


Improving Milk value chain through Solar Milk Cooler in Ethiopia

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Introduction

- Dairy farming contributing to the livelihoods of 1.7 million livestock farmers in Ethiopia
- 98% of the milk production produced by smallholder farmers
- The demand for milk is high



Problem statement:

- High perishability nature of milk
- Post-harvest loss because of Lack of cooling/chilling plants in rural areas because of
 - ✓ Lack of access to electricity
 - ✓ high costs of standalone diesel generators


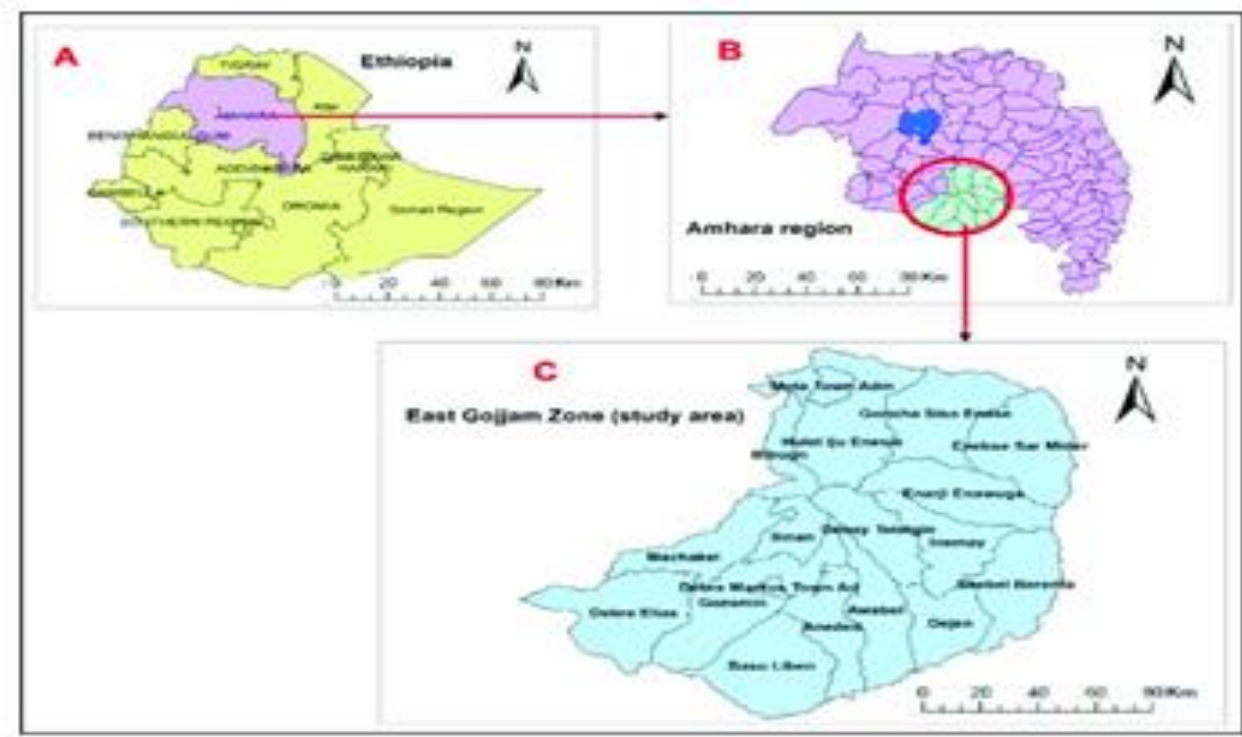
Value chain affected:

- high amount of milk going waste
- Insufficient supply of quality milk
- Low income for producers

Solution approach:

- Use of solar milk cooler

Location of project area (East Gojjam, Ethiopia)

Implementation steps(milestones)

- Team formation and capacity building
- Pre -assessment
- Develop a detailed plan
- Linkage with key partners
- Find a consultant and raise capital
- Acquisition of cooling equipment's
- Purchase of inputs\ equipment's
- Installation
- Follow up and evaluation

Objectives

- To reduce post harvest losses of milk through the use of solar milk cooler
- To create job opportunity for women and youth
- To support smallholders with equipment needed for solar cooler

Conclusion / Highlights

- Lack of refrigeration in rural areas is leading to millions of tons of fresh produce of milk going to waste every year
- Solar Cooling/Chilling of raw milk enables higher milk production, since the farmers can milk their cows twice a day
 - decreases the risk and cost of spoiling due to delays in being transported.
- Helpful for the rural poor who do not get electricity and can not afford to pay for it.

Expected costs (For 2 years)

- Capacity building = 5,000 Euro
- Equipment's cost = 18, 000 Euro
- Installation & maintenance cost= 4000 Euro
- Administration and operating cost = 5000 Euro

SWOT Analysis

<p>Strength:</p> <ul style="list-style-type: none"> ▪ High demand of solar energy ▪ Growing consumer interest for organic local products 	<p>Weakness:</p> <ul style="list-style-type: none"> ▪ Lack of financial support
<p>Opportunity:</p> <ul style="list-style-type: none"> ▪ Government support ▪ Availability of experts ▪ Potential area for dairy production ▪ High source of solar energy throughout the year 	<p>Threat:</p> <ul style="list-style-type: none"> ▪ Cost of cooling equipment

Possible risks

- Lack of support for the project (fund)
- Absence of well organized farmers
- Equipment maintenance problem



Expected outcomes

- Improved access to quality milk for the surrounding community
- Reduced post harvest losses of milk
- Profitability of smallholder dairy farmers
- Job opportunity for women and youth created