



Highlands Natural

Research and development project

P.PSH.1509 – Beef Bone Broth value add opportunities

Process

Time and temperature, bone by-product processing.

Summary

The bones of beef carcasses can make up to 20% of animals' liveweight and are typically treated as a by-product or waste and usually sent to renderers where they are converted into tallow and bone meal. Further value adding opportunities for bones is typically seen in the production of bone broths where "everything but the kitchen sink" is added to make a flavourful liquid.

This ongoing research project is looking to understand the nutritive values attached to varying bones and joint types involved in developing a beef bone broth and the impact on nutritive value after secondary and tertiary extraction on these same bones.



Outcomes

MLA has been actively exploring red meat inputs as an ingredient. Bone broth was identified as an opportunity to utilise low-value red meat products as an ingredient in the wider food industry as well as research into bone by-product processing.



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This will look to grow awareness regarding health benefits among consumers across the globe, coupled with the numerous, scientifically-backed health benefits associated with broth consumption.

This ongoing project is seeking to identify the differences in amino acid profiles, collagen content and mineral content in the different bones and joints of the animal to determine a hierarchy of nutritional value which in turn could affect which bones and joints to prioritise when processing and preparing bones for broth and other products.

In June 2024, the average price of 50% MBM (meat bone meal) was valued at \$0.52/kg (MLA co-products report). Converting this to a nutritionally-dense health and wellness product could generate up to \$40/kg which would represent a 77X (exclusive of production, packaging and any associated marketing costs) value multiplier.

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