

SA GROWER

Working to stop food loss

POTATOES SA

BY ROBBIE DAVIS, CEO

AS YOU are aware, I have a personal and professional focus on, and interest in food waste and loss (FWL) and more particularly at the production end of the food value chain.

At a national level, FWL research to reduce, transform and engage (with stakeholders and the consumer) is in the capable hands of the Fight Food Waste Cooperative Research Centre (FFW CRC). The association is a participant, as are four fresh potato companies and many in horticulture generally.

At a state level, a collaboration between the University of Adelaide and 17 national and international academic and industry partners was launched in October, 2019.

Named the Research Consortium for Agricultural Product Development (RC APD), its vision is to extract high-value products from agricultural waste streams and downgraded commodities for local benefit.

These products would otherwise be turned into com-



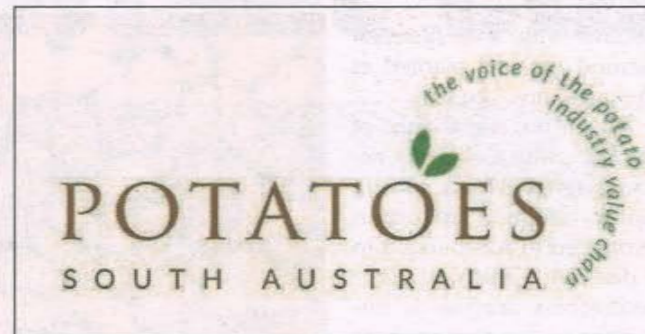
post, landfill or animal feed. This will include functional foods, green materials and sustainable agriculture.

A \$10.9 million, four-year program funded by the state government, the RC APD aims to achieve the following:

- Identify and characterise bioactive molecules from

crop waste and determine genetic and environmental factors that control their synthesis;

- Assess the properties of structural carbohydrates and bioactive compounds;
- Develop new, high-value food products and high-performance materials to



benefit industrial partners and end-users; and

- Train future Australian leaders in the field.

Short-term commercial outcomes are expected by exploiting known bioactive and structural compounds which can be found in our local crop biomass. Examples include the following:

- Anthocyanins (from red-skinned horticultural products; potatoes, apples, berries) and chitosan (from mushrooms) for use in skin-care products;
- Sulforaphane (from brassica vegetables) for biomedical applications;
- Melatonin, low GI carbohydrates and vitamin D in nutraceuticals;
- Biopolymers suitable as texturing agents for food

applications;

- Bioactive compounds with anti-microbial, antioxidant, anti-cancer and anti-inflammatory properties; and
- Cellulose and other biopolymers, bioplastics, packaging materials, films, coatings, gels for cosmetics.

Through this research, there is also the capability of the discovery of novel compounds that will allow development of other new products in the areas of health-promoting (functional) foods and beverages, bio-medical and biopharmaceuticals and high-performance materials.

With Potatoes South Australia, some of the industry partners in these projects

include South Australian producers Filsell's Orchards, Raw Nation Wholefoods, Ashton Valley Fresh, JVJ Co (Joint Venture Juicing Company), AE Cranwell & Sons, and SA Mushrooms.

It also involves Denmark's Carlsberg Group and SA's Coopers Breweries, Vanquish Technologies and Agilent Technologies Australia, with American ingredients solutions company Ingridion Incorporated. I am fortunate to be on the governing board.

Research providers include the University of South Australia, CSIRO, KTH (Royal Institute of Technology), Stockholm, Plant and Food Research Australia and the University of Adelaide.

The program is based at the School of Agriculture, Food and Wine, The University of Adelaide, Waite Campus.

These programs are so critical to South Australian/Australian agriculture.

It's all about using the whole harvest for maximum gain to the primary producers and consequential use of wholly Australian products by the consumers.