The Wastes to Profits project aims to capture a potential market opportunity for the livestock sector by converting wastes into valuable products.

Australia's animal industries produce significant quantities of wastes from on-farm production, intensive feed and processing sectors. The management of these wastes is a significant cost for these industries exceeding AUD$100-200 million per year. In addition, primary production and processing costs are rising and there is an ongoing need to improve productivity to maintain future industry profitability.

There are significant opportunities to create new business models for improved management of wastes, unlocking new revenue streams for Australia's livestock industries.

The Wastes to Profits project brings together stakeholders from across Australia's animal industries and technology, research and development providers to deliver advanced technologies to convert wastes from livestock production and municipal water treatment into fertilisers, feeds, chemicals, and energy products for use in agriculture. The overall aim of the project is to improve productivity and profitability for primary producers.

This project is supported by Meat and Livestock Australia through funding from the Australian Government Department of Agriculture and Water Resources as part of its Rural R&D for Profit program and the partners.

Project partners

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[Logos of various partners]
Project areas

Area 1 – Wastes assessments, business models and pathways to adoption
Area 1 addresses key information gaps on waste composition and quantity and investigates waste aggregation opportunities. Information from Activity 1 will inform Activities 2-4 to ensure the project outcomes are identified, measured, and communicated across the sectors.

Area 2 – Development of technologies for improved waste management
Area 2 is developing novel pretreatment and processing strategies to prepare wastes for value-adding; enhancing efficiency of anaerobic digestion (AD) processes from animal wastes to increase biogas yields, lower costs and recover nutrients; and investigating pathways to increase adoption of AD throughout these industries.

Area 3 – Development of technologies for production of nutritionally-advanced feeds
Area 3 is developing opportunities to produce new animal feeds products from wastes, including nutritionally enhanced single cell protein, probiotics, algae and enzyme supplements. These products will contribute to a sustainable feed base for the sector and deliver improvements in animal productivity which will be measured through feeding trials.

Area 4 – Development of technologies for production of fertilisers, chemicals, plastics and energy products
Area 4 involves the development of technologies for the production of new products including bioplastics and biocomposites from animal industry residues; technologies for the hydrothermal processing of organics to produce energy products and enhance the use of residues for fertilisers, soil amendment and compost products.

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