Industry
Sampano Pty Ltd	Supporting	56608519893	SME
State of Queensland through Department of Agriculture & Fisheries	Core	66934348189	State Government
Sustainability Victoria	Core	62019854067	State Government
Swinburne University of Technology	Core	13628586699	University
Swisse Wellness Pty Ltd	Core	62004926005	Large Industry
The South Australian Potato Company Pty Ltd	Core	48090103549	SME
The Trustee for THE FAVCO TRUST t/a FAVCO QUEENSLAND PTY LTD	Core	22608312386	Large Industry
The University of Adelaide	Core	61249878937	University
The University of Queensland	Core	63942912684	University
Thomas Foods International Fresh Produce Pty Ltd	Core	28164983591	SME

Participant Name	Type	ABN/ACN	Org Type*
Toowoomba and Surat Basin Enterprise Pty Ltd	Core	85155004523	Organisation
Transport Canberra City Services Directorate (ACT NoWaste)	Core	37307569373	State Government
University of Southern Queensland	Core	40234732081	University
Waste & Resource Action Program (UK)	Supporting	N/A	Organisation
Western Australia Department of Water and Environmental Regulation	Core	28428443065	State Government
Whitsunday Regional Council	Core	63291580128	Other
Woolworths Group Limited	Core	88000014675	Large Industry
Zerella Holdings Pty Ltd	Core	75007857534	Large Industry

Joining Participants

Participant Name	Type	ABN/ACN	Org Type*
Eastern Waste Management Authority Inc	Core	15 972 100 754	Other

* These categories are determined by the CRC Program 2020 annual reporting guidelines

APPENDIX B – PUBLICATIONS

Date	Program	Author	Details
END-USER REPORT			
30/10/2019	CORPORATE	Fight Food Waste CRC	Fight Food Waste CRC 2018/2019 Annual Report
22/11/2019	ENGAGE	Fight Food Waste CRC	Designing effective interventions to reduce household food waste - summary report
25/11/2019	REDUCE	Verghese	Food: It is too good to waste by Karli Verghese Voices Column for One Earth Journal
3/02/2020	CORPORATE	Fight Food Waste CRC	2018-2028 Fight Food Waste CRC Strategic Plan
11/05/2020	REDUCE	Lockrey	DIRECT Case Study Participant Briefing Document
13/05/2020	REDUCE	MacNish	Banana project in the Australian Banana industry magazine
26/05/2020	ENGAGE	National Steering Committee	Designing effective interventions to reduce household food waste - final report
15/06/2020	REDUCE	Langley et al	Consumer perceptions of the role of packaging - Baseline Industry Report
15/06/2020	CORPORATE	Barthel	Food waste: preventing a multi-billion dollar problem
15/06/2020	CORPORATE	Barthel	Transforming food waste: making something out of rubbish
23/06/2020	CORPORATE	Lapidge	Fighting food waste: ensuring a sustainable food future
INFORMATION SHEETS			
16/08/2019	REDUCE	Fight Food Waste CRC	Enhancing Foodbank's stakeholder engagement
19/08/2019	REDUCE	Fight Food Waste CRC	Consumer perceptions of the role of packaging
26/08/2019	REDUCE	Fight Food Waste CRC	Save Food Packaging and Criteria
30/08/2019	TRANSFORM	Fight Food Waste CRC	Fight Food Waste SME Solutions Centre
5/09/2019	REDUCE	Fight Food Waste CRC	DIRECT Commercialisation
11/10/2019	ENGAGE	Fight Food Waste CRC	Food Waste reduction roadmap for Woolworths
4/12/2019	REDUCE	Fight Food Waste CRC	Reducing canning loses in the abalone industry
4/12/2019	REDUCE	Fight Food Waste CRC	On-board processing and packaging in the Australian wild harvest prawn fishery

Date	Program	Author	Details
5/12/2019	REDUCE	Fight Food Waste CRC	Foodbank Meals via Y Waste app
5/12/2019	TRANSFORM	Fight Food Waste CRC	Converting potato waste into pre-biotics and other valuable products
18/12/2019	TRANSFORM	Fight Food Waste CRC	Making ACC circular
17/02/2020	ENGAGE	Fight Food Waste CRC	Designing effective interventions to reduce household food waste
16/06/2020	REDUCE	Fight Food Waste CRC	Supply chain monitoring and improvements to reduce banana quality
16/06/2020	REDUCE	Fight Food Waste CRC	The opportunities for Australia's packaging and processing machinery sector to tackle food waste
16/06/2020	TRANSFORM	Fight Food Waste CRC	Nutraceutical extraction from Australian wine industry waste
16/06/2020	ENGAGE	Fight Food Waste CRC	Future Leaders Program
16/06/2020	ENGAGE	Fight Food Waste CRC	WWW (What, Where and Why) of household food waste behaviour
16/06/2020	ENGAGE	Fight Food Waste CRC	Sustainable packaging to reduce food waste
INTERIM TECHNICAL REPORTS			
8/04/2020	REDUCE	Lockrey	DIRECT interim technical report
unpublished	TRANSFORM	Fight Food Waste CRC	SME Solutions Centre - Prioritisation of value-adding opportunities to upcycle brewing by-products
Unpublished	REDUCE	Francis, Ryder, Verghese and Fight Food Waste CRC	Save food packaging design criteria and guidelines research literature and industry knowledge review
Unpublished	REDUCE	Lockrey, Hill, Landley, Ryder, Francis, Brennan, Verghese and Fight Food Waste CRC	Consumer perceptions of the role of packaging - Journey Mapping Review
Unpublished	REDUCE	Francis, Ryder, Verghese, Lockrey and Fight Food Waste CRC	Save Food Packaging Design and Criteria – Stakeholder Review and Online Survey
PEER REVIEWED ARTICLES/CONFERENCE PROCEEDINGS			
Under review	REDUCE	Brennan et al	The role of packaging in fighting food waste: a systematised review of consumer perceptions
11/11/19	CORPORATE	Lapidge	<i>Fight Food Waste Cooperative Research Centre – a national Public Private Partnership to reduce food loss and waste in Australia.</i> The Pontifical Academy of Sciences Conference on Reduction of Food Loss and Waste, Vatican City.

Date	Program	Author	Details
MEDIA RELEASES			
5/08/2019	TRANSFORM	Fight Food Waste CRC	Help for small agribusinesses to turn food waste into commercial products
6/08/2019	CORPORATE	Fight Food Waste CRC	International expert to help Fight Food Waste in Australia
20/11/2019	ENGAGE	Fight Food Waste CRC	Australians want to waste less food – but are unaware how much food they’re really throwing away
1/03/2020	TRANSFORM	Fight Food Waste CRC	Transforming potato waste into a new industry for Australia
18/05/2020	TRANSFORM	Fight Food Waste CRC	Turning wine industry waste into premium products
19/05/2020	ENGAGE	Fight Food Waste CRC	Diverting food waste from landfill is gold for local councils and residents
NEWSLETTERS			
8/07/2019	CORPORATE	Fight Food Waste CRC	CEO Participant Update #17
12/07/2019	CORPORATE	Fight Food Waste CRC	Launch of our SME Solutions Centre and more ...
25/07/2019	CORPORATE	Fight Food Waste CRC	Register now for our SME Solutions Centre launch event
12/08/2019	CORPORATE	Fight Food Waste CRC	Projects! Projects! Projects!
23/08/2019	CORPORATE	Fight Food Waste CRC	Finding the balance between packaging and reducing food waste
6/09/2019	CORPORATE	Fight Food Waste CRC	Cloud-based technology to assist industry reduce food waste
24/09/2019	CORPORATE	Fight Food Waste CRC	Woolworth's roadmap, Brisbane participant's meeting, and more ...
24/09/2019	CORPORATE	Fight Food Waste CRC	CEO Participant Update #18
3/10/2019	CORPORATE	Fight Food Waste CRC	Introducing our industry-led PIRSA/SARDI abalone project
8/10/2019	CORPORATE	Fight Food Waste CRC	CEO Participant Update #19
21/10/2019	CORPORATE	Fight Food Waste CRC	WINNERS in a global #FoodWaste challenge
1/11/2019	CORPORATE	Fight Food Waste CRC	Save food packaging industry survey
26/11/2019	CORPORATE	Fight Food Waste CRC	Launch of our national consumer survey results
27/11/2019	CORPORATE	Fight Food Waste CRC	CEO Participant Update #20
13/12/2019	CORPORATE	Fight Food Waste CRC	Training needs survey for food businesses, and our new re-port with KPMG on the circular economy
17/12/2019	CORPORATE	Fight Food Waste CRC	CEO Participant Update #21
17/01/2020	CORPORATE	Fight Food Waste CRC	Welcome back to 2020, and introducing our Sydney office
3/02/2020	CORPORATE	Fight Food Waste CRC	CEO Participant Update #22

Date	Program	Author	Details
14/02/2020	CORPORATE	Fight Food Waste CRC	Welcome to Mischa and more ...
12/03/2020	CORPORATE	Fight Food Waste CRC	Opportunities with Fight Food Waste CRC, AIP sustainable packaging workshop, and our new compost project
17/03/2020	CORPORATE	Fight Food Waste CRC	CEO Participant Update #23
27/03/2020	CORPORATE	Fight Food Waste CRC	Food waste becomes even more important to reduce!
9/04/2020	CORPORATE	Fight Food Waste CRC	Are you cooking more with your family?
24/04/2020	CORPORATE	Fight Food Waste CRC	Exciting new project with Swisse
13/05/2020	CORPORATE	Fight Food Waste CRC	2020 WorldStar Packaging Special Awards
28/05/2020	CORPORATE	Fight Food Waste CRC	SME Solutions Centre projects launch
11/06/2020	CORPORATE	Fight Food Waste CRC	Tomatoes and capsicums up north, funding opportunities, and more ...
30/06/2020	CORPORATE	Fight Food Waste CRC	Our next SME Solutions Centre project with bananas in horse diets
PRESENTATIONS			
1 July 2019	CORPORATE	Nerida Kelton AIP	AIFST conference
1 July 2019	REDUCE	Karli Verghese	AIFST conference
1 July 2019	CORPORATE	Steve Lapidge	AIFST conference
1 July 2019	CORPORATE	Robbie Davis	AIFST conference
12 July 2019	TRANSFORM	Paul Luckman	DOW Centre Board Meeting
18 July 2019	CORPORATE	Steve Lapidge	Geological Society of SA
5 August 2019	TRANSFORM	Steve Lapidge	Launch of SME Solutions Centre
6 August 2019	ENGAGE	Mark Barthel	Woolworths introduction
7 August 2019	CORPORATE	Steve Lapidge	NFWSC states and territories presentation
22 August 2019	CORPORATE	Steve Lapidge	Coromandel Valley Combined Probus Club
22 August 2019	CORPORATE	Mark Barthel	FIAL workshop
3 September 2019	CORPORATE	Mark Barthel	Global Table
3 September 2019	CORPORATE	Steve Lapidge	Global Table
3 September 2019	REDUCE	Karli Verghese	Global Table
3 September 2019	TRANSFORM	Ross Naido	Global Table
10 September 2019	TRANSFORM	Ross Naido	Complete guide: Government Grants & Support for Business (Toowoomba)
19 September 2019	CORPORATE	Steve Lapidge	ANZ Sustainable Development and Circular Economy Innovations Conference
22 September 2019	REDUCE	Simon Lockrey	Selerant User Conference - San Diego
11 October 2019	REDUCE	Karli Verghese	Circular Economy Forum
11 October 2019	REDUCE	Simon Lockrey and Karli Verghese	Consulate of Netherlands

Date	Program	Author	Details
11 October 2019	TRANSFORM	Paul Luckman	Soft Plastics Forum. Department of Environment and Science
16 October 2019	CORPORATE	Steve Lapidge	WasteQ conference
18 October 2019	CORPORATE	Karli Verghese	CRC Research Opportunities RMIT Workshop
24 October 2019	CORPORATE	Steve Lapidge	RDA Industry Project Launch
25 October 2019	CORPORATE	Steve Lapidge	Tasmania Agricultural Productivity Group AGM and Forum
30 October 2019	CORPORATE	Mark Barthel	Australian Waste and Recycling Expo
30 October 2019	CORPORATE	Steve Lapidge	Australian Waste and Recycling Expo
30 October 2019	CORPORATE	Mark Barthel	Australian Waste and Recycling Expo
31 October 2019	CORPORATE	Mark Barthel	Goodman Fielder Group Executive
1 November 2019	CORPORATE	Mark Barthel	National Retail Association Sustainability Committee
5 November 2019	CORPORATE	Steve Lapidge	Curtin University CRC Update
6 November 2019	CORPORATE	Steve Lapidge	Environmental Health Australia National Conference presentation
11 November 2019	CORPORATE	Steve Lapidge	Conference on Food Waste and Losses Reduction, Vatican
11 November 2019	CORPORATE	Mark Barthel	LOOP conference: plenary 'from the front line' successful circular economy
11 November 2019	CORPORATE	Mark Barthel	LOOP conference: right round - design for the circular economy
11 November 2019	CORPORATE	Mark Barthel	LOOP conference: right round - design for the circular economy
11 November 2019	CORPORATE	Mark Barthel	LOOP conference: food glorious food, product development and food waste
11 November 2019	CORPORATE	Mark Barthel	LOOP conference: COG workshop
13 November 2019	TRANSFORM	Paul Luckman	TropAg (International Tropical Agriculture Conference)
20 November 2019	CORPORATE	John Webster	Science Symposium - overview
20 November 2019	CORPORATE	Steve Lapidge	Science Symposium - 12 months in review
20 November 2019	ENGAGE	David Pearson	Science Symposium - ENGAGE program
20 November 2019	ENGAGE	Olav Muurlink	Science Symposium - Future Leaders programs
20 November 2019	ENGAGE	Emily Mantilla	Science Symposium - Industry Connection Hub
20 November 2019	ENGAGE	Mark Barthel	Science Symposium - Woolworths food waste reduction roadmap
20 November 2019	ENGAGE	Rebecca Bliss	Science Symposium - Household attitudes, behaviours and interventions
20 November 2019	TRANSFORM	Paul Luckman	Science Symposium - TRANSFORM overview

Date	Program	Author	Details
20 November 2019	TRANSFORM	Vincent Bulone	Science Symposium - Converting potatoes into higher value products
20 November 2019	TRANSFORM	Susanne Schmidt	Science Symposium - smart composting formulation
20 November 2019	TRANSFORM	Ian O'Hara	Science Symposium - Horticulture surplus
20 November 2019	TRANSFORM	Ben Baldwin	Science Symposium - SME Solutions Centre
20 November 2019	TRANSFORM	Ken Dods	Science Symposium - Sandalwood nut transformations
20 November 2019	TRANSFORM	Stephan Tait	Science Symposium - Making ACC circular
20 November 2019	TRANSFORM	Paul Luckman	Science Symposium - Waste-to-energy, fuelling sustainable wastewater treatment with food waste
20 November 2019	CORPORATE	Valeria Torok	Science Symposium - Food Safety and Integrity Theme Leader
20 November 2019	REDUCE	Karli Verghese	Science Symposium - REDUCE overview
20 November 2019	REDUCE	Simon Lockrey	Science Symposium - DIRECT commercialisation
20 November 2019	REDUCE	Nerida Kelton AIP	Science Symposium - Save food packaging
20 November 2019	REDUCE	Kellie Watson	Science Symposium - consumer perceptions of packaging
20 November 2019	REDUCE	Sarah Pennel	Science Symposium - Foodbank and Y waste app
20 November 2019	REDUCE	Upamali Amarakoon	Science Symposium - Foodbank stakeholder engagement
20 November 2019	REDUCE	Stephen Pahl	Science Symposium - reducing abalone canning losses
20 November 2019	REDUCE	Janet Howieson	Science Symposium - Australian wild prawn fisheries on-board processing and packaging
20 November 2019	REDUCE	Ben Baldwin	Science Symposium - reduce banana loss
20 November 2019	REDUCE	Robert Marguccio	Science Symposium - APPMA opportunities
20 November 2019	REDUCE	Ruby Chan	Science Symposium - PhD introduction
3 December 2019	REDUCE	Karli Verghese	CRC Project Opportunity, City of Kingston & Business Community
9 December 2019	CORPORATE	Steve Lapidge	Future Earth ECRP workshop - the Future of Food and the SDGs
11 December 2019	CORPORATE	Management Team	Fight Food Waste CRC – UA & SARDI BD Workshop/presentation
5 February 2020	CORPORATE	Karli Verghese	Engaging for Impact Conference at RMIT
5 February 2020	CORPORATE	Karli Verghese, Mark Barthel, and participants Barry Cosier, Travis Hatton and Juliette Anich'	Food: Too Good to Waste – Engaging for Impact



Date	Program	Author	Details
11 February 2020	CORPORATE	Mark Barthel	Australian Academy of Sciences - Food for Thought Lecture on Food Waste
18 February 2020	CORPORATE	Steve Lapidge	Food waste presentation - TAFE SA
20 February 2020	CORPORATE	Karli Verghese	Innerwheel
26 February 2020	CORPORATE	Steve Lapidge	Fight Food Waste CRC Business Development Meeting - Rockhampton
12 March 2020	CORPORATE	Mark Barthel	Presentation to the Australian Food Cold Chain Council
6 May 2020	CORPORATE	Mark Barthel	Clean Growth Choices Webinar Presentation
6 May 2020	CORPORATE	Mark Barthel	OzHarvest Food Waste Workshop
20 May 2020	CORPORATE	Mark Barthel	Food Too Good To Waste: One of the biggest growth opportunities in food
28 May 2020	CORPORATE	Mark Barthel	CQU webinar discussion on food supply chains

APPENDIX C FIGHT FOOD WASTE CRC STUDENTS IN APPROVED PROJECTS (2019/2020)

Project Title	Research Program	Host Research Institution	Student Type	Name	Start date	Expected Completion Date	Country of Origin
Dynamic Industry Resource Efficiency Calculation Tool (DIRECT) Commercialisation	REDUCE	RMIT	PhD	Roland Somlai	1/11/2019	31/10/2023	Hungary
Save Food Packaging Criteria and Framework	REDUCE	RMIT	PhD	Ruby Chan	02/09/2019	02/09/2023	Australia
Enhancing Food-bank's stakeholder engagement	REDUCE	CQUniversity	PhD	Khouloud Kamalmaz	9/01/2020	9/01/2024	Australia
Opportunities for reducing horticultural food wastes using biorefining approaches.	TRANSFORM	Queensland University of Technology	PhD	Roanna Jones	24/02/2020	23/02/2024	Australia
Understanding consumer food waste attitudes and behaviours and interventions to reduce food waste (Household Project)	ENGAGE	CQUniversity	PHD	Esther Landells	1/07/2020	30/06/2024	Australia
Understanding consumer food waste attitudes and behaviours and interventions to reduce food waste (Household Project)	ENGAGE	CQUniversity	Masters by Research	Danica Jobson	1/06/2020	31/05/2024	Australia
Food waste reduction roadmap for Woolworths	ENGAGE	CQUniversity	Masters by Research	Josephine Buckman	1/06/2020	31/05/2024	Australia
Who, What, Where (WWW) of Household Food Waste Behaviour	ENGAGE	University of Adelaide	PhD	Trang Nguyen	1/10/2019	1/10/2023	Vietnam

APPENDIX D – 2019/2020 FINANCIAL STATEMENTS

Fight Food Waste Limited

ABN: 90 627 226 537

Financial Statements

For the Year Ended 30 June 2020

Fight Food Waste Limited

ABN: 90 627 226 537

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For the Year Ended 30 June 2020

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Fight Food Waste Limited

ABN: 90 627 226 537

Directors' Report

30 June 2020

The Directors present their report on Fight Food Waste Limited (FFWL; ABN 90 627 226 537) for the financial year ended 30 June 2020. FFWL was established on the 2nd of July 2018 and is an independent organisation that manages the Fight Food Waste Cooperative Research Centre (FFW CRC). FFWL is a company Limited by Guarantee with members being the FFW CRC core participants that opted to become members.

Four Board Committees operate to assist with the effective running of the FFW CRC:

- Audit, Risk Management and Compliance Committee (ARMC)
- Research & Commercialisation Committee (RCC)
- Industry Impact Committee (IIC)
- Remuneration and Nominations Committee (RNC)

Charters for the Board and each Committee set out the governance framework and role for each. Three of these committees are usual in any CRC. The Industry Impact Committee though is an innovation of this CRC to ensure that an initial focus on impact and ongoing measurement of impact is integral in every aspect of operations. As a result, all research projects are required to clearly record the baseline position regarding food waste and then measure impact delivered in terms of tonnage reduction in food waste and increase in commercial returns together with environmental benefits where applicable.

As part of the Company financial performance reporting, we have adhered to the Australian Accounting Standards as set out in the notes to these accounts. The most critical policy impacting on the reported results was the matching of contributions to project obligations (see Note 3) which will result in a zero surplus until such time as any commercialisation gains are realised.

Fight Food Waste Limited

ABN: 90 627 226 537

Directors' Report

30 June 2020

Key management personnel

Names	Position	Appointed/Resigned
John Webster	Non-Executive Director and Independent Chair	21/11/2019 (originally appointed 2/7/18)
Toine Timmermans	Non-Executive Director	21/11/2019 (originally appointed 2/7/18)
Geoff Starr	Non-Executive Director	02/07/2018
Sandra Hook	Non-Executive Director	02/07/2018
Christine Giuliano	Non-Executive Director	02/07/2018
Robbie Davis	Non-Executive Director	02/07/2018
Alain Pillay	Non-Executive Director	02/07/2018
Dr Steven Lapidge	Chief Executive Officer	02/07/2018
Ian Hardwick	Chief Financial Officer	18/02/2019

Principal activities

Fight Food Waste Limited (FFWL; ABN 90 627 226 537) is a registered charity with the Australian Charities and Not-for-profits Commission. The key legal agreements establishing both FFWL and FFW CRC are:

- FFWL Constitution
- CRC Grant Agreement between the Commonwealth of Australia and Fight Food Waste Ltd
- Core Participants Agreement between all Core (cash contributing) participants and Fight Food Waste Ltd
- Individual Supporting Participants Agreements between in-kind only contributing participants and Fight Food Waste Ltd

The FFW CRC aims to tackle the growing international problem of food waste, both here in Australia as well as to contribute to global knowledge and action.

The FFW CRC brings together industry, research and the community to capitalise on Australia's food waste opportunities. Winning this fight could save Australia \$20 billion per annum in food while increasing industry profitability and reducing food insecurity, as well as enhancing Australia's reputation as a sustainable producer of premium food products.

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

Objectives

The overarching strategic objectives of the FFW CRC are to deliver:

- A transformation in the way Australian industry and consumers view food waste as well as contribute to food rescue.
- A suite of new tools and technologies for extracting the maximum value out of primary production, food manufacturing, supply chains and product sales, whether through supply chain innovation or waste transformation.
- Reduction in food waste entering landfill and associated greenhouse gas emissions.
- Future industry professionals skilled in capturing opportunities identified by industry.

Fight Food Waste Limited

ABN: 90 627 226 537

Directors' Report

30 June 2020

Strategic plan

The FFW CRC will achieve its purpose through three main research, development and extension programs. They are:

REDUCE food waste throughout the supply chain by:

- Delivering supply chain analysis tools
- Developing a framework for optimal packaging design
- Establishing innovative supply chain and packaging solutions
- Identifying options to optimise food rescue.

TRANSFORM unavoidable waste into innovative products by:

- Identifying and prioritising commercially valuable products from waste streams
- Developing new technologies for waste transformation
- Creating decision support tools and identifying regulatory options to promote investment in waste transformation

ENGAGE with industry and consumers to deliver behavioural change by:

- Educating future industry professionals
- Industry dissemination and skills training
- Facilitating household and business behaviour change

Members' guarantee

The Company is incorporated under the *Australian Charities and Not-for-profits Commission Act 2012* 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 \$10 each towards meeting any outstandings and obligations of the Company. At 30 June 2020 the number of members was 25 and the collective liability of members was \$250.

Operating results

The Company received total contributions from the CRC Program and Participants of \$7,754,246. Such contributions are treated as contract liabilities until matched against expenditure in the course of the Company's activities. Direct expenditure totalled \$3,254,434 and operating expenditure (net of interest earned) totalled \$1,242,018. Revenue treated as a contract liability on the statement of financial position was therefore \$3,257,794.

The net surplus/deficit of the Company for the year therefore amounted to \$0.

Fight Food Waste Limited

ABN: 90 627 226 537

Directors' Report

30 June 2020

Review of operations

The Company is in a sound financial situation at the end of June 2020 including a cash carry forward balance of \$5.9M. This carry forward is due to cash contributions having been received from the Commonwealth CRC Program and from many of the Participants (in accordance with the Core Participants Agreement) from July 2018, but the research activities having only more recently commenced. Unspent contributions have been recorded as a 'contract liability' in the financial statements rather than a surplus. Of this contract liability, \$1.4M relates to industry/end user participant contributions, \$1.7M to State Government research organisation contributions and \$2.6M to CRC Grant funds. Much of this is already committed to contracted research projects and all is expected to be expended in future years.

Despite the challenges of COVID-19 the Company had a successful second year of operation. There have not been any participant or project withdrawals during the reporting period and over 90% of the 2019/20 Operational Plan was delivered and most projects kept on schedule.

The focus for the year was on the establishment of the remaining initial research portfolio. By the end of June 2020, 34 projects had been approved, an increase of 20 projects from June 2019, for a total project value of \$17.7M. Cash involved in the 34 projects (\$8.5M) represents 20% of total research spend (\$41.6M) at the 20% mark of the FFW CRC, or 2 of 10 years. While the 34 projects approved is more than the initial research portfolio of 29 projects that were developed through the series of bid workshops, it still did not represent that entire initial research portfolio. The remaining five projects will be developed in 2020/21.

Events after the reporting date

On 7 August 2020, the Australian Government Department of Agriculture, Water and the Environment (DAWE) released a partnership call for a National Food Waste Governance Entity to lead the National Food Waste Strategy, with up to \$4M of seed funding available. Fight Food Waste Ltd (as the lead entity), in partnership with the Waste & Resource Action Programme (UK), the National Farmers Federation, the Australian Food Cold Chain Council, the Australian Institute of Packaging, the Australian Food and Grocery Council, the National Retail Association, Foodbank Australia and the state governments of New South Wales, Queensland, South Australia and Victoria submitted a partnership proposal on Monday 7 September 2020.

On 22 October 2020, the Company was advised that it was successful with its Stage 2 application (competitive round) and would now proceed to Stage 3 which is a non-competitive partnering design discussions stage. If the Company is to become the National Food Waste Governance Entity it is anticipated these activities will be separate but complementary to the FFW CRC, there would be some organisational changes required to manage the new activities and the presentation of these Financial Statements would change to reflect the two distinct activity areas of the Company (i.e. the FFW CRC and the National Food Waste Governance Entity).

Environmental issues

The Company's operations are not regulated by any significant environmental regulations under a law of the Commonwealth or of a state or territory of Australia.

Share capital and options

The Company is limited by guarantee and has no share capital.

Fight Food Waste Limited

ABN: 90 627 226 537

Directors' Report

30 June 2020

Information on directors

John Webster

Experience

Non-Executive Director and Independent Chair

John Webster is the inaugural Independent Chair of the Fight Food Waste Cooperative Research Centre and was integral to the success of the bid. He has provided leadership throughout the bidding and FFW CRC establishment process and has kept a strong focus on industry impacts and good governance. John has extensive experience in issues surrounding both food waste and management of complex industry/research collaborations. His expertise includes strategy, governance, leadership, performance measurement, R&D project management, business and commercialisation in the food, agribusiness and food waste sectors.

John is a former CEO of Foodbank Australia, MD of Horticulture Australia, and GM of Meat & Livestock Australia. He is currently a Director of AgStrat Associates, Council Member of the International Meat Research 3G Foundation and Member of the Australian Research Council Strategic Advisory Committee for Biosolids Training Centre. His qualifications include a degree in Economics and he is a Graduate Member of the Australian Institute of Company Directors.

Toine Timmermans

Experience

Non-Executive Director

Toine Timmermans is a global leader in food waste management and the FFW CRC's key connection to international food waste initiatives. He was an integral component of the successful bid, as remarked by the CRC Advisory Committee, and has since been indispensable to the establishment of the R&D portfolio. He is active globally in creating impact on food waste prevention via research, innovation and establishing partnerships.

Toine is currently the Program Manager of Sustainable Food Chains at Wageningen University & Research in the Netherlands and the Managing Director of the Foundation United Against Food Waste. Formally the Coordinator of the European Union food waste project REFRESH where overall aim of the project was to halve food loss and food waste across the post harvest supply chain. His qualifications include a MSc in Agricultural Engineering and post graduate studies in Business Strategy.

Geoff Starr

Experience

Non-Executive Director

Geoff Starr has a wealth of experience in international branded foods. Geoff has worked for Unilever, been CEO for Mars Inc. companies internationally and George Weston foods. He has run very large businesses and also enjoyed the involvement in smaller enterprises. Geoff was chair of the Australian Food and Grocery Council, Australia's first industry advocate to government, former director of Foodbank Australia and current director of Australian Pork Ltd, Food Innovation Australia Ltd, Birch & Waite foods and chair of Cannpal Therapeutics.

Geoff's qualifications include a Bachelor of Arts with Honours and he is a Graduate Member of the Australian Institute of Company Directors (AICD).

Fight Food Waste Limited

ABN: 90 627 226 537

Directors' Report 30 June 2020

Information on directors

Sandra Hook
Experience

Non-Executive Director

Sandra has a track record in driving customer centred business transformation and transitioning traditional organisations in rapidly evolving environments. She has extensive operational, digital, financial management and strategic experience built over 25 years as a CEO and in senior executive roles for some of Australia's largest media companies including News Limited, Foxtel, Federal Publishing Company, Murdoch Magazines and Fairfax.

Sandra's qualifications include courses from the Australian Graduate School of Management and she is a Graduate Member of the Australian Institute of Company Directors (AICD).

Sandra holds directorships of other companies including: RXP Services (ASX:RXP), MedAdvisor Limited (ASX:MDR), IVE Group Limited (ASX:IGL), Sydney Fish Markets, Redhill Education ASX: RDH and Sydney Harbour Federation Trust

Christine Giuliano
Experience

Non-Executive Director

Christine is the Commercial Director at Kerry Group . Christine was previously Managing Director of Naturex Australia, the world's largest processor of herbal and botanical extracts, and prior to that Managing Director of Kingfoods Australia. She has had over 20 years' experience in Australia's food technology and processing sectors.

Christine holds a Bachelor of Applied Science in food and nutrition and she is a Graduate Member of the Australian Institute of Company Directors (AICD). She is also a Professional Member of the Australian Institute of Food Science and Technology (AIFST), and a member of the Complimentary Medicines Australia.

Robbie Davis
Experience

Non-Executive Director

Robbie has business experience in both the private and public sectors domestically and internationally, and at Board level as a NED and reporting to a Board in the capacity of CEO. With a strong understanding of whole-of-industry value chains, she also has a grazing property in the upper SE of South Australia. Following ten years living and working in SE Asia (Singapore, Indonesia, Brunei), she was self-employed as an agribusiness consultant until her appointment as CEO, Potatoes South Australia in 2012. She continues to consult privately. She believes that the reduction and transformation of food waste is critical to productivity gains, and to the sustainability and reputation of Australian agriculture. She also believes that R&D programs across agricultural sectors and value chains are vital to Australia attaining its \$100b production target by 2030.

Based at the Waite Campus, Robbie is project manager of several value-adding research consortia led by the University of Adelaide and Primary Industries & Regions SA (PIRSA).

She was profiled under PIRSA's Women Influencing Agriculture and Regions in 2015, is the AgriFutures 2016 SA Rural Woman of the Year and is a graduate of the NFF's Diversity in Agriculture Leadership Program 2019.

Fight Food Waste Limited

ABN: 90 627 226 537

Directors' Report 30 June 2020

Information on directors

Alain Pillay
Experience

Non-Executive Director

Alain Pillay is the Managing Director of Nexus Strategem Pty Ltd, a boutique financial land economic advisory firm specialising in corporate strategy and M&A. Since 2011 Nexus has been involved in acquisitions across the sugar, beef, port and technology sectors. Prior to establishing Nexus, Alain was the Queensland state lead partner for Deloitte's economics and strategy unit and was responsible for establishing and building the practice into one of the largest economic groups in Queensland. A member of Deloitte's young leaders group and a member of Deloitte economics executive team, Alain worked extensively across Asia, Middle East and America.

Alain has a strong investment network both domestically and internationally and has experience in corporate governance as a company secretary of a listed company. Alain is tertiary qualified in both accounting and economics and is a member of the Australian CPA's, Australian Institute of Company Directors (AICD) and Chartered Secretaries of Australia.

Dr Steven Lapidge
Experience

Chief Executive Officer

Steven Lapidge is the inaugural CEO of the Fight Food Waste CRC. He has spent much of his 20 year career working for or with agribusiness CRC's, with a strong focus on New Product Development and commercialisation. Steven led the development of the Fight Food Waste CRC bid and in recent years has represented Australia at G20, OECD and national food waste forums. He is a member of the NFWS Steering Committee

Steven's qualifications include a BSc(Hons), PhD and an MBA. He is a Graduate of the Australian Institute of Company Directors (AICD) and a Professional Member of AIFST. Steven's previous research saw him awarded the Fulbright Professional Business/Industry (Coral Sea) Scholarship in 2010.

Ian Hardwick
Experience

Chief Financial Officer

Ian joined Fight Food Waste CRC in February 2019 after having spent nearly eight years as CFO of Deep Exploration Technologies CRC, which was wound up in late 2018 at the end of its funding life, having successfully licensed a number of new technologies to the mineral exploration services sector. Prior to that role, Ian worked within an accounting firm providing business advisory and compliance services across a range of industries. Ian is a Commerce graduate, Chartered Accountant and Graduate of the Australian Institute of Company Directors (AICD).

Fight Food Waste Limited

ABN: 90 627 226 537

Directors' Report 30 June 2020

Meetings of directors

	Board	ARMC	RCC	IIC	RNC
Number of meetings held	7	4	6	3	4
Number of meetings attended					
John Webster	7/7	-	6/6	3/3	2/2*
Toine Timmermans	5/7	-	4/6	1/3	1/2*
Geoff Starr	6/7	3/4	-	3/3	-
Sandra Hook	7/7	3/4	-	-	4/4
Christine Giuliano	7/7	3/4	3/4*	-	3/4
Robbie Davis	7/7	-	6/6	3/3	-
Alain Pillay	6/7	4/4	5/6	-	-

The four committees listed above are; Audit, Risk Management and Compliance Committee (ARMC), Research & Commercialisation Committee (RCC), Industry Impact Committee (IIC) and Remuneration and Nominations Committee (RNC).

**In November 2019, the following Board Committee changes were made; Christine Giuliano joined the RCC, John Webster joined the RNC, Toine Timmermans left the RNC.*

Directors fees

The aggregate maximum amount available to be paid to all Directors will be the sum of the average payments to Chair/directors in the latest CRC Association benchmarking report and as ratified or otherwise determined by an ordinary resolution of Members.

The amount paid to all Directors for the reporting year was \$204,000 which is in accordance with the limits set out in the Company Constitution.

In June 2020, acting on the recommendation of the RNC, the Board decided that the Director remuneration review which was to be conducted in July 2020 be deferred until a later stage in recognition of the challenges facing participants due to the COVID-19 pandemic.

Employee performance based remuneration

The Board approves annual company KPI's and approves potential bonus pool as part of annual budget. At years end the Board approves performance against these KPI's and approves the portion of bonus pool available to be distributed. The Board apportions CEO bonus (based on advice from the Remuneration & Nominations Committee) and the CEO apportions the remainder to employees (based on outcomes achieved against CEO approved individual KPI's).

Recognising the challenges faced by Participants due to COVID-19 pandemic the Board determined that no performance bonus should be available for the 4th quarter of the 2019-20 financial year and therefore the maximum bonus pool was reduced by 25%. In addition, the benchmark salary review for all employees that was to be conducted in July 2020 has been deferred until 2021 and any salary adjustments that arise from that review once conducted will not be retrospective.

The amount paid to employees by way of performance bonuses for the reporting year was \$60,843.

Fight Food Waste Limited

ABN: 90 627 226 537

Directors' Report

30 June 2020

Indemnification and insurance of officers and auditors


During the reporting year, the Company paid a premium in respect of a contract insuring the Directors of the Company, the Company Secretary, and all executive officers of the Company against a liability incurred by such a Director, secretary or executive officer to the extent permitted by the Corporations Act 2001. The contract of insurance prohibits disclosure of the nature of the liability and the amount of the premium. The Company has not otherwise, during or since the financial year, except to the extent permitted by law, indemnified or agreed to indemnify an officer of the Company or of any related body corporate against a liability incurred by such an officer.

To the extent permitted by law, the Company has agreed to indemnify its auditors, BDO, as part of the terms of its audit engagement agreement against claims by third parties arising from the audit (for an unspecified amount). No payment has been made to indemnify BDO during or since the financial year.

Sign off details

This report is made in accordance with a resolution of directors, pursuant to section 60.15(2) of the Australian Charities and not-for-profit commission regulation 2013.

Signed on behalf of the board

Director: 
John Webster - Chair of the board

Dated this 23rd day of October 2020

**DECLARATION OF INDEPENDENCE
BY PAUL GOSNOLD
TO THE DIRECTORS OF FIGHT FOOD WASTE LIMITED**

As lead auditor of Fight Food Waste Limited for the year ended 30 June 2020, I declare that, to the best of my knowledge and belief, there have been:

1. No contraventions of the auditor independence requirements of section 60-40 of the *Australian Charities and Not-for-profit Commission Act 2012* in relation to the audit; and
2. No contraventions of any applicable code of professional conduct in relation to the audit.



Paul Gosnold
Director

BDO Audit (SA) Pty Ltd

Adelaide, 23 October 2020

Fight Food Waste Limited

ABN: 90 627 226 537

Statement of Profit or Loss and Other Comprehensive Income For the Year Ended 30 June 2020

		2020	2019
	Note	\$	\$
Funding and program revenue	5	4,496,452	1,974,244
Project expenditure		(2,225,035)	(61,400)
Program coordination support		(724,373)	(677,092)
Postgraduate program		(208,986)	-
Interest expense - lease liability		(37,989)	(41,082)
Depreciation of right of use asset	3(e)	(58,051)	(58,051)
Gross surplus		1,242,018	1,136,619
Interest income		21,198	4,379
Director fees		(204,000)	(204,000)
Communication expenses		(62,780)	(60,599)
Employment expenses		(763,634)	(589,146)
Office expenses		(23,095)	(14,097)
Professional services and licenses		(129,283)	(196,682)
Travel expenses		(80,424)	(76,474)
Total expenditure		(1,263,216)	(1,140,998)
Net surplus / (deficit) for the year		-	-
Other comprehensive income		-	-
Total comprehensive income		-	-

The accompanying notes form part of these financial statements.

Fight Food Waste Limited

ABN: 90 627 226 537

Statement of Financial Position

As At 30 June 2020

	Note	2020 \$	2019 \$
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents	6	5,851,667	2,410,772
Trade and other receivables	7	832,578	261,676
Contract assets	8	992,500	235,000
Other assets	9	54,693	20,288
TOTAL CURRENT ASSETS		7,731,438	2,927,736
NON-CURRENT ASSETS			
Right-of-use assets	10(a)	464,409	522,460
Property, plant and equipment	11	18,169	23,574
TOTAL NON-CURRENT ASSETS		482,578	546,034
TOTAL ASSETS		8,214,016	3,473,770
LIABILITIES			
CURRENT LIABILITIES			
Trade and other payables	12	1,682,755	309,076
Borrowings	13	-	10,848
Lease liabilities	10(b)	47,338	44,011
Current tax liabilities	14	148,570	26,611
Contract liabilities	8	5,758,550	2,500,756
Employee benefits	15	120,401	86,106
TOTAL CURRENT LIABILITIES		7,757,614	2,977,408
NON-CURRENT LIABILITIES			
Lease liabilities	10(b)	448,244	495,582
Employee benefits	15	8,158	780
TOTAL NON-CURRENT LIABILITIES		456,402	496,362
TOTAL LIABILITIES		8,214,016	3,473,770
NET ASSETS		-	-
EQUITY			
TOTAL EQUITY		-	-

The accompanying notes form part of these financial statements.

Fight Food Waste Limited

ABN: 90 627 226 537

Statement of Changes in Equity For the Year Ended 30 June 2020

	Retained Earnings	Total
	\$	\$
Balance at 1 July 2019	-	-
Net surplus / (deficit) for the year	-	-
Balance at 30 June 2020	-	-
Balance at 1 July 2018	-	-
Net surplus / (deficit) for the year	-	-
Balance at 30 June 2019	-	-

The accompanying notes form part of these financial statements.

Fight Food Waste Limited

ABN: 90 627 226 537

Statement of Cash Flows For the Year Ended 30 June 2020

	2020	2019
Note	\$	\$
CASH FLOWS FROM OPERATING ACTIVITIES:		
CRC program funds	3,533,750	1,303,500
Participant contributions	3,173,058	3,008,500
Grant funding: SA Government	110,000	110,000
Other receipts	248,000	-
Interest received	2,861	4,379
Payments to suppliers and employees	(3,549,713)	(1,995,745)
Interest repayment of lease liability	(28,492)	-
Net cash provided by/(used in) operating activities	<u>3,489,464</u>	<u>2,430,634</u>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of property, plant and equipment	<u>(4,027)</u>	<u>(30,710)</u>
Net cash provided by/(used in) investing activities	<u>(4,027)</u>	<u>(30,710)</u>
CASH FLOWS FROM FINANCING ACTIVITIES:		
Repayment of lease liabilities	<u>(33,008)</u>	-
Net cash provided by/(used in) financing activities	<u>(33,008)</u>	-
Net increase/(decrease) in cash and cash equivalents held	3,452,429	2,399,924
Cash and cash equivalents at beginning of year	<u>2,399,924</u>	-
Cash and cash equivalents at end of financial year	6 <u><u>5,852,353</u></u>	<u>2,399,924</u>

The accompanying notes form part of these financial statements.

Fight Food Waste Limited

ABN: 90 627 226 537

Notes to the Financial Statements For the Year Ended 30 June 2020

1 Introduction

The financial report for the year ending 30 June 2020 covers Fight Food Waste Limited as an individual entity. Fight Food Waste Limited is a not-for-profit unlisted public Company limited by guarantee, registered and domiciled in Australia. Fight Food Waste Limited is registered with the Australian Charities and Not-for-profits Commission.

The functional and presentation currency of Fight Food Waste Limited is Australian dollars.

2 Basis of Preparation

The financial statements are general purpose financial statements that have been prepared in accordance with the Australian Accounting Standards - Reduced Disclosure Requirements and the *Australian Charities and Not-for-profits Commission Act 2012*.

Historical cost convention

The financial statements have been prepared under the historical cost convention.

3 Summary of Significant Accounting Policies

(a) Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable. Amounts disclosed as revenue are net of goods and services tax (GST), 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.

To the extent that revenue is unearned it is carried as a liability at reporting date.

Grant Funding

Recognised at fair value where there is a reasonable assurance that the grant will be received and the Company will comply with all attached conditions. Grants relating to costs which have not yet been incurred are included in unearned income 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.

Participants' contributions

Contributions received 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.

Contract liabilities arising from obligations to make contributions to the Company and not allocated to program expenses at reporting 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.

In Kind Contributions

In-kind staff and non-staff contributions and the corresponding expense from the participants are not included in the statement of profit or loss and other comprehensive income. They are recorded in the Commonwealth Tables which are subject to separate reporting requirements. The impact on the financial statements is nil.

Interest

Interest revenue is recognised as interest accrues.

Fight Food Waste Limited

ABN: 90 627 226 537

Notes to the Financial Statements For the Year Ended 30 June 2020

3 Summary of Significant Accounting Policies

(a) Revenue recognition

Other revenue

Other revenue is recognised when it is received or when the right to receive payment is established. Revenue is recognised when the amount of the revenue can be measured reliably, it is probable that economic benefits associated with the transaction will flow to the Company and specific criteria relating to the type of revenue as noted above, has been satisfied.

(b) Income tax

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

(c) Goods and services tax (GST)

Revenue, expenses and assets are recognised net of the amount of goods and services tax (GST), except where the amount of GST incurred is not recoverable from the Australian Taxation Office (ATO).

Receivables and payable are stated inclusive of GST.

Cash flows in the statement of cash flows are included on a gross basis and the GST component of cash flows arising from investing and financing activities which is recoverable from, or payable to, the taxation authority is classified as operating cash flows.

(d) 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.

(e) Leases

Right-of-use asset

This balance represents the company's right to lease its current premises. Per AASB 16, this amount is calculated using the present value of all future lease payments, assuming a remaining lease period of 8 years, discounted using the company's incremental borrowing rate.

Lease liability

The lease liability is initially measured at the present value of the remaining lease payments at the commencement of the lease. The discount rate is the rate implicit in the lease, however where this cannot be readily determined then the Company's incremental borrowing rate is used.

Subsequent to initial recognition, the lease liability is measured at amortised cost using the effective interest rate method. The lease liability is remeasured whether there is a lease modification, change in estimate of the lease term or index upon which the lease payments are based (e.g. CPI) or a change in the Company's assessment of lease term.

Where the lease liability is remeasured, the right-of-use asset is adjusted to reflect the remeasurement or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

(f) Trade and other receivables

Trade and other receivables arise principally through the provision of goods and services to customers. The carrying value is considered a reasonable approximation of fair value due to the short-term nature of the balances.

Fight Food Waste Limited

ABN: 90 627 226 537

Notes to the Financial Statements

For the Year Ended 30 June 2020

3 Summary of Significant Accounting Policies

(g) Property, plant and equipment

Plant and equipment is stated at historical cost less accumulated depreciation and impairment. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Depreciation is calculated on a straight-line basis to write off the net cost of each item of property, plant and equipment (excluding land) over their expected useful lives as follows:

Leasehold improvements	10 years
Right of use asset	10 years
Office equipment	3-5 years

The residual values, useful lives and depreciation methods are reviewed, and adjusted if appropriate, at each reporting date.

An item of property, plant and equipment is derecognised upon disposal or when there is no future economic benefit to the company. Gains and losses between the carrying amount and the disposal proceeds are taken to profit or loss.

(h) Financial instruments

Financial assets

The financial assets of the Company comprise trade and other receivables.

Impairment of Financial Assets

At the end of the reporting period the Company recognises an allowance for expected credit losses for financial assets measured at amortised cost.

Receivables

As there has been no significant increase in credit risk the loss allowance is equal to the 12 month expected credit losses.

Financial liabilities

The Company measures all financial liabilities initially at fair value less transaction costs, subsequently financial liabilities are measured at amortised cost.

The financial liabilities of the Company comprise trade payables.

Fight Food Waste Limited

ABN: 90 627 226 537

Notes to the Financial Statements For the Year Ended 30 June 2020

3 Summary of Significant Accounting Policies

(i) Employee benefits

Short-term employee benefits

Liabilities for wages and salaries, including non-monetary benefits, annual leave and long service leave expected to be settled wholly within 12 months of the reporting date are measured at the amounts expected to be paid when the liabilities are settled.

Other long-term employee benefits

The liability for annual leave and long service leave not expected to be settled within 12 months of the reporting date are measured at the present value of expected future payments to be made in respect of services provided by employees up to the reporting date 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 reporting date on corporate bonds with terms to maturity and currency that match, as closely as possible, the estimated future cash outflows

Defined contribution superannuation expense

Contributions to defined contribution superannuation plans are expensed in the period in which they are incurred.

(j) Trade and other payables

These amounts represent liabilities for goods and services provided to the company prior to the end of the financial year and which are unpaid. Due to their short-term nature they are measured at amortised cost and are not discounted. The amounts are unsecured and are usually paid within 30 days of recognition.

(k) Adoption of new and revised accounting standards

The Company has adopted all standards which became effective for the first time at 30 June 2020.

AASB 15 Revenue from Contracts with Customers, AASB 1058 Income of Not-for-Profit Entities and AASB 16 Leases

The Company early adopted AASB 15 Revenue from Contracts with Customers, AASB 1058 Income of Not-for-Profit Entities and AASB 16 Leases during the previous financial year with a date of initial application of 1 July 2018.

The Company has continued to apply these standards during the current financial year.

Fight Food Waste Limited

ABN: 90 627 226 537

Notes to the Financial Statements

For the Year Ended 30 June 2020

4 Critical Accounting Estimates and Judgements

Those charged with governance make estimates and judgements during the preparation of these financial statements regarding assumptions about current and future events affecting transactions and balances.

These estimates and judgements are based on the best information available at the time of preparing the financial statements, however as additional information is known then the actual results may differ from the estimates.

The significant estimates and judgements made have been described below.

Key estimates

Employee benefits provision

As discussed in note 3, the liability for employee benefits is expected to be settled more than 12 months from the reporting date and are recognised and measured at the present value of the estimated future cash flows to be made in respect of all employees at the reporting date. In determining the present value of the liability, estimates of attrition rates and pay increases through promotion and inflation have been taken into account.

Estimation of useful lives of assets

The company determines the estimated useful lives and related depreciation and amortisation charges for its property, plant and equipment and finite life intangible assets. The useful lives could change significantly as a result of technical innovations or some other event. The depreciation and amortisation charge will increase where the useful lives are less than previously estimated lives, or technically obsolete or non-strategic assets that have been abandoned or sold will be written off or written down.

Fight Food Waste Limited

ABN: 90 627 226 537

Notes to the Financial Statements For the Year Ended 30 June 2020

5 Revenue breakdown

	2020	2019
Note	\$	\$
CRC Program	3,970,000	1,420,000
Participant contributions	3,404,246	2,955,000
Consultancy fees	180,000	-
Grant funds: SA Government	100,000	100,000
Government assistance (cash flow boost)	100,000	-
	<u>7,754,246</u>	<u>4,475,000</u>
less: Revenue received with outstanding performance obligations	<u>(3,257,794)</u>	<u>(2,500,756)</u>
	<u><u>4,496,452</u></u>	<u><u>1,974,244</u></u>

6 Cash and Cash Equivalents

Cash at bank and in hand	3,101,667	2,410,772
Short-term deposits	2,750,000	-
	<u>5,851,667</u>	<u>2,410,772</u>

Reconciliation of cash

Cash and Cash equivalents reported in the statement of cash flows are reconciled to the equivalent items in the statement of financial position as follows:

Cash and cash equivalents		5,851,667	2,410,772
Bank credit cards	13	-	(10,848)
Balance as per statement of cash flows		<u>5,851,667</u>	<u>2,399,924</u>

7 Trade and Other Receivables

CURRENT

Trade receivables	969,477	261,676
Allowance for expected credit losses	(155,863)	-
	<u>813,614</u>	<u>261,676</u>
Interest receivable	18,335	-
Other receivables	629	-
Total current trade and other receivables	<u>832,578</u>	<u>261,676</u>

Aged Receivables Summary

Current	Overdue < 30 days	Overdue 30 - 60 days	Overdue 60 - 90 days	Overdue 90+ days	Total
120,086	153,335	27,500	275,000	393,556	969,477

Fight Food Waste Limited

ABN: 90 627 226 537

Notes to the Financial Statements

For the Year Ended 30 June 2020

7 Trade and Other Receivables

Aged Receivables Summary

The invoicing of participants for their committed contributions is based on a schedule agreed within the CRC Grant Agreement (to which participants are tied via the Participants Agreement) unless otherwise agreed.

The timing of participant contributions is not ordinarily directly tied to individual project timings, notwithstanding the Company has experienced delays collecting some participant's contributions due to the desire of those participants to see that project proposals, to which their contributions will be tied, are well evolved prior to making payment.

The allowance for expected credit losses relates to invoices issued to Participants FAVCO Queensland Pty Ltd and to Entopia Biotechnologies Pty Ltd whose ongoing participation in the Fight Food Waste CRC is uncertain. To date no projects or other contracts have been entered into with either of these Participants.

It is anticipated that all other outstanding receivables at reporting date will be collected.

8 Contract Balances

The Company has recognised the following contract assets and liabilities from contracts with customers:

(a) Contract assets

	2020	2019
	\$	\$
CURRENT		
Accrued revenue from CRC program	992,500	235,000

(b) Contract liabilities

CURRENT		
Revenue received with outstanding performance obligations	5,758,550	2,500,756
Opening balance 1 July	2,500,756	-
Current year allocation	7,754,246	4,475,000
Current year draw-down	(4,496,452)	(1,974,244)
Closing balance 30 June	5,758,550	2,500,756

Per the revenue policy in note 3(a), contributions from the Commonwealth of Australia and Participants are treated as contract liabilities until matched against expenditure in the course of the Company's activities.

At the end of the grant period, any outstanding CRC Grant revenue not matched against expenditure is required to be returned to the Commonwealth of Australia.

Fight Food Waste Limited

ABN: 90 627 226 537

Notes to the Financial Statements For the Year Ended 30 June 2020

8 Contract Balances

Components of contract liabilities

	2020	2019
	\$	\$
CRC program funds	2,629,498	691,508
Participant contributions: Industry/End User	1,430,151	1,038,000
Participant contributions: State Government Research Organisations	1,698,901	771,248
Total	5,758,550	2,500,756

9 Other Assets

CURRENT

Prepayments	4,693	20,288
Receivable from cash flow boost	50,000	-
Total	54,693	20,288

10 Leases

(a) Right-of-use assets

Office lease

Net present value at date of recognition	580,511	580,511
Accumulated depreciation	(116,102)	(58,051)
Total	464,409	522,460

(b) Lease liabilities

CURRENT

Minimum lease payments	82,000	82,000
less: Finance charges	(34,662)	(37,989)
	47,338	44,011

NON-CURRENT

Minimum lease payments	574,000	656,000
less: Finance charges	(125,756)	(160,418)
	448,244	495,582

Fight Food Waste Limited

ABN: 90 627 226 537

Notes to the Financial Statements For the Year Ended 30 June 2020

11 Property, plant and equipment

	2020	2019
	\$	\$
Furniture, fixtures and fittings		
At cost	5,462	5,144
Accumulated depreciation	(895)	(372)
Total furniture, fixtures and fittings	<u>4,567</u>	<u>4,772</u>
Office equipment		
At cost	6,532	4,098
Accumulated depreciation	(1,440)	(440)
Total office equipment	<u>5,092</u>	<u>3,658</u>
Computer equipment		
At cost	18,993	17,767
Accumulated depreciation	(11,349)	(3,511)
Total computer equipment	<u>7,644</u>	<u>14,256</u>
Leasehold improvements		
At cost	910	910
Accumulated depreciation	(44)	(22)
Total leasehold improvements	<u>866</u>	<u>888</u>
Total property, plant and equipment	<u>18,169</u>	<u>23,574</u>

12 Trade and Other Payables

CURRENT		
Trade payables	407,468	97,876
Project expenditure	902,154	-
Program coordination support	207,544	150,000
Director fees	57,250	57,250
Office lease for June quarter	20,500	-
Postgraduate scholarship commencement	75,000	-
Other	12,839	3,950
	<u>1,682,755</u>	<u>309,076</u>

13 Borrowings

CURRENT		
Bank credit cards	-	10,848

Fight Food Waste Limited

ABN: 90 627 226 537

Notes to the Financial Statements For the Year Ended 30 June 2020

14 Current Tax Liabilities

	2020	2019
	\$	\$
GST	98,425	(5,518)
PAYG Withholding	15,152	14,772
FBT	34,993	17,357
	<u>148,570</u>	<u>26,611</u>

15 Employee Benefits

CURRENT		
Provision for annual leave	29,532	9,406
Wages and bonus payable	72,482	62,988
Superannuation payable	18,376	14,266
Workcover	11	(554)
	<u>120,401</u>	<u>86,106</u>
NON-CURRENT		
Long service leave	8,158	780
	<u>8,158</u>	<u>780</u>

16 Key Management Personnel Remuneration

The total remuneration paid to key management personnel of the Company, as listed in item 1 of the directors' report, is \$ 716,082 (2019: \$ 584,074).

17 Contingencies

In the opinion of those charged with governance, the Company did not have any contingencies at 30 June 2020 (30 June 2019: None).

18 Statutory Information

The registered office and principal place of business of the company is:
L1, Wine Innovation Central Building, Cnr Hartley Rd & Paratoo Rd Urrbrae
SA 5064

INDEPENDENT AUDITOR'S REPORT TO THE MEMBERS OF FIGHT FOOD WASTE LIMITED

Report on the Audit of the Financial Report

Opinion

We have audited the financial report of Fight Food Waste Limited (the registered entity), which comprises the statement of financial position as at 30 June 2020, 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 report, including a summary of significant accounting policies, and the responsible entities' declaration.

In our opinion the accompanying financial report of Fight Food Waste Limited, is in accordance with Division 60 of the *Australian Charities and Not-for-profits Commission Act 2012*, including:

- (i) Giving a true and fair view of the registered entity's financial position as at 30 June 2020 and of its financial performance for the year then ended; and
- (ii) Complying with Australian Accounting Standards - Reduced Disclosure Requirements and Division 60 of the *Australian Charities and Not-for-profits Commission Regulation 2013*.

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 registered entity in accordance with the auditor independence requirements of the *Australian Charities and Not-for-profits Commission Act 2012* (ACNC Act) and the ethical requirements of the Accounting Professional and Ethical Standards Board's *APES 110 Code of Ethics for Professional Accountants (including Independence Standards)* (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 believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other information

Those charged with governance are responsible for the other information. The other information obtained at the date of this auditor's report is information included in the Fight Food Waste Limited's 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.

Responsibilities of responsible entities for the Financial Report

The responsible entities of the registered entity are responsible for the preparation and fair presentation of the financial report in accordance with Australian Accounting Standards - Reduced Disclosure Requirements and the ACNC Act, and for such internal control as the responsible entities determine is necessary to enable the preparation of the financial report that is free from material misstatement, whether due to fraud or error.

In preparing the financial report, responsible entities are responsible for assessing the registered entity'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 responsible entities either intends to liquidate the registered entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the registered entity's financial reporting process.

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 the 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 this financial report.

A further description of our responsibilities for the audit of the financial report is located at the Auditing and Assurance Standards Board website (<http://www.auasb.gov.au/Home.aspx>) at: http://www.auasb.gov.au/auditors_responsibilities/ar4.pdf

This description forms part of our auditor's report.



BDO Audit (SA) Pty Ltd



Paul Gosnold
Director

Adelaide, 28 October 2020



FIGHT FOOD WASTE
Cooperative Research Centre

REDUCE - TRANSFORM - ENGAGE

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