

SECTION I: DAIRY VALUE CHAIN DEVELOPMENT

A Strategic Role of

CAIT

in Dairy Value Chain Development



Frozen Semen Taken out of LN₂ Can for AI

Community Artificial Insemination Technician

Case Story - I

First Woman CAIT



Case Story - II

Retired Army becomes CAIT



Case Story - III

Enthusiastic CAIT from Norbugang



BACKGROUND Dairy has always been one of the important livelihoods for farmers in Bhutan. A dairy product such as butter and cheese form an important component of the Bhutanese cuisine. Until recently, dairy products have become an important source of income generation for many smallholder farmers in eastern Bhutan.

As per the livestock statistics of 2019, Indigenous cattle make up 65% of the total cattle population in Bhutan. Therefore, various breed enhancement interventions such as supplying community breeding bulls, outsourcing hybrid cattle, and introducing Artificial Insemination technology are imperative.

INTRODUCTION OF CAIT

Artificial insemination (AI) is considered, one of the most important reproductive technology, for improving the genetic potential of animals for increasing productivity. The technology was first adopted in 1987 in Bhutan.

However, the AI service was inaccessible to most of the dairy farmers from remote communities, due to rough geographical terrain, lack of adequate AI technicians, and multi-tasking of the Livestock extension officials. Thus, the need for community-based AI

technician service delivery was found necessary in the commercially viable areas. The Department of Livestock initiated the Community Artificial Insemination Technician (CAIT) program in 2010, with the pilot training of the first batch.

CARLEP Support in CAIT

In eastern Bhutan, CARLEP has played a major role in the dairy value chain development to increase smallholder income from livestock value chains. Among many, cattle breed improvement is considered one of the key interventions to increase production. As dairy production systems in Bhutan have switched from a transhumant system (cattle migration) to a sedentary system also known as a crop-cattle system with an increasing population of crossbred cattle, the growth of dairy farming was also confronted with new challenges especially in breed improvement.

Understanding the importance of CAIT in filling the gap of technical human resources in the field of dairy breed enhancement, CARLEP adopted the CAIT program in 2016. Since then, the Regional Livestock Development Centre (RLDC), Kanglung had trained 36 people from six eastern Dzongkhag, with fund support from CARLEP.

CAIT has a huge role in introducing the AI Technology to remote communities, where the extension services are difficult to reach.

Case Story I:

A Story of the First Woman CAIT in Eastern Bhutan



↑ Tashi Dema performing AI

Tashi Dema, 22, a young woman from Thridangbi under Saling gewog, Mongar is the first woman to take up the role of CAIT in eastern Bhutan under CARLEP.

parents in managing a dairy farm.

Dairy has been one of the important sources of nutrition and income for Tashi's family. With the home processing business, managing a dairy farm was tedious and challenging. Likewise, taking a cow to a breeding bull in nearby villages was time-consuming and laborious. Despite the presence of an AI Technician in the

gewog, receiving timely AI services was challenging due to the lack of adequate AI technicians. Therefore, she decided to become CAIT and registered herself for the CAIT training.

Despite being the first and only woman participating in the training, she worked hard and completed the training. She feels the training was very educative but also intense as the course

Tashi has performed 46 AI in her first year after completing the CAIT Training.

Tashi could not continue her studies after 7th grade and spent most of her time helping her parents with agribusiness. Most of the time, she used to help her mother in making banana chips and beaten maize. Aside from homemade banana chips making, she also helped her



AI Equipment used by CAIT →

was done with no prior experience in AI. She added that one does not need to have all the skills to start something, one should have a willingness to learn and explore.

At the age of 19, Tashi became a Community Artificial Insemination Technician. She completed Community AI Technician training in 2019 through the Regional livestock development center Kanglung.

After completing the AI training, Tashi has proactively delivered AI service to the dairy farmers from the village, i.e., Thridangbee, Kalapang, and

“ At first, I thought that CAIT is a men's job only. I was wrong to think that way. If men can do this, so can we. It just takes a willingness to learn and practice. - Tashi says.

↓ Farmer availing the AI services from TASHI (CAIT)



“ After the training, I have delivered the AI services to the dairy farmers from the village, i.e., Thridangbee, Kalapang, and Saling. Within my first year as a CAIT, I have inseminated 46 cows, out of which 10 have given birth. The gender ratio of the AI offspring is fairly balanced, says Tashi

Saling. With her efficient and timely services, farmers in her gewog have been immensely benefited in terms of improving the breeds and reaching AI and animal health services.

Within Tashi's first year as a CAIT, she had inseminated 46 cows, out of which, more than 10 have given birth to fairly balanced gender of AI offspring. Currently, she earns an average income of Nu. 3500 a month from her services to farmers.

As more farmers are coming forward to avail AI services, she aspires to expand her reach to more villages.

Today, Tashi is one of the successful community AI Technicians despite the challenges she faced as a woman. She has demon-

strated that women can be as effective and efficient as men in delivering AI services.

↓ LN₂ can used by Tashi to store frozen semen



Case Story II:

A Passion in Dairy led a Retired Army to become a Successful CAIT

Kezang Jamtsho, 41, hails from a small village called Dangling under Maenbi gewog, Lhuentse Dzongkhag. He served in an army for 10 years and left the job for the grueling, yet rewarding work of earning money from his ancestral land back in the village.

After returning to the village, he began dairy farming. Currently, he owns thirteen jersey crossbreed cows and supplies a high volume of milk to the Milk Processing Unit at Tangmachu, Lhuentse.

Today, Kezang is not only a progressive dairy farmer but also a competitive CAIT in the community. He attended CAIT training in 2019 through RLDC, Kanglung with fund support from CARLEP-IFAD. Like many CAITs, Kezang also took up AI job to ease the burden of the lone livestock production supervisor in gewog and

help the officer with timely AI services for breed improvement. Unlike in the past, Kezang does not worry about breeding his cows as he can now inseminate the cows whenever needed.

ing. He charges Nu. 400 per insemination within a travel distance of 4 kilometers, Nu. 500 for travel distance of 5 kilometers and Nu. 1000 for travel distance of 10 km and above as services charge, as per the agreement drawn between the dairy farmers and the CAIT.

Kezang receives AI equipment and semen supports through Regional Livestock Development Centers, Kanglung with fund support from CARLEP-IFAD, and technical assistance from the Dzongkhag Livestock sector.

Since the program is in the initial phase he earns a minimum of Nu. 800 to 2500 in a month from his services. With his improving skills, Kezang was able to convince farmers and deliver AI services. Out of the 72 cows inseminated, 10 progenies are born to date.

"CAIT will be the first stepping stone of privatizing RNR service delivery if services are privatized in near future"

Although the concept of CAIT is new to the community, Kezang was able to inseminate 72 cows within one year and six months (October 2020 to May 2021) after completing the train-

CAIT in Action



Case Story III:

An Enthusiastic Man Venturing into CAIT



his quality and timely services at reasonable fees. Despite the transportation challenges, Pema is determined to provide door-to-door services for the farmers at Nu.800 per cow. The charges vary from Nu. 1000 per cow to dairy farmers residing 8km away from his station to Nu. 1500 per cow residing more than 12 Km away.

Despite the challenges faced, Pema lives his wish to benefit dairy farmers and will continue to reach his services to the dairy farmers. Besides CAIT-CAHW, Pema is also a member of a dairy group, Norbugang Zambala Om Detshen. Together with his group, he works hard to enhance dairy products to achieve self-food-sufficiency and substitute dairy imports within the dzongkhag and beyond.

Pema believes in providing quality services and constantly makes sure his clients are satisfied with his service.

Pema Wangda going to dairy farms to deliver his service



Pema Wangda performing AI

Pema Wangda, 42, is one of the two CAIT-CAHW from Norbugang gewog (Block), Pemagatshel district who has received the training during the seventh batch of CAIT-CAHW training organized by the RLDC Kanglung. Since the training, Pema has been actively reaching out to the dairy farmers and has been assisting the gewog livestock officer with the services.

Prior to becoming the CAIT-CAHW, Pema worked as a driver to multiple agencies and later become a dairy farmer. With the increasing demand for AI services in the gewog, Pema saw an opportunity of earning through CAIT-CAHW and attended the training.

At present, Pema provides AI service to Gashari, Tselingzor,

Ngongshingborang and Norbugang under his gewog, and sometimes the service reaches out beyond the region such as Mongar and Trashigang. To date, he has performed more than 300 AI and 25 sex-sorted inseminations. He inseminates 15-20 cows every month on average, with a conception rate of almost 50 %. Although the success of the conception rates outweighs the failure rate, Pema feels that he can excel in these skills and increase the success of the progeny. Pema earns an income of Nu. 3000 to 4000 per month on average from his AI services.

Today, Pema is one of the trusted CAITs in the region for



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