PROJECT SUMMARY

Converting potato waste into pro-biotics and other valuable

KEY POINTS

- Potato starch recovery from waste potatoes was shown to be a viable and valuable industry.

THE CHALLENGE

The potato industry disposes up to 40% of potatoes because they do not meet market requirements. The transformation of downgraded potatoes into high value products is an urgent requirement for the industry to improve their profits.

THE OPPORTUNITY

These products have a ready market in e.g., the functional food, bioplastics, packaging materials, coatings and adhesives sectors. The aim of this project was to assess and determine the viability of potential products that can be derived from waste potatoes.

OUR RESEARCH

Processes were optimised for starch recovery as well as for recovery of proteins and fibres, and bioactive compounds from potato skins. The potato starch produced from downgraded/waste potatoes was clean and white with low impurities. Importantly the levels of toxic glycoalkaloids in the starch were negligible.

Other potential industrial applications investigated include the purification of phenolic compounds and glycoalkaloids. Both the alkaloids and phenolic compounds were successfully extracted and purified from the waste peels, however, the economic potential of these products is uncertain as there is currently limited data available on these specific markets.

OUTCOMES

After the establishment cost of a starch recovery plant, the potential revenue to the primary producers was assessed and it was demonstrated that the establishment of a potato starch industry in South Australia would be commercially viable and a profitable business.

NEXT STEPS

Following the study performed in this project, the project team recommend that the FFW-CRC Project Partners closely look at the strong commercial prospects for building a Starch Recovery Plant in South Australia for their waste potatoes using the confidential data and recommendations provided.

PROJECT TEAM

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PARTICIPANTS

THE UNIVERSITY of ADELAIDE
THE MITOLO GROUP
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PROJECT REPORTS/PUBLICATIONS

All reports associated with this project are confidential.

PROJECT WEBPAGE

Converting potato waste into pre-biotics and other valuable products | Fight Food Waste CRC

FFW CRC Publication 2023_17

The Fight Food Waste Cooperative Research Centre is funded through the Australian Government's CRC Program administered by the Department of Science, Industry and Resources.