TRANSFORM

Food waste to pig feed - safe and biosecure

The challenge

According to the National Food Waste Baseline, Australia currently produces 11.3 million tonnes per annum of food waste and diverts 3.9 million tonnes to animal feed. Of the remaining 7.3 million tonnes, up to 60% of the wastage is avoidable by directing it to food rescue and animal feed. These are currently the only two destinations that count towards the United Nations Sustainable Development Goal 12.3 of halving food waste by 2030 under the Australian National Food Waste Strategy.

A considerable proportion of the cost of rearing pigs in Australia is related to feeding. In Australia, pig feeds are predominately based on cereals and cereal by-products, pulses and (or) oilseeds, rendered animal products, and dairy products (for young pigs). There is currently some use of manufacturing and dairy waste streams in the pork industry, but by and large, the use of other forms of recycled food waste, which potentially has a significantly lower input cost than other feed ingredients, is limited.

It is estimated that currently, only 10-20% of Australian herds are accessing manufacturing waste, largely due to a lack of business to business awareness.
In countries like Japan and South Korea, feed costs have been reduced by 40-60% against standard feed by the use of treated mixed food wastes. In Japan, the Ecofeed (animal feed made from recycled food waste scraps and leftovers) industry has been successfully and safely producing nutritious feed for pigs from surplus food for over 15 years. It is a global pioneer in this field, currently recycling 52% of food industry surplus into animal feed.

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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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Our plan

The Australasian Pork Research Institute Ltd (APRIL) considers the greater utilisation of food wastes to substitute current feed ingredients to be of high importance for the pork industry, and this project aims to:

- identify food safety/biosecurity risks and strategies to mitigate perceived risks of utilising food waste streams into pig feed;
- identify waste streams with the least variability in quality and quantity;
- determine the economic feasibility of using food waste for pig feed in key regional production areas.

The major outcome of the project will be the generation of more information on food waste streams and a techno-economic analysis of utilising food waste (primary production, manufacturing, retail and hospitality/ institutional waste streams) for pig feeds. Key to this will be addressing food safety and biosecurity issues in utilising a greater amount of food waste streams for incorporation into prepared pig feeds.

Ultimately, the project hopes to reduce the 'highs and lows' of supply and demand (and hence cost) associated with traditional feed ingredients fed to pigs, thereby favourably impacting margins for pork producers and maintaining a high-quality product with good animal welfare standards and low environmental impact.

This project will be led by the Department of Primary Industries and Regions (PIRSA) through their research arm, the South Australian Research and Development Institute (SARDI), in collaboration with the University of Adelaide, and supported by the Fight Food Waste Cooperative Research Centre and Australasian Pork Research Institute Limited (APRIL).

Timeline

December 2020 - December 2022

Project Leader

Dr Valeria Torok
South Australian Research and Development Institute

Participants

Government of South Australia
Department of Primary Industries and Regions

SARDI
South Australian Research and Development Institute

Australasian Pork Research Institute Ltd
APRIL

The University of Adelaide

www.fightfoodwastecrc.com.au