



Investigating new food insulation materials from food waste to reduce food waste

The challenge

The Australian Food Cold Chain Council estimates that food losses and waste in Australia due to poor temperature management cost \$3.8B p.a.

Planet Protector Packaging 'Woolpack' products keep temperature-sensitive products within the required 0 – 5 °C temperature range 2 – 5% longer than the market standard, expanded polystyrene, and can significantly help reduce food waste.

The grain, fodder, food processing and silviculture sectors are all significant sources of potential feedstocks for value-adding. Collectively, these materials are a large, diverse source of fibres that have the potential to be included in insulated packaging.

Our plan

Planet Protector Packaging aims to improve the materials cost, cold chain integrity, and thermal performance of their products by integrating agricultural waste streams into the composition of Woolpack thermal liners. By achieving this aim, they will be able to offer cost-competitive, industry-tailored, sustainable thermal packaging solutions to businesses.

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FIGHT FOOD WASTE
Cooperative Research Centre
REDUCE - TRANSFORM - ENGAGE



Australian Government
Department of Industry, Science,
Energy and Resources

Business
Cooperative Research
Centres Program

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This project will assist agricultural producers in creating revenue for their waste streams which would otherwise have little to no commercial value. The new Woolpack products also aim to be cheaper to manage through composting or biodegrading than current insulation materials, which average as high \$1,500 (AUD) per tonne and face numerous institutional and infrastructure barriers to successful recycling.

Volumes of food waste will reduce as Woolpack products integrate into the food transport and storage sector. In doing this, greenhouse gas emissions will also reduce. By decreasing the volume of products discarded due to temperature faults, we will increase profitability to the producers and manufacturers of these products.

The processing required to prepare the fibres for integration into Woolpack products will be, by necessity, a regional activity. It will require the use of a range of bioprocessing technologies. The renewable nature of the feedstocks will create circular economy jobs in the regions.

Timeline

December 2020 - June 2021

Project leader

Associate Professor Mark Harrison
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Participants

