



Bahia State University



PROVICAPRI
Bahia Sheep and Goat
Production Program

2003-2018



Provicapri: Research and Extension Program

Statewide Program, but the focus was on the semiarid area (139,000 square miles), including 257 municipalities.

15,000 families attended

It joined forces with other State programs of small ruminant value chain development and programs of the Brazilian National Rural Learning Service/Brazilian National Agriculture Council. In addition, many other institutions, municipal councils, and private companies were partners of PROVICAPRI.

The northeast region of Brazil is marked by large semiarid area (i.e. 981,821 km²). Small ruminant production is one of the few economic activities suitable to the semiarid area. The northeast has 90% of the 10 million goats present in the country. Additionally, the Northeast has 11.6 million sheep (65%) that are frequently raised together with goats on the same farm.

However, often the owners, who are predominantly small-sized producers, have no knowledge of the particularities of each species and the techniques applied to herd management. Therefore, the mortality rates are high, while reproductive efficiency and growth performance are low. The challenges include: 1) feed scarcity; 2) sanitary challenges, mainly for gastrointestinal nematodes; and 3) low genetic potential of the animals; 4) few inspected slaughter plants and limited market for high-quality products. The lack of free technical assistance and training to small producers likely would keep the precarious situation steady.

Therefore, Provicapri was created and articulated with many participants in order to increase the sheep and goat productivity and improve the products quality. Primarily the effort was made toward meat sheep and goats.



Description:
 Comprehensive program including extension in the main areas of small ruminant production (genetics, feeding, reproduction, installations, health, market).

The program was released in 2003 during its first extension action, the 1st Beef Sheep and Goat Symposium of Western Bahia. Also, applied research in two major areas: feeding and health was conducted. Rapidly, the program was expanded to the semiarid area of the state, where most of the small ruminant are raised.

During its existence, PROVICAPRI, more than applied research, could training producers and extension agents, prepare written materials, spread proper technologies to improve the quality of life of thousands of small producers.

Research

- Interaction between type of grass and worm diseases in small ruminants
- Ammonization and fibrolytic enzymes on cotton gin trash



Research

- Pastures for goats and sheep production
- Trampling effects
- Pasture intake measurements
- Ruminal fluid studies
- Carcass evaluation
- Goat milk



Extension: taking the knowledge for those in need

Symposiums, field days, short courses





In order to be more efficient during the technical assistance, we created the Bode Movel (BulkGoatMobile), with the partnership with Sebrae and Brazil Bank Foundation.

Bode Movel is a mobile lab to make fast fecal egg count (FEC) to detect worm diseases, the most important health problem in the region, and also to support the genetic improvement program with estrus synchronization and artificial insemination services. All services were subsidized by the Government.



6,000 producers in a Workshop organized by Provicapri and the Government of Bahia, with the participation of many other institutions.

In this event, we unveiled “Bode Movel” and how the role of research-based technical assistance in developing sheep and goats value chain and the economic and social benefits. development.

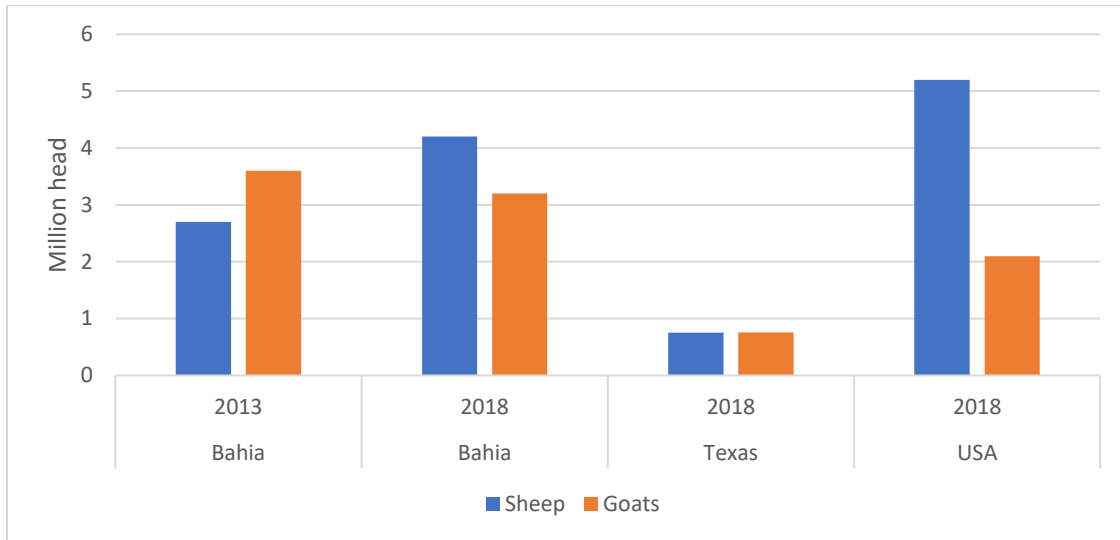


Figure 1: Sheep and goat herd in Bahia (2013 and 2018) in comparison with USA and Texas.

There was a reduction in the goat herd, but increased performance and carcasses quality. Goat and sheep are sold for the same price and in many places are sold and consumed undifferentiated. Therefore, due to the lower fence costs and better growth performance of meat sheep in improved production systems, our producers switched to or increased sheep herd in quantity (+31%) and quality, even Bahia had two historical consecutive droughts in the last 15 year period. Compared to USA, where Texas is the largest sheep and goat producer, Bahia has 52% more goats (421% more than TX) and 23% less sheep than the entire America (560% more than TX).

Provicapri was the main responsible for the improvement in the sheep and goat value chain. The main achievements were:

- Increase in feed supply and nutrition practices: Rangelands were improved with management techniques increasing the carrying capacity in 47% with no or very low costs. Buffelgrass and other drought resistance grasses areas were expanded. All the producers had demand:supply calculations and received spineless cactus springs to plant a forage reserve area. Other crops were introduced, and techniques of forage conservation were used. Mineralization with proper products were introduced and during the dry season, low-cost multiple mixtures were prepared on farms.

- Improved genetics: New breeds introduction (Kalahari, Savanna) and increase in meat goat (Boer) and sheep (Dorper) breeds. Selection of sires using progeny tests. Introduction of herd control spreadsheets to select dams and ewes, rams and bulks.
- Feedlot: There were a strong move toward simple low-scale drylots. There were a impressive reduction of harvesting time, performance and carcass quality.
- Worm monitoring and strategic control: with the Bodemovel (Bulkmobile) and thousands of FEC and epidemiological studies, we could stablish strategic shots and detect the efficacy of the anthelmintics improving the prevention and treatment of worm diseases.
- Health management: worms are the worst health problems, but other diseases were tackled with preventive practices, vaccination, exams, monitoring and treatment: clostridium, footrot, caseous lymphadenitis, soremouth, pinkeye.
- Adaptation of installations: Traditional management pens and fences were redesigned taking advantage of low-cost available material and respecting animal welfare and human safety.
- Reproductive management: our breeds are continuous poli-estrus. So, with an adequate nutritional program, strategic two-months breeding seasons were stablished to result in three parturitions in two years. Moreover, some producers adopted flushing, increasing the prolificacy.
- Costs control: Provicapri focused also on introducing business administration basics in these kinds of small businesses, in which there is very limited formal education of many of our attendees. All expenses (for investments or maintenance) and revenues were controlled by simple paper spreadsheets. The extension agent helped them to keep the papers in order and the technician was responsible for input the data on a proper spreadsheet in Excel. Along the project, we got support from our main partner (National Ag Learning Service) for building a software.
- Increase of the number of inspected slaughter plants: informal slaughter is a major problem in our region. As our focus was on high-quality safe products, we worked with the government, private companies and entrepreneurs and financial banks to stimulate meat processing plants and give them support in the business plans, products development, and market opening. We increased from 3 to 9 plants, there were integrated with Provicapri.

Provicapri in the media

<https://www.youtube.com/watch?v=ee035jo1Jil>



<http://atividaderural.com.br/artigos/4f7b542bdccfc.pdf>

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