

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 thủy 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 hazards
- 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

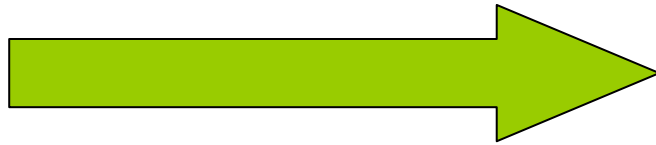
Shrimp

- 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



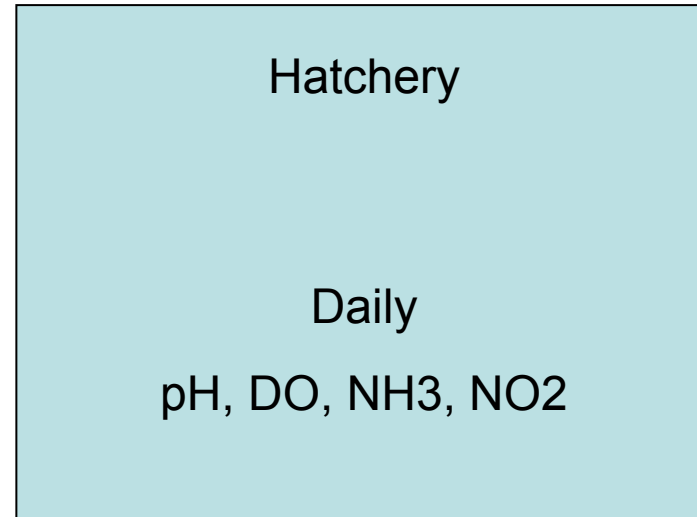
Weekly pH, DO, NH₃, NO₂



Daily, Weekly, Monthly

Turbidity, NH₃, NO₂

To National standards but
no check



Hatchery

Daily

pH, DO, NH₃, NO₂

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