

Freeze Dry Industries

Research and development project

P.PSH.1274 – Hides to Riches – Extracting food grade collagen from beef hides

Process

Hydrolysis, freeze drying (FDI Eagle Maxi), milled powder.

Summary

The Australian hide (and skin) market continues to drop to almost record low prices meaning not just hide waste streams, but indeed alternate uses for hides need to be fast-tracked.

The Australian beef hide market is typically split to produce gelatine and leather. This project looked at Freeze Dry Industries technology to identify a three-to-five-fold value-adding opportunity for the red meat industry with the application to extract food grade collagen as an alternative use of hides.

Further, the demand from wellness, beauty and fitness trends for collagen continues to grow globally so a certified organic collagen production process from waste hides was also developed to meet this demand.

Outcomes

Costing models show a clear benefit to the red meat industry with this technology providing up to a 4x increase in the value of hides and creating a whole new sector for Australia's red meat industry as there currently is no collagen production.

Using this more sustainable collagen extraction process, the freeze dry and milling process will generate a 20% collagen yield from hides i.e. for every ~20kg hide that can be freeze dried, 4kgs collagen is extracted.

It is estimated that waste disposal currently costs processors up to \$12.50 per hide, however now there is an opportunity to divert hides from landfill unlocking not only sustainability benefits but nearly \$1M pa new revenue by transferring them instead to be freeze dried and milled into collagen.



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