

Improvement of traditional techniques for making biltong and kitoza by applying solar dryers in the Centre-Nord Region of Burkina Faso

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Herd of Zebu Peulh in the Sahel

Why this research project matters

- Availability and safety of animal sourced foods (ASF) is critical, particularly in developing countries where food is limited. Burkina Faso has 2.9 million people classified as undernourished with 25.5% of children under age five classified as stunted
- Meat spoilage due to lack of cold chain is a challenge in Burkina Faso which affects availability of meat for consumption and income opportunities for livestock producers.
- Preservation of ASF using methods such as drying is a way to reduce waste and increase ASF availability and safety. The use of solar dryers could increase the adoption of the innovation including in remote rural areas where power supply is often lacking or unreliable.



Solar based meat drying operation in Ouagadougou

Overarching goal

Develop a refined protocol for the production of healthy and nutritious dried meat (similar to biltong and kitoza) utilizing solar dryers that drastically reduce the presence of pathogens and increase the shelf life of the product.

Our work is based in

The Centre-Nord region in Bam, Namentenga and Sanmatenga provinces

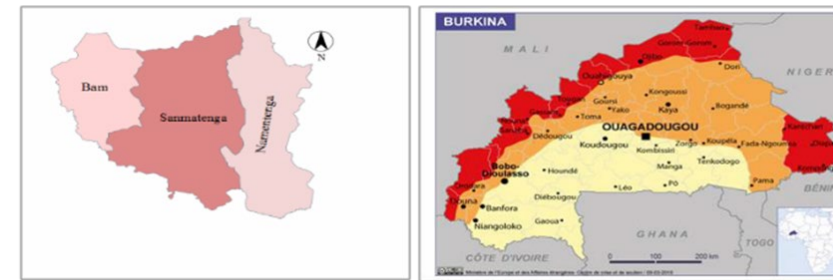
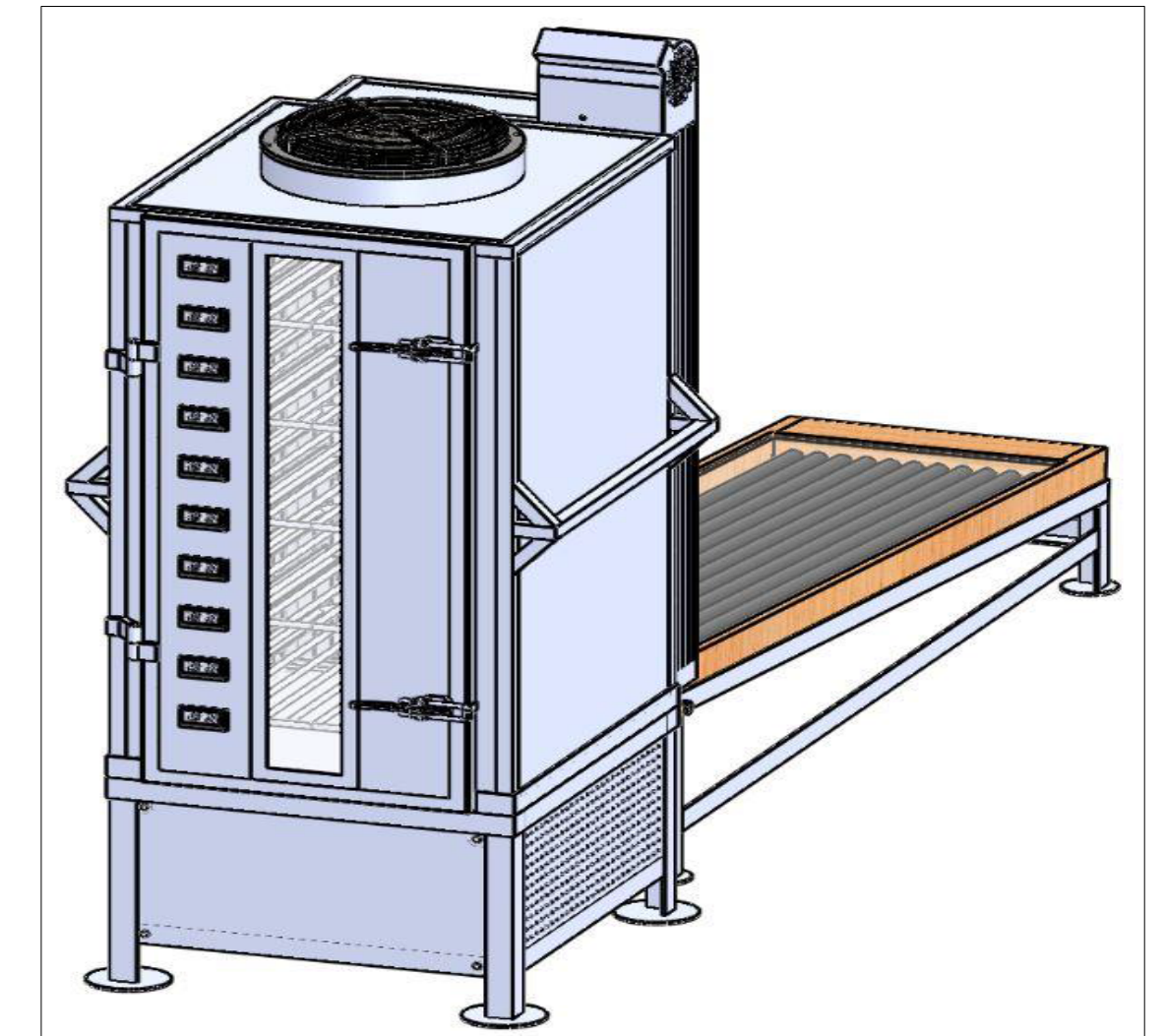


Figure 1: Geographical location of the Centre-Nord region, Burkina Faso.



Model of a forced convection solar dryer (Kiendrébégo, 2023)

What we aim to do

- Determine the suitability of the solar dryer to produce biltong and kitoza using beef, sheep, and goat meat.
- Assess the microbiological, nutritional, technological, and organoleptic characteristics of biltong and kitoza produced using a solar dryer
- Develop processing guidelines for healthy and nutritious dried meat production
- Develop dried meat products with organoleptic properties that consumers appreciate.
- Diversify processing options for livestock and expand revenue possibilities
- Contribute to the viable development of ruminant meat value chains
- Increase availability, variety, and safety of animal source foods.

Our work on cross-cutting themes

- Local Capacity Development & Gender and Youth: Strengthen the capacity of university students, youth, women and institutions in Burkina Faso.
- Enabling Environment: Strengthen institutional partnerships



Microbiological and biochemical analyses are essential to assure the safety of meat drying technology