THE UNIVERSITY of ADELAIDE

EASY PEEL TOMATO

First self-peeling tomato for faster, lower cost processing

Benefits

- No water, heat, chemicals or other engineering is required, which could save 25% in production costs.
- The skins are also unprocessed, thus have the ability to be repurposed.

Background

In 2018, the 40 largest tomato processing companies in the world processed 35.7M tonnes of raw tomato. The industry has annual sales valued at over US$5B. We have estimated that a self-peeling tomato could save 25% of the tomato processing costs.

Currently the tomato processing industry peels tomatoes by blanching in hot water, vacuum cooling, then pinching with rollers and abrasive material or using caustic soda to chemically peel the tomatoes. The use of caustic soda is environmentally detrimental and highly regulated. Less conventional techniques include using electromagnetic infrared waves or ultrasonication.

Technology overview

University of Adelaide researchers have discovered a unique genetic signature that imparts the easy peel quality in tomatoes and have grown and tested a range of plants for consistency and range of the quality. With this information, we believe we can now adjust the timing and ease of skin removal to adapt plants for varying purposes.

Applications

The tomatoes may be able to be consumed fresh, but the target market is in processed products such as canned tomatoes, salsas, juice, purees, sauces and soups. Further investigation needs to be done on the taste of a less worked product.

Another potential application will be in use of the skin to extract lycopene, as the skin will not have been processed through extreme heat or chemical means.

Projects

- Use gene editing to control the timing and ease of skin removal
- Breeding into elite material
- Field trials

Development Status

Easy-Peel Tomato plants have been grown for multiple generations. These plants were developed using GM techniques. Further non-GM techniques will be used for the next stage of development.

Opportunity

We are seeking interest from

- Breeders/seed companies
- Growers
- Processors
- Investors

The University will entertain various business models including research partnership, joint venture, technology licensee and/or end product licensee.

IP Status

A provisional patent has been filed. Further detail can be provided under CDA.

Inventor

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FURTHER ENQUIRIES

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