

The unlimited potential of waste potatoes: *We want your opinion*

By Dr Carmen Muller and Dirk Uys

Potatoes South Africa promotes excellence in research to ensure optimal production and usage of the exceptional product that we work with. To ensure that research outcomes are achieved over the various focus areas, external funding opportunities are often sought.

Potatoes South Africa, along with researchers at the University of Pretoria, were successful in obtaining research funding from the Department of Science and Innovation implemented by The Technology Innovation Agencies (TIA), Agricultural Bio-Innovation Partnership Programme (ABIPP). The project entitled 'Feasibility study of a new value chain for lower grade potatoes in the agro-processing industry' will focus on finding alternative uses for potatoes that do not meet minimum size, grade, or quality standards for the fresh produce market, or potatoes disposed of because of low market value due to overproduction, they are considered waste or 'cull' potatoes.

Initial phases

This novel project will follow a three-phased approach starting off with an in-depth market research study that will be conducted by the Bureau of Food and Agricultural Policy (BFAP).

During this economic feasibility study the tonnage and monetary value, as well as nature of potatoes that are classified as losses and waste at various levels throughout the potato production chain, will be quantified.

This will entail detailed questionnaires conducted from farm to industry level to determine:

- How the industry role-player defines or views losses/waste.
- Points of loss/waste.
- Amount of loss/waste.
- Regional loss/waste.
- Seasonal loss/waste.
- Reasons for loss/waste.
- Current loss/waste uptake practices.
- Most common cultivars and sizes wasted.

Data obtained from this study can be used to determine the feasibility of secondary production systems at various points in the value chain, and to provide insight into the types of secondary industry that will provide maximum returns.

Product development phase

The feasibility study will be followed by an innovative product development project. The aim will be to create a new value chain for potatoes that are

rejected for aesthetic reasons but still hold nutritional and economic value for human consumption. The developed products will comply with current market trends and will attempt to fill gaps in the emerging consumer market.

The main segments for development will be:

- Healthy snacking foods.
- Potatoes as a breakfast food.
- Potatoes as part of a ready-made frozen meal along with a protein component.

Creating a secondary market

The final portion of the project involves groundbreaking work to create a secondary market for potatoes that are not suitable for human consumption, but still hold nutritional and economic value. These tubers, although aesthetically unattractive, have the promising potential to be used as a substrate (feed) for high protein insects including black saw flies, crickets, and meal worms that in turn feed the poultry industry.

The project is proving to be highly relevant in the potato market and is on a trajectory to deliver valuable information and create secondary markets for the South African potato market. 🍅

We invite all role-players in the potato industry to partake in this research study and provide your valuable input with regards to waste potatoes. Please be on the lookout for the BFAP team who will be disseminating the questionnaire towards the middle of the year. If you would like to form part of the research project or receive more information please contact Dirk Uys at dirk@potatoes.co.za or Carmen Muller at carmen.muller@up.ac.za.

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