

TESTING THE FEASIBILITY OF FREEZE-DRYING MEAT BARS

ABOUT MEAT & COMPLETE, LLC. Meat & Complete is located in Valentine, Nebraska, and manufactures Cibo meat protein bars. Chelsea Luthy-Stoeger founded this company in 2021, based on a passion to create a healthy lifestyle for herself and her family. Chelsea, along with her three girls, creates meat bar products that provide energy and nourishment for active and on-the-go lifestyles. The company currently employs 3 people.

THE CHALLENGE. Meat & Complete currently manufactures meat bars that require refrigeration throughout their shelf life. This cold storage requirement limits both the distribution area of the meat bars, as well as their shelf life. Chelsea Luthy-Stoeger, President, decided to reach out to The Food Processing Center (FPC) at the University of Nebraska-Lincoln in hopes of making a shelf-stable product that could last longer, as well as be distributed over a wider region. The FPC is a partner of Nebraska MEP, part of the MEP National Network™. She had previously worked with the FPC for help with formulating the meat bars, thus she felt that seeking assistance from the FPC was a natural solution.

MEP CENTER'S ROLE. Freeze-drying was an attractive option for Meat & Complete to consider as it is a low-temperature, low-pressure process that can preserve heat-sensitive vitamins and nutrients in foods. This process can require a large capital investment, thus using the FPC to test the process would be a cost-effective way to see if the meat bars could be successfully freeze-dried before investing in the equipment for her production facility. Dr. Grace Danao, a food processing specialist in the FPC, assisted Meat & Complete by freeze-drying a small batch of products provided by the company and shipping them back to Meat & Complete for their own internal evaluation. Upon receipt of their freeze-dried meat bars, Meat & Complete evaluated the quality (i.e. texture, palatability, taste, etc.) and stability of the meat bars at room temperature.

"I am very familiar with the Nebraska MEP partner, The Food Processing Center (FPC) at the University of Nebraska-Lincoln. The FPC helped me with my original product formulation and I wouldn't still be in business today without their guidance. I knew when I wanted to test out freeze-drying that I should contact the FPC for support and I was not disappointed! Their assistance was invaluable not only in equipment savings and employee training but also in expertise and the amount of time required if I had done it myself. The results we received are helping us to launch a new product line and open a new market for our business."

-Chelsea Luthy-Stoeger, President

RESULTS



Saved **\$170,000** on shelf life studies, packaging, market testing and the use of outside expertise



Invested **\$15,000** in new plant equipment (freeze dryer)



Invested **\$5,000** in employee training, safety and HACCP procedures



Invested **\$5,000** in the company's information software system to manage a new product line

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