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## **SUSTAINABLE FLOUR HOUSE: A NEW CONCEPT ON CASSAVA PROCESSING**

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Manipug

Stic sewer



2. Participative

elaboration

### **Statement of the problem**

There are around **775** traditional flour houses (*Fig.1*) only in Alcobaça county-Bahia-Brazil According to IBGE\*, 2017 \*Brazilian Institute of Geography and Statistics

## Methodological approach

**Research question:** How to adequate clandestine Flour Houses to current polices to avoid its destruction and turn it viable and sustainable for smallholders?



Public inquiry of the state prosecution





## Hygienic-sanitary issues

## Unregulated flour house

## Low quality products

Unfair trade

25x more pollutant Toxic liquid residue Contaminant agent;

Indiscriminatly discarded (*Fig. 2*);

Poisoning soil, water, people and livestock.



**3. A Model Flour House** assemblage

#### **BEFORE**

#### **AFTER**







- 63% made by family work
- 86% produces around 28 sack of flour per week
- 1/kg<sup>-1</sup> of produced flour generates 1/L<sup>-1</sup> of *Manipueira*

RESULTS

5.800 liters of *Manipueira* per month

#### **Sustainable Flour House concept**

- Residue management
- Hygienic-sanitary facilities (*Fig. 3*)
- Improved workflow

#### **Center of reference for Mandiocultura**

- **Manipueira** storage for multi-purposes (*Fig. 4*)
- Agroforest system
- Evapotranspiration basin
- Rainwater cistern
- Separate clean and dirty workflows layout
- **Rentable** destination of organic residue (peelings, stems and leaves)

# FARINHEIRA SUSTENTÁVEL





Flour House adequated for Hygienic-sanitary and enviromental friendly technologies.

#### **Partnership for flour houses sustainability**

- Authorities endorsement (State prosecution; Surveillance Agency)
- Financial contribution by the local industry
- Banking credit availability for flour houses owners
- Creation of a network for Cassava grown and processing
- Revenue diversification for farmers
- Fair trade promotion— proper packaging and trademark
- **228** trained persons (women, men and young)
- 5 completely adequated flour houses (*Fig. 5*)
- Sustainable flour house- attested as social technology (*Fig.* 6)

## Conclusion

The results promoted rural development by optimizing the cassava processing, creating Jobs and **diversifying income**;

Cooperation to support the **financial conditions** for the smallholders to adequate their flour houses avoided the farmers to lose their properties due to the public inquiry;

The center of reference allowed the proper packaging, the achievement of the **formal trade chain** and young people engagement;

The *manipueira* has a rentable destination as fertilizer, pesticide, livestock feed or it is used as feedstock for soap manifacturing. Research is undergoing;

The **cassava value-chain** can be improved for sustainable rural development and change the reality of the South of Bahia State.





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"Filling gaps and removing traps for sustainable resources development"