

# Earn more from making yoghurt

Danish dairy expert Nieke Westerik is training farmers in value addition. She makes yoghurt from milk at Yoba for Life, writes **Desire Mbabaali**

Adding value to products is among the things farmers in Uganda are lacking.

However, this not only brings you more income, but also helps one build a product that is easily identifiable on the market.

Yoba for Life, a Dutch NGO, makes yoghurt by producing a starter culture which contains probiotic bacteria.

"Probiotic yoghurt is a type of yoghurt that looks and tastes the same as normal regular yoghurt, but has additional benefits. It has a special type of bacteria described as 'soldier bacteria' that helps reduce diarrhoea, cough and flu, ulcers, skin rashes, breaks down aflatoxin, and enhances nutrient absorption by the body," says Nieke Westerik, the project coordinator.

## Milk supply

Westerik explains that Heifer International partners with the Yoba for Life foundation in the 'Fermented Food for Life' project, under which, 115 production units have been helped to initiate and scale-up production of probiotic yoghurt.

These produce over 20,000 litres of healthy probiotic yoghurt per week.

"The concept therefore is to improve both health and wealth - market for the milk, value addition and employment generation," she says.

Some of these production units are dairy cooperatives, farmer (women) groups and individual entrepreneurs.

"All different production units work under their own brand name, but their labels include the 'Yoba for Life' stamp, to indicate that their yoghurt is healthy probiotic yoghurt," Westerik adds.

## The production process

Westerik explains the process of yoghurt production. Wash all equipment that is going to be used, and rinse it with boiling water to kill all spoilage bacteria. Take care of personal hygiene: wash hands, wear protective clothing, and cover hair.

The next step is to test the quality of the milk. This is done through; **Sensory test** - looking at and smelling the milk to see if it is fresh and normal.

## THE PROCESS

- Place a large saucepan half filled with water on heat.
- Place milk can with milk in this water bath.
- Heat the milk till 60°C as is measured with a laboratory thermometer and add sugar.
- Recommended amount is 1/2kg of sugar per 10 liters of yoghurt.
- Continue heating until 85°C.
- Reduce the heat, but do not remove the milk from the fire.



maximum of 100 liters yoghurt.

Keep the milk warm for 12 hours. Small volumes can be kept warm in a vacuum flask. Large volumes of milk (milk can) can be kept warm by wrapping it into a blanket.

After 12 hours, you can add flavour (e.g. strawberry or vanilla) in the recommended ratio of 1ml of flavour per liter of yoghurt. Stir the probiotic yoghurt very well. It can now be packaged.

Store the probiotic yoghurt in a fridge below 7 °C. Under these conditions, yoghurt has a shelf life of at least 1 month.

## What kind of milk is good for yogurt?

"Milk should have a lactometer reading of 28 and above. The higher the lactometer reading, the thicker the yoghurt will become, hence milk of local cows usually obtains thicker yoghurt," Westerik says.

She encourages all farmers to take their products to be tested at Uganda Industrial Research Institute lab (accredited by UNBS) to safeguard microbial safety of the products.

## Challenges

Westerik identifies the limited knowledge on probiotic yoghurt in Uganda as a major challenge, thus obtaining market by probiotic yoghurt producers is still difficult.

The Yoba culture costs Shs2,000 (for a pack that can make a maximum of 100 liters of yoghurt) from the Heifer Offices, Uganda Industrial Research Institute Jinja Rd and regional distributors in Soroti, Kamuli, Jinja, Nansana, Bukumero, Luwero, Masaka, Rushere, Mbarara and Ibanda.

During a training in Ruhendwa, the fresh starter is added to the big batch of yoghurt. COURTESY PHOTO

# 20,000

THE AMOUNT OF YOGHURT IN LITRES PRODUCED PER WEEK

**Lactometer test** - the lactometer should read a number of 28 or more,

**Ethanol test** - mix equal amount of 80 per cent ethanol with an equal amount of milk and mix well.

The mixture should be smooth (as opposed to starting to clot) and lastly,

**Clot-on-boiling test** - where milk is heated till it boils. "If clots form, it means the milk is not fresh," says Westerik.

## Pasteurization

• Place a large saucepan half filled with water on a source of heat.

• Place milk can with milk in this water bath.

• Heat the milk till 60 °C as is measured with a laboratory thermometer and add sugar.

• The recommended amount is 1/2

kilogramme of sugar per 10 liters of yoghurt. • Continue heating up till 85 °C.

• Reduce the heat, but do not remove the milk from the fire. Let it be on the fire while maintaining the temperature of 85 °C for 15 minutes. So during these 15 minutes, it should not cool down, but it should also not heat up beyond 85 °C.

## Cooling the milk

Remove the milk from the hot water bath, and place in a cold water bath (for -example a large bucket filled with cold water).

Cool until the milk is 45°C. Add starter culture. One pack of one gramme starter culture can be directly added to 20 liters of pasteurised milk. One pack of one gramme starter culture can make a

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