Bahia State University

NEPPA
Animal Science Research and Extension Center

Program RenewBahia

Renewable Energy in Agriculture

2003-2018

Research and Extension

Statewide Program.

The program started with a partnership with Bahia Agricultural Development Company Inc., Winrock International (non-profit organization) funded by the Brazilian National Council for Scientific and Technological and USAID to install and evaluate low-tech anaerobic digesters for small farmers.

With the positive technical, economic, environmental, and social results, Renew Bahia was forged to become a frame for public policies to use low-cost digesters to reduce wood utilization and energy exclusion, and promote social development in the rural areas.

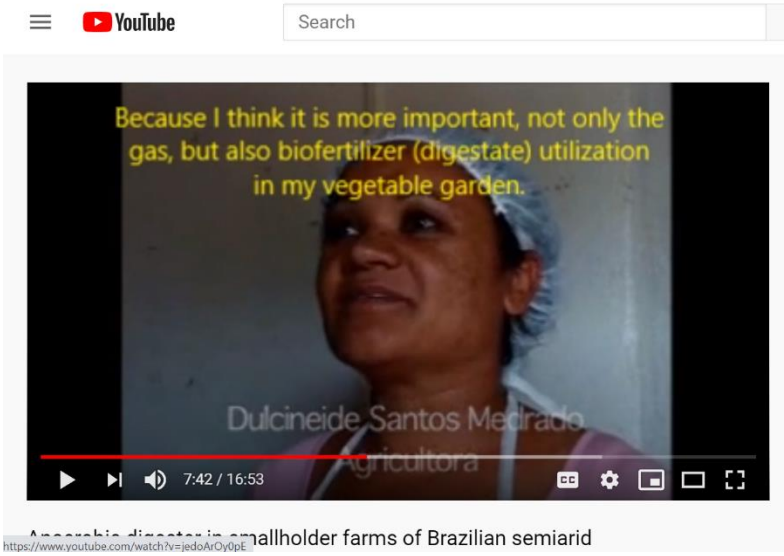
Goals:

- Research and technology development
- Divulgate the digester for sustainable agriculture
- Promote technology development in this area
- Reduce wood consumption in rural areas
- Preserve vegetation
- Reduce energy exclusion
- Use the energy for domestic and production uses
- Use the biofertilizer to produce food to increase food security in low-income rural communities and generate extra-income
- Transform traditional products of small-holder farms into commercial longer shelf-life products adding value
- Stimulate associativity and cooperativity
- Organize events (meetings, seminars, workshops, expos)
- Prepare a hand-book and other publications for Ag professionals and producers
- Training extension agents and producers
- Work with public and private banks institutions in order to replicate the technology
- Replicate digester as economic and social development tool

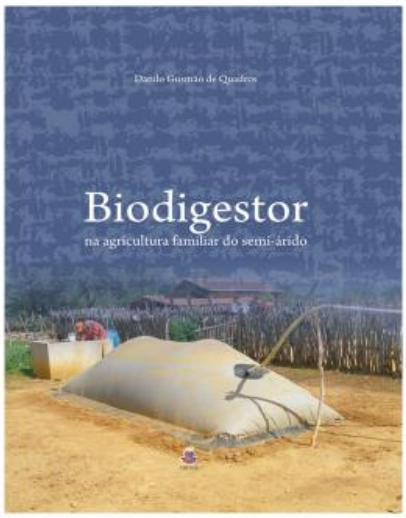
Our team was pioneer in this area and responsible for developing the technology for using sheep and goat manure for low-tech digester to produce biogas and biofertilizer. The results speak for themselves. The comparison of neighbors, one without the digester and another one with the digester, proved the digester as a valuable tool for sustainable agriculture, hunger

combat, energy generation and economic benefits. See the documentary “Anaerobic digester smallholder farms of Brazilian semiarid” for more details (subtitles in English):

https://www.youtube.com/watch?v=MCvHN2_S_4w



Many strategies were used to divulgate the technology. The success of Renew Bahia was much more than the initial expectations.



Biodigestão anaeróbia de dejetos de caprinos e ovinos em reator contínuo de PVC flexível[1]

Danilo G. de Quadros[2], André de P. M. Oliver[3], Ueliton Regis[4], Renata Valladares[3], Pedro H. F. de Souza[4] & Edivaldo de J. Ferreira[2]

ANALISE ECONÔMICA DO BIODIGESTOR PARA APROVEITAMENTO DOS DEJETOS DA CAPRINOCULTURA NA AGRICULTURA FAMILIAR NORDESTINA[1]

Danilo Guzmão de Quadros[2], André de Paula Moniz Oliver[3], Ueliton Regis[4] & Renata Valladares[3]

The huge repercussion attracted the attention of people and institutions from other States. Many projects were developed using Renew Bahia Program expertise all over the country.

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Bioenergy area was expanded internationally with interactions with USA, Germany, Austria and UK institutions.

After many years working with biomass, Renew Bahia expanded to a mix of renewable energy sources (e.g. solar, wind, hydropower) and the Center of Renewable Energy in Agriculture (https://www.facebook.com/cenerauneb/) was created to amplify the research and extension in all renewables, mainly with the focus on agriculture and the benefits for rural communities.

Renew Bahia in the media

https://www.youtube.com/watch?v=APVD4G_rxlk

https://www.youtube.com/watch?v=lUnxnDS1QK0

https://www.youtube.com/watch?v=j0x2Gk9wlQI

http://www.seagri.ba.gov.br/noticias/2006/12/18/biodigestor-elimina-dejetos-animais-e-produz-energia-no-semi-%C3%A1rido-baiano-tarde

https://webjornalunesp.wordpress.com/2014/09/19/biodigestores-transformando-residuos-em-algo-lucrativo-e-vantajoso/

https://docplayer.com.br/3948560-Manual-de-treinamento-em-biodigestao.html

http://www.bahia.ba.gov.br/2007/09/noticias/governo/energias-renovaveis-serao-discutidas-em-encontro-no-museu-de-ciencia-e-tecnologia/