



Options for utilising apple and pear pulp residue

The challenge

Australia's apple and pear juicers squeeze about 110,000 tonnes of fruit each year and are left with over 30,000 tonnes of pomace/pulp by-product. Different businesses deal with this by-product in different ways, with the vast majority of processes being no/low value-adding options.

Much of this by-product goes to animal feed, anaerobic digestion systems, and to compost. However, there are higher value-added products from apple pomace in the marketplace such as apple flour, apple powder, and nutraceuticals containing apple polyphenols demonstrating that such transformations are possible.

For more producers and juicers to transform their by-product into these higher-value products, they need an up to date analysis of the possible uses of apple and pear pomace/pulp residue. This will inform them of the potential options available to them to maximise their return from the resource.

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Our plan

In 2016, Green Industries South Australia commissioned SARDI, a division of the Department of Primary Industries and Regions, to investigate the potential options for use of this pulp residue to return value to the producers and juicers. This resulted in a report that consisted of the various options that Australian and international researchers have explored. It also reviewed the compositional analysis of the pulp residue looking at both macro and micro-nutrients, and the yield and market value of various components if recovered or extracted from the pulp.

Before a business puts any significant investment into transforming these by-products, they should have the latest information. This includes the relative value, potential end-users, and the relative costs of the technology to make the value-added products (e.g. pectin as a cooking thickener, or fibre to keep our digestive systems healthy).

This report will be updated to ensure that Australian apple and pear juicers have the latest information to understand the potential of value-adding to this by-product the relative costs of making that transformation, the technical skills required, and

the relative price/competitiveness for each potential output in the marketplace.

Producers and juicers will then have a better idea of the cost-benefit opportunity of these technologies for their business and/or a cluster of similar businesses in a particular geographic area. This updated report will inform businesses of the potential opportunities for transforming juice pomace into a higher value resource.

Timeline

September 2020 - November 2020

Project Leader

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Participants

