



RESEARCH
PROGRAM ON
Livestock

*More meat, milk and eggs by and for
the poor*



Simple smokers to improve traditional dairy products

Key messages and solution

- Smoking of milk utensils is a crucial traditional practice to develop the product's desired organoleptic characteristics.
- Fumigation also assures quality and safety of milk and dairy products.
- Traditional fumigation often leaves residues, may contaminate food, and can release toxins.
- An easy-to-use beekeeping smoker helps produce high quality and safe products and satisfies consumers.



Benefits

Using simple smokers leads to:

- Clean smoke that is free of contaminants, ash and charcoal
- Production of dense smoke even under windy conditions
- Safe smoking of plastic milk containers

Problem statement

- Producers fumigate utensils used for milk using woods of specific plant species. The smoking is done by placing an ignited wood piece in an empty milk container, normally from plant origin, but also often plastic. Traditional methods of fumigation leave black residues of charcoal, ash and other dark contaminants in the product that is not preferred by consumers.
- The wood for fumigation is often stored where it comes in direct contact with food or dung; these affect product safety due to contamination with harmful bacteria like *E. coli* and coliform.
- Additionally, smoking of plastic containers using traditional methods releases bisphenol and dioxin that is highly toxic.



Evidence

- The intervention was tested in Tigray, Abergelle and Yabello targeting goat, cattle and camel herders. The intervention is very simple to understand and to apply. Generally, around 78% of the farmers would like to use this technology.



Suitability

- The intervention is appropriate for pastoral and agro-pastoral communities that use smoking in dairy processing on a daily basis. The needed equipment is available in the local market and is simple to use.
- Resources required are few – some cash and some knowledge. The intervention contributes especially to human nutrition (safer food) and market linkages (consumer demand) and gender empowerment.

Resource requirements (low to high)

Land	○ ○ ○ ○ ○
Water	○ ○ ○ ○ ○
Labor	○ ○ ○ ○ ○
Cash	● ○ ○ ○ ○
Access to inputs	● ○ ○ ○ ○
Knowledge and skills	● ○ ○ ○ ○

Impact areas (low to high)

Food security	○ ○ ○ ○ ○
Human nutrition	● ● ● ○ ○
Employment and livelihoods	○ ○ ○ ○ ○
Natural resources base	○ ○ ○ ○ ○
Gender empowerment	● ● ○ ○ ○
Market linkages	● ● ● ○ ○

Value chain focus



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