

# Certification and Standards

# National standards

- TCN 167 : 2001 Cá nước ngọt - Cá bố mẹ các loài: Tai tượng, Tra và Ba sa - Yêu cầu kỹ thuật (broodstock)
- TCN 168 : 2001 Cá nước ngọt - Cá bột các loài: Tai tượng, Tra và Ba sa - Yêu cầu kỹ thuật (larvae)
- TCN 169 : 2001 Cá nước ngọt - Cá hương các loài: Tai tượng, Tra và Ba sa - Yêu cầu kỹ thuật (fry)
- TCN 212:2004: Quy trình kỹ thuật sản xuất giống cá Ba sa
- 28 TCN 213:2004: Quy trình kỹ thuật nuôi thâm canh cá Tra
- 28 Tcn 173 : 2001 Trung tâm giống thuỷ sản cấp I - Yêu cầu chung (hatchery facilities)

# Quality Standards

## Larvae

- Behaviour
- Appearance colour
- Size – length and weight
- Health

- Fry
- Behaviour
- Appearance colour
- Size – length and weight
- health

# Quality Standards

Private and Government hatcheries

No checks

No certification of production

Any movement should have health certificate

# Health certificate for movement

For every batch from the hatchery (but implementation not strict)

- Quantity
- Size
- Behaviour
- Parasite check
- Bacteria check by clinical sign
- Producer send sample for analysis to regional institute/university

# Certification of hatchery

- SQF 1000 annual certification
- GAP food safety of fry going to farm
- Incoming and Effluent standards
- Professional certified check

- Applied in shrimp hatchery but not yet in freshwater

# GAP

- Starting to be implemented in freshwater hatcheries (catfish first)
- Biosecurity - hygiene
- Inlet outlet quality control
- Standardised production protocol
- Identify the critical hazzards
- Disease checks
- Fish resistance

# Better management Practices

- None

# Disease

## Broodstock

- Record activity
- Input output control for disease
- Supplier quality certification GMP and ISO
- Broodstock disease checks
  - Certification, history, performance
  - Virus no problem
  - Parasite not vertical transmission

# Disease - General prevention only

## Eggs

- Chlorinated water for incubation (at high risk time)
- Disinfecting by washing only
- Temperature control
- Water quality control (filtering, Aeration)
- No disease testing

## Hatched larvae (for sale)

- Disease inspection (Authorities)

## Fry (for sale)

Disease inspection (Authorities)

# Disease

- Opportunistic disease only - difficult to prevent
- Treat if disease occurs only

## Shrimp

- Disease checking and monitoring much more sophisticated for shrimp
- Disease checks at hatchery after shipment

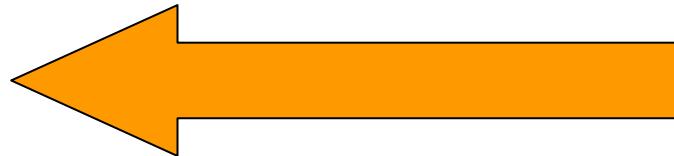
# Traceability

- Production trace
- Broodstock tags
- Traced to Groups of broodstock
- Broodstock records
- Only give info if asked (farmers increasingly asking if for esp. export)

# Environmental monitoring



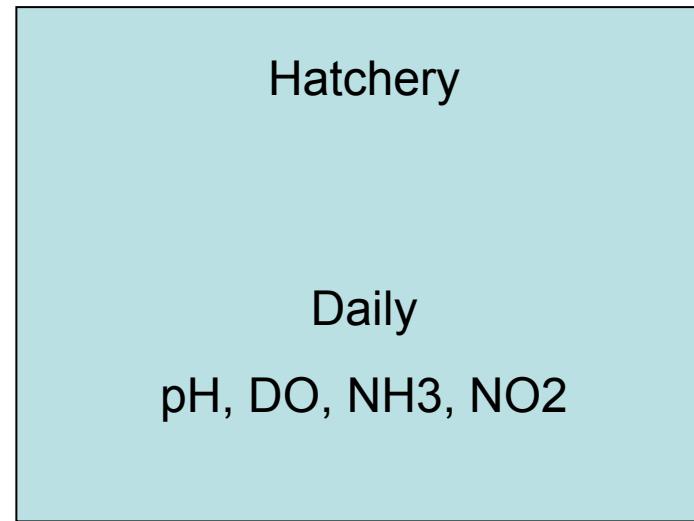
Weekly pH, DO, NH<sub>3</sub>, NO<sub>2</sub>



Daily, Weekly, Monthly

Turbidity, NH<sub>3</sub>, NO<sub>2</sub>

To National standards but  
no check



Daily

pH, DO, NH<sub>3</sub>, NO<sub>2</sub>

# Food safety

- Only grow out
  - Antibiotic
  - Chemical
  - Microbio stds
  - hormone

# Health certificate for export

- No health certification required
- USA
  - Inspection of production facilities by US officials, broodstock, viral disease, disease control, treatments, feed source, feeding, certifying for export, professional suppliers
  - quarantine, then monthly checks for 3 months if problem then cannot import from same exporter