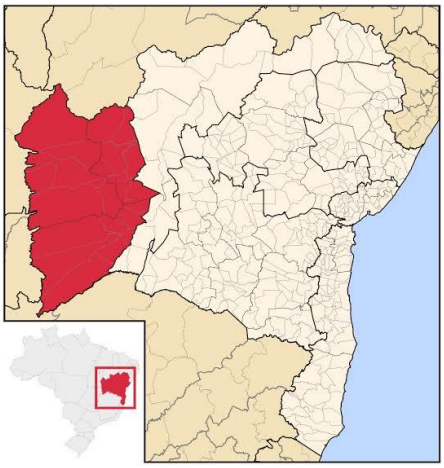
Bahia State University

NEPPA
Animal Science Research and Extension Center

Full Bucket

Embrapa

2007-2012



Area: Western Bahia (45,092 sq. miles)
Number of municipalities: 24
Number of producers beneficiated: 1,200
Partnership: City councils, Brazilian Research Corporation (Embrapa), Northeast Official Bank, Bahia Agricultural Development (EBDA), Private Companies.

Introduction

Brazil was the fourth largest milk producer in the world in 2018, with a production of 33.6 billion L (about 8.87 billion gallons), standing behind the USA with 96.4, India with 77.4, and China with 37.2 billion L.

The milk production chain is very important socially and economically for Brazil. Most of the millions of farms are small and owner by low income families. In addition, milk production has an important role in food security.

Milk production has been growing in Brazil (96% in the last 10 years). The main producing states are Minas Gerais, Paraná, Rio Grande do Sul, Goias, and São Paulo (i.e. responsible for 73.3% of all milk collected in Brazil in 2018).

Bahia is the seventh milk producer in Brazil, and the production is not enough to reach the State consumption, having to import about 1 billion litters per year. Western Bahia is known for the developed agriculture (soybean, corn, cotton, and other crops). All this Ag production generate thousands of tons of byproducts and residues that could foment milk production. In this context, normally milk production is performed in small farms. About 90% of the farms produce up to 100L (only less than 30 gallons) per day. Then, increasing the milk production has an enormous positive impact in the local economy.

Goals

- Elaborate a study about the dairy value chain in Western Bahia
- Getting funds for a Milk and Dairy Products Analysis (ANAMILK) to be installed at Bahia State University, Campus IX of Barreiras
- Conduct applied research focusing on milk quality and production systems in terms of the different technology levels
- Evaluate the production systems
- Propose the adoption of technologies
- Build a technology transfer net with many partners
- Install Demonstrative Units in different municipalities
- Foment foruns, discussions, events, technical trips, field days, short training
- Strength Ag technical assistance and improve the knowledge of extension agents in dairy cattle and milk production

Research:

Short courses

After seeing the results of Full Bucket Project (Embrapa), we brought it to the region and changed the region completely toward milk production as an interesting activity. The producers professionalized their activity with administrative and costs control, pastures and forage supply: demand concerns, improve cattle nutrition, animal welfare and health, reproductive management, installation, and milking hygiene.

The kickoff of Full Bucket in Barreiras in 2009 reunited 200 professional, that received an interactive CD-ROM as part of the training and, in a separated event, 800 producers. An agenda was elaborated in order to implement the project, including program presentation, technical trips to another state to see the results in person, choose the extension agents and producers to be demonstrative units, meetings with majors, small producers syndicates and confederations, and city council and other partners.

SEMINÁRIO LEITE OESTE – PROGRAMA BALDE CHEIO
Abril de 2009

Technical trips to other states to visit demonstrative units where full bucket were implemented

Implementation of Full Bucket in western Bahia

Field days cycle - Baianopolis

Field days cycle - Angical

Field days cycle – St. Rita de Cassia

Field days cycle – Sao Desiderio

Few examples of the program successes:

Valdeci, Wanderley, BA. Before.

After. from 0.5 to 4 cows per acre

Tonho do Coco, Baianopolis, BA. Before.

After. Incresed milk yield in 3x in one year.

Full bucket goals and main areas of work in a property:

Pasture intensification: pastures in our condition are the cheapest source of forage. Pasture fertilization, renovation and managed under rotational stocking with electric fences were implemented. When possible, irrigation was implemented increasing the milk yield and productivity.

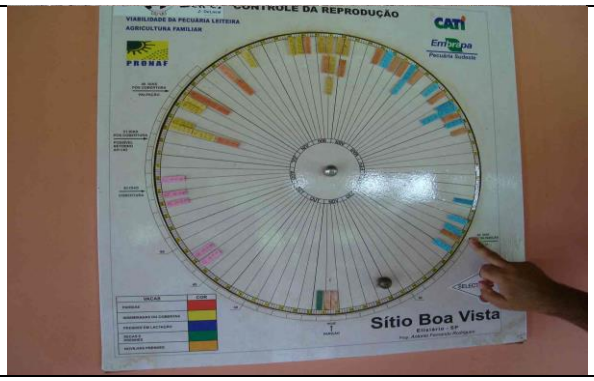
Panicum maximum cv. Mombaca pasture

Strategic forage reserves and forage conservation: each unit had its own solution, discussed between the coordination and the extension agent. Sugarcane, spineless cactus, cassava and other crops as strategic reserve plus silage and hay production as forage conservation techniques were applied. Everything professionally and with high productivity to reduce the unitary costs of forage and the daily cow cost.

Sugarcane: new varieties and growing practices

Animal welfare: distance of water source, shadows, distance for the milking parlor, human-animal interactions, how to deal with dairy cows (most of the producers managed like beef cattle), animal comfort, heat stress reduction.

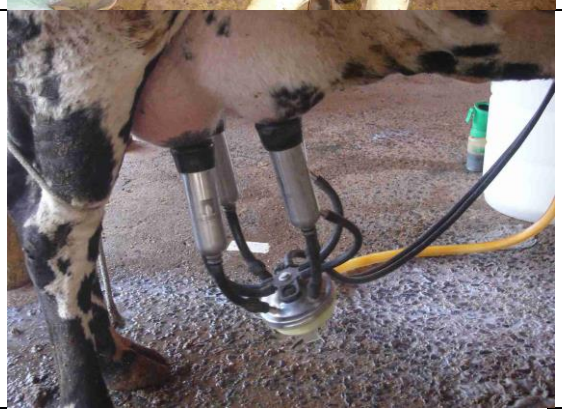
Reproductive management: with the control, the producers could manage calvings along the year and understand the importance of the herd composition (i.e. % lactating cows/total of cows). Using the reproductive board, they could have a snapshot of the opened cows, dry and lactating cows.



Genetic improvement: Always we got started with the current cows, characterized by low milk yield and persistence, but high rusticity. With the process, producers analyzed the data and selected the better cows, changed unproductive or low milk yield cows for better ones, bought better sires and introduced artificial insemination.

Animal health: Brucellosis and tuberculosis exams were required. Prophylactic procedures were adopted, including mandatory and optional vaccinations, umbilical cord treatment, and parasites control.

Milking management: many producers invested in milking machines, but all of them were taught basics of hygiene applied to milking cows and its impacts of milk quality and mastitis control.



Administration: Herd and cost control paper (for producers) and computer (for extension agents) spreadsheets. With the annotations, the producers could select the best cows, control herd practices, plan investments and calculate the economic benefits.

CONTROLE LEITEIRO ____/____/____

VACA		PRODUÇÃO (kg)			OBS
nº	nome	1ª ordenha	2ª ordenha	TOTAL	

In the media

https://www.youtube.com/watch?v=-LzYyr3mvw0&t=3s

https://www.youtube.com/watch?v=r0iu2BILjZg

https://www.youtube.com/watch?v=Jgggu2pAZhw&t=4s

https://www.youtube.com/watch?v=CnAoSqdJHSw

http://www.seagri.ba.gov.br/noticias/2009/04/01/semin%C3%A1rio-leite-oeste-come%C3%A7a-amanh%C3%A3-em-barreiras

https://saodesiderio.ba.gov.br/arquivo/LerArquivoSd.php?id=252

https://saodesiderio.ba.gov.br/arquivo/LerArquivoSd.php?id=327

https://cienciadoleite.com.br/noticia/124/producao-e-qualidade-do-leite-na-regiao-oeste-da-bahia

https://opresenterural.com.br/regiao-oeste-da-bahia-a-fronteira-agricola-da-bahia-porque-nao-pecuaria-tambem/