ALBERTA INNOVATES

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Development of New Processing Technology to Manufacture Shelf Stable, Solid Muscle, Fermented Pork Loin Products

Fermentation is a traditional method for preserving meat products. Properly controlled fermentation prevents the spoilage and growth of pathogenic bacteria. The method also produces shelf stable products with highly desirable flavour and textural attributes. Fermentation of meat products takes time and can be a drawback for some processors. This project aims to shorten the time by developing a technology that combines two variables (starter cultures and brine curing) that previously have not been used together. The findings of this project could reduce overall processing times required to produce solid muscle cured, fermented products that are shelf stable and flavourful. The technology developed here could also be adapted towards other types of meats to create additional value-added meat products.

FUNDING DETAILS

RECIPIENT:
Soliterra D'Italia

PARTNERS:
Sunterra Market

TOTAL BUDGET:
$ 91,333

AI FUNDING:
$63,533

PROJECT DATES:
February 2019 – December 2020

PROJECT TRL:
Start: 4
End: 8

APPLICATION

The technology will be incorporated into the Soleterra D'Italia Ltd. production facility. This facility already specializes in the manufacturing other dried pork products. This new technology could reduce the overall processing time required to produce fermented pork products and could be used for other types of meat. The new value added, high quality products obtained using this technology are expected to meet the growing Canadian and North American demand for artisanal style meat products. Products will also be incorporated into Soleterra D'Italia's current export market program that includes both Japanese and Chinese clientele.

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PROJECT GOALS

- Determine the effect of the Canadian Food Inspection Agency (CFIA) approved starter cultures on boneless pork loin.
- Determine combined effects of the starter culture, fermentation processing and drying on the finished product.
- Develop a commercially viable process to manufacture cured, fermented, solid muscle, shelf stable pork loin products.

BENEFITS TO ALBERTA

- The development of a safe, efficient and unique technology that will lead to a new value-added pork loin with a desirable flavour and texture.
- Showcase Alberta-made artisanal pork products that align with current consumer trends in locally made food, fermented foods, and high-quality charcuterie products.
- The benefit to the processors will be a reduction in processing time, drying requirements, capital and labour. There is potential to increase profit margins, product competitiveness, and product differentiation.
- Strengthen the social license and sustainability of Alberta's agriculture sector by using humanely raised pigs fed with locally raised grain. The pork will be locally sourced and traceable back right to the farm.

1 New Product/Service

1 Patent

CURRENT STATUS

June 2020

The team is optimizing the fermentation process and will begin planning for consumer sensory evaluation, which includes the assessment of product appearance, aroma, flavour, texture, saltiness, sourness and overall acceptability. Panelists are being screened for regular consumption of similar products on the market – artisanal fermented meats. Relationships between consumer acceptability feedback and objective measurements of textural quality will be investigated.