CATFISH PRODUCTION IN THE MEKONG DELTA

Vuong Hoc Vinh, Fishery Department
Vo-Tong Xuan, Rector
Angiang University
Village of floating cage culture in Chau Doc
Two main species of catfish being cultured in the Mekong Delta of Vietnam

Pangasius bocourti – Cá ba sa

Pangasianodon hypophthalmus - Cá tra
The Mekong River system

- Rich in fishery resources
- In the Vietnamese part, particularly rich is the catfishes
  - *Pangasius bocourti*
  - *Pangasianodon hypophthalmus* (sole)
Parent catfish
Production of fingerlings

1. Gathering wild fry in the Mekong river
   - Using fine bag nets, in areas just below the Tonle Sap lake.
   - Hatching
Bag nets (đái) for catching wild fry of catfish flowing from the Tonle Sap river.
Bagnet or dai for catching catfish fry in Cambodia and Vietnam

A catch of catfish wild fry
Production of fingerlings

2. Artificial breeding

- Maintaining parent stock
- Checking for egg maturity
- Injection of hormone
- Obtaining male semen
- Extruding eggs from female fish
Catching parent catfish
Inspection for egg maturity (spawning readiness)
Ovary - Inspection for egg uniformity
Injection of hormone
Stripping sperms from male parent
Cryo-preservation of fish semens in liquid nitrogen
Stripping female eggs
Fertilizing the eggs
Incubating in (left to right, top down) water hyacinth roots, nylon net in circulating tank, and in aquarium.
Incubating eggs in weiss (Zuger) jars
Bagging newly hatched fingerlings.
Transport newly hatched fingerlings
Catfish fingerlings ready to be seeded to production facilities
Production of catfish

• Natural catches
  – Along river courses

• Culture
  – In-land ponds
  – River-shore netting
  – Floating cages
Capture fisheries
(Bassac case study)

- **Labor force:**
  - 11,930 persons, 2056 full time and 9874 part time.

- **Fishing gears:**
  - 9216 units & 7 groups (Fyke net, Trawl net, Gill net, Purseine, Cast net, Lift net, Lines).

- **Production:**
  - 8849.6 Tons
  - Average production: 485-1238 kg/man/yr
  - Ave. harvest in depression areas: 68 kg/ha/yr
In-land Pond Production

- Pond construction
- Seeding
- Feeding
  - + commercial feed
  - + homemade feed
- Harvesting
Harvesting from a pond
River-shore Netting Production

- Site selection
- Site construction
  + dredging of netting area
  + fencing with bamboo stakes and wire mesh and net
- Seeding
- Feeding
  + commercial feed
  + homemade feed
- Harvesting
Địa chỉ: 7/39 Quốc lộ 1A, Xã Bình Hưng Hòa, Huyện Bình Chánh, TPHCM
Diễn thoại: (08) 8755025 - (08) 7501700 Fax: (08) 8755379
Floating Cage Production

• Site selection
  considering the appropriate river flow
• Cage construction
  size: usually 10 x 20 x 5 m
  bottom: cage combines with floats
  top: normal house plus feed production compartment
• Seeding fingerlings
• Feeding
  +commercial feed
  +home-made feed
• Harvesting
Cage culture

• Cage culture of river catfish (*Pangasius bocourti*, *Pangasianodon hypophthalmus*) mainly practised in Dong Thap and An Giang.

• Fingerlings: from hatcheries.

• Stocking densities: 100-200 fish/m^3
Cage culture (cont.)

- Composed Feeds: rice bran, fish meal, trash fish, vegetable meal, dry fish, vitamins, premix.
- The yield/yr: Small cage (5x12x4m) = 30 tons; medium cage (7x17x4m) = 50-60 tons; big cage (9x23x4.5m) = 100-120 tons; very big cage (11x27x5m) = 150-200 tons.
- An Giang province in 2003: 3,500 cages and 35,000 tons of fish.
Site selection
considering the appropriate river flow
Cage construction

Size:
usually 10x20x5 m

Bottom: fish cage combines with floats

Top: normal house and feed production compartment
Using motorized propellers to create flow when needed
Catfish fingerlings ready to be stocked into floating cage.
Commercial feed – in pellet form becoming popular.
Traditional feeding by home-made feed: each cage has its own feed boiler.
Cooking feed in boiler
Cooling sticky feed by forming balls before pelleting.
Feed preparation compartment – for multiple cages feeding
Feeding in pellet form produced by extruding machine
Catfish fighting for feed
Harvesting mature catfish
Pangasius bocourti (Ba sa)
**Bottomless boat** to transport live fish to processing plant
Processing of catfish - fish filets (1)
Processing of catfish - fish filets (2)
Fresh cuts

Filets
Dry catfish
Catfish sausage & dried shrimps
Đặc sản Châu Đốc

Thành phần: Cá tươi, muối.

Cách sử dụng: Chiên hoặc nướng

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Trường Hải

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