



STEP

St. Paul / Elk Point
Economic Development Alliance

CASSAVA ANIMAL FEED PROJECT PROPOSAL

The Cassava Animal Feed Project is an exciting opportunity to explore feasibility and benefits of integrating forage cassava into livestock feed systems while showcasing agricultural research and development, progressive producers and small medium enterprises as catalysts for sustainable, innovative and progressive agriculture.

Driven by the need to find sustainable and economical feed alternatives for the Canadian beef cattle industry in Alberta, the Cassava Animal Feed Project was undertaken. Forage cassava presents a promising solution due to its high nutritional value, adaptability to various growing conditions, and potential to enhance livestock production.



Rationale

- Alberta, a major livestock producer in Canada, boasts the highest cattle population, accounting for 43.2% of Canada's total cattle inventory in 2023.
- Rising costs of traditional feed sources, such as grains and hay, pose a significant challenge to the profitability and sustainability of beef cattle operations.
- Forage cassava, is known for its high nutritional content, adaptability to marginal lands, and resilience to drought conditions, presents a compelling opportunity.
- Forage cassava offers higher dry matter (DM) content (approximately 92%) compared to traditional feed sources like alfalfa, barley, corn, oats, wheat grain, hay, and silage, which range between 30-91%.
- Its crude protein (CP) content of around 29% is comparable to that of canola, soybean meal, and field peas (25-53%) and surpasses the CP content of wheat, barley, corn, alfalfa, and other grasses, which range from 0-20%.
- Supplementing livestock diets with forage cassava has been shown to improve feed intake, enhance rumen ecology, and increase the digestibility of DM, organic matter (OM), and CP in ruminants, all without posing health risks.
- Cassava leaves have been successfully used in other countries to replace maize in poultry feed and have shown the potential to replace other by-product feed ingredients like cottonseed cake.
- Research has shown that substituting a portion of the diet with cassava can decrease methane emissions. Lower fiber content means less fermentation time, which can reduce methane production. Additionally, high starch content can lead to different fermentation pathways that produce less methane compared to fibrous feeds.

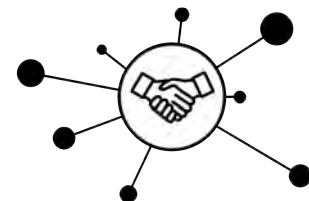
Partnership in R & D



STEP

St. Paul / Elk Point
Economic Development Alliance

**ENTREPRENEURS /CROP & BEEF
PRODUCERS**



Mosh Louisa Biosa Hevi – Entrepreneur

Objectives

- **Introduce** at least two forage cassava varieties to Alberta
- **Establish** capacity for in-vitro micropropagation of forage cassava varieties
- **Study** the growing conditions of forage cassava in both greenhouse and outdoor settings
- **Evaluate** potential for large scale planting, harvesting, and processing of cassava fodder
- **Determine** cassava production costs and cost of gain for livestock supplemented with cassava
- **Study** the effects of forage cassava on livestock methane emissions
- **Commercialize** forage cassava production as an alternative protein source

How to Get Involved

- **Producers** – crop trials and feed trials
- **Research and Development** – investment and collaboration
- **Manufacturing** – planting and harvesting processes and equipment
- **Business** – commercialization and market opportunities

Agricultural Service Boards / Municipalities – support excellence in research and development to highlight the region as an agricultural hub

Contact:

Linda Sallstrom: lsallstrom@stepeconomicdevelopment.ca

Mosh Louisa Hevi: moshdzidzeme@gmail.com



Learn more about the STEP Region and the County of St. Paul.

Contact: Linda Sallstrom: lsallstrom@stepeconomicdevelopment.ca

STEP (Economic Development Alliance):

+1-780-646-3301 ext. 1218 (office) / +1-780-646-2975 (cell)



STEP

St. Paul / Elk Point
Economic Development Alliance