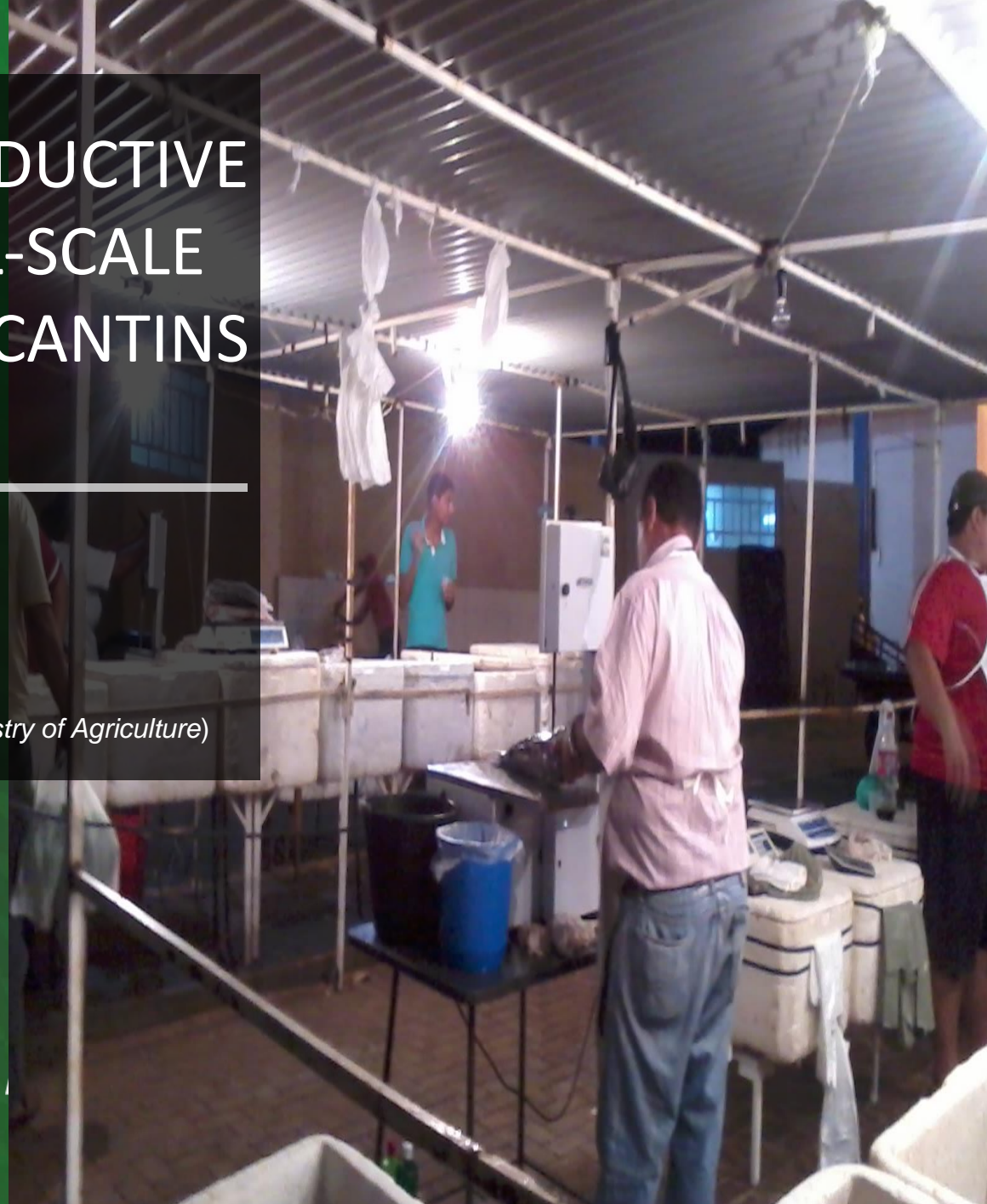


STRATEGIES FOR PRODUCTIVE INCLUSION OF SMALL-SCALE FISH FARMERS OF TOCANTINS STATE

by Renata Barroso

Embrapa Fisheries and Aquaculture
(*Brazilian Agricultural Research Corporation / Ministry of Agriculture*)



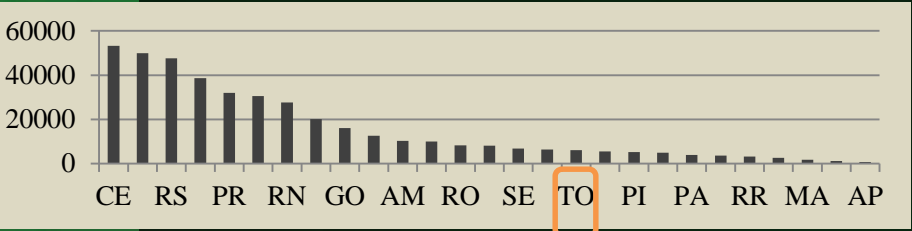
Context

- Potentiality + Governmental programs
- Opportunity for big entrepreneur but also small-scale fish farmers
 - Small-scale fish farms = 82% of 18.075 aquaculture (share 39,5% fish production)
 - Impacts on local economy, food security and environment
- Evolution of the retail channels
 - Small-scale fish farmers supplying traditional retail channels
 - Supermarket increased role on fish market
 - Saturation of the local market : Increase of sales of the large fish farmers



A few explored potential

Brazilian aquaculture production by state (2009, in ton)



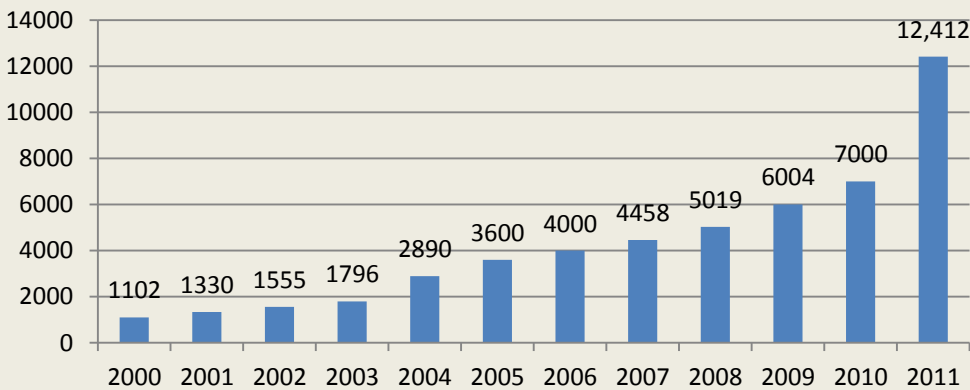
Source: MPA.

1,44% of national production



- Increase of 833% between 2000 to 2011

Fish production in Tocantins



Diversified business

- Heterogeneity in terms of fish farm profile:
 - About 1.000 fish farms → most smallholders



Small-scale fish farms

Water surface area : 0,1 ha

- ✓ *Strongly based on economies of scope*
- ✓ *Changing profile - from subsistence to market oriented*

Large fish farms

Water surface area: 1.000 ha



Main species produced in Tocantins



Tambaqui – *Colossoma macropomum*
(± 50%)



Surubim (and hybrids)



Caranha - *Piaractus brachypomus*



Hybrid: Tambaqui x Caranha



Piau – *Leporinus macrocephalus*



Matrinxã - *Brycon gouldingi*

75% C
MA
Same product
No Diversification
Price Competition

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Reduction of traditional seafood
retail channels

Market exclusion of small-scale fish farmers

Difficulty to achieve supermarkets
requirements

Competition with large fish farms

- Scale, regularity and quality
- Complexity due to high perishability



WHY SMALL-SCALE FARMERS ARE MORE AFFECTED

- More sensible to value-chain bottlenecks
 - Difficulty to produce with competitive costs
 - No bargain with feed sellers
 - Cannot afford technical assistance
 - Struggle to fulfill sanitary law - Absence of public or collective fish processing plants
 - Compulsory certifications:
 - To produce: Environmental allowance (fish farm)
 - To trade fish: Sanitary Inspection (Fish plant)

COMPLEX TO GET



Which paths to take to ensure sustainability of the small-scale fish farms?

What to do?

- Insertion in Brazilian governmental programs of food acquisition
- Adding value / processing
- Social seal “Small-scale fish origin”
- Short market channels / Valorization of Traditional Markets

How to do?

- Through producers organization (PO)
 - Association ?
 - Cooperative ?
 - Which cooperative?



The case of the fish farming cooperatives in the Tocantins state

Failure of the all 3 cooperatives of small-scale fish farming

- Top-down initiatives from federal and state government;
- Producers didn't participate in the decisions concerning processing plant construction or organizational model;
- Problems: governance of the cooperative, logistics of the processing plant, financing, etc.



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Research problem

What are the determinants of the successful organizational models of PO for Brazilian small-scale fish farming?

Case Studies on Market Access

Different ways small-scale farmers found to “survive” and compete



METHODS

- ✓ Exploratory and qualitative research;
- ✓ Selection of successful PO's in small-scale fish farming;
- ✓ Analyze of determinants of the success and their applicability in others regions of Brazil;
- ✓ 6 PO's (in 4 different regions) were interviewed.



CASE 1 - “Project of Incubation of PO in Pernambuco State” since 2002

Strategy – Innovative Producers’ Organization Model

- Lead by a priest and supported by catholic church
- Generate income for young people living in the hydroelectric reservoir area;
- Colective Tilapia Aquaculture
- Current income of each associate is US\$ 700 to 1.500/month
 - ✓ *Brazilian minimum wage = US\$ 306/month*
 - ✓ *Average per capita income in the region = US\$ 228/month*
- No leader = duty rotation
- Fixed number of 12 members
- Each association has 65 cages (12m³)
- Yield ≈ 15 Ton/monthly/association (135 tonnes total)
6 – 8 month / 1,2 kg



Learning with experience
Rigorous internal rule

pa

- ✓ All associates realize all tasks (i.e. handling of cages, accounting, sales, supply management);
- ✓ All decisions are taken by the group
- ✓ Handling 24h per day – 4 associates/day





1 meeting per day, at the moment of shift of the workers on duty



1 meeting/week with the 12 members



1 meeting every 2 weeks with all 9 POs

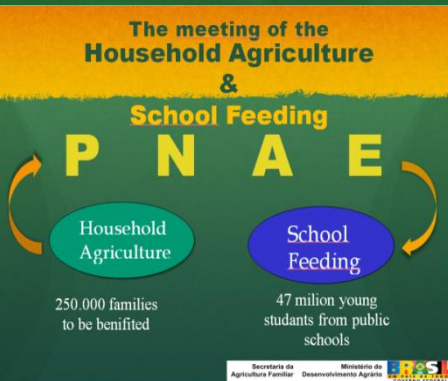


National School Nutrition Program

US\$ 1.5 billion in 2010

All types of food from household agriculture

20.000 tonnes of fish purchased in 2012



CASE 2 – Capixaba Aquaculture Association

since 2005

Strategy – Adding value + Governmental Program

rural producers / rural association

Accessed public program to build structures:

- Fish processing plan
- truck

72 associated - Family labour

23 employees in the fish processing plant

Production = 251 ton/year

70% of the production is sold to the National School Nutrition Program

Learning with experience
Rigorous internal rules



Main rules

- To provide high quality fish (no off-flavour, no disease, no damage allowed)
- Minimum size of 700g
- 80% of each associate production must go to ACA



CASE 3 – Fisherman Association of Serra

Strategy SHORT CHANNEL MARKET

Former fisherman

Former Association of fisherman

Accessed public program to build structures

- 50 cages 12m3

- fishmong

- restaurant

Fixed number of 30 associated

Tilápia's fair

70% is sold at their structure (restaurant + fishmong)

30% direct sale

Meeting once a week

Learning with experience

Rigorous internal law



Main rules

- No absence allowed:
 - US\$40 fee for each non-worked day
 - US\$20 fee for each missed meeting
- 25% saving fund
- same income for every member (average US\$500)
- One out – one in (3 month experience)

Conclusion

Determinants of the success:

- ✓ Participatory feature;
- ✓ Incubation process (**Learning with experience**);
- ✓ High self-control by associates (**Rigorous internal law**);
- ✓ Defining the working group – not everyone has the same profile/skills





OBRIGADA!!!

Renata Melon Barroso, PhD

Embrapa Fisheries and Aquaculture / Brazilian Agricultural Research Corporation

skype: cnpasa.renata

Email: renata.barroso@embrapa.br

Phone: +55 (63) 3229-7800 e 3229-7850 **Mobile:** +55 (63) 8464-8416

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