

Involvement of Fisherwomen in Ornamental Fish Farming Activities in Chitwan Valley, Nepal

This project is the outcome of a group efforts to whom credit and technical responsibility goes. This project is based on an assignment which was given to course participants and supervised by Dr. Abdel Rahman El Gamal as a part of "Fish Culture Development Training course". This annual course is organized by the Egyptian International Centre for Agriculture - Egypt (EICA). The names & group picture of the team members who developed this project as well as their countries is shown in the following slide

2007

Our team



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Introduction

- Few years ago ornamental fish keeping was a hobby rather than a business.
- Now a days millions of dollars are mobilized.
- Recently the size of world trade is estimated at USD\$ 2.2B (90% of which is tropical fish)
- World import and export valued USD 250M &176M respectively.

Introduction

- **Aquarium fish keeping helps**
 - **Keeping homely environment.**
 - Makes people happy and relax.
 - Reduce mental sickness, heart pressure.
 - **Generate income and employment.**
 - **Reduce poverty.**
 - **Conserve local valuable fish species.**

Justification

On the basis of socio economic survey:

- Urbanization is taking place
- Intensification of aquaculture were found geared up.
- High value fish species were given emphasis.
- Aquarium fish breeders have increased to match in the increase of aquarium keepers while nursery keepers are limited.
- Koi carp and Gold fish were most demanded species.
- Local government places an emphasis on the conservation of natural water bodies and illegal fishing has been totally forbidden.



Justification continues ...

- Fishermen were migrating towards the cities looking for jobs and women were found jobless, their children's facing severe malnutrition.
- Water bodies with spring water of the surrounding were found unused.
- Dialogue with women groups, facilitated them to speak for ornamental nursery keepers.
- They immediately accepted new ideas, so we finalized the project.

Objective of the project

- The main objective of the project is to increase income level of women fishers through ornamental fish seed production program.
- Specific objectives
 - To produce 140000 fingerlings of Koi carp
 - To produce 160000 fingerlings of Gold fish

Conceptual frame -work

- Ornamental fish seed owners
- Fish seed production [▲]
- Buying by nursery owners
- Growing fish seeds for about one to two months
- Selling the fry of ornamental fish
- Making money
- Raising the income
- Improve livelihood
- Improving living standard

Funding of the project

- Project needs USD 4300 as capital and operating costs.
- Local government support 60 % (USD 2600)
- Rest USD 1700
 - 50% from Bank
 - Rest 50 % from group as a labor cost

Budget of the project

A) Capital cost USD

Pond construction 2000

- Working place 50
- Electrical device 100
- Mug, bucket, hapas, nets etc 100

Sub total 2250

B) Operating cost

- Hatchlings 500
- Plankton feed 250
- Supplemental feed 450

Budget continues ...

	USD
• Electricity cost	50
• Plastic bag/ oxygen	500
• Interest (on bank loan)	50
• Miscellaneous	250
• Subtotal	2050
• Total cost (FC*+VC)	4300

FC = fixed costs; VC = variable costs

Calendar of operation

Activities	J	F	M	A	M	J	J	A	S	O	N	D
Pond construction	Light Green											Light Green
Pond preparation		Dark Blue										
Stocking			Teal									
Feeding			Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue	Light Blue		
Water quality management		Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	Light Green	
Record keeping				Teal		Teal		Teal		Teal		
Harvest/ Sale				Dark Blue		Dark Blue		Dark Blue		Dark Blue	Dark Blue	

Project details



- **Location:** The Chitwan valley, Nepal
- **Region:** sub tropical
- **Soil condition:** Loamy
- **Land slope:** Gentle
- **Temperature:** 22 -32 degree Celsius
- **Water source:** Spring with gravity follow
- **Type of project:** Production oriented

Project details cont.....

Beneficiaries

- Category of beneficiaries: Women fishers
- Direct beneficiaries: 20
- Indirect: 500

Physical characteristics (water quality)

- PH: 6.5 -8.5
- DO: 4 mg -8mg/L
- Alkalinity ; 50-150 mg/L
- Water free from Iron and Chlorine

Target clients: Aquaria keepers, Hotels, clubs, etc

Culture details

- **Type of fish species:** Gold fish & Koi carp
- **Type of culture unit:** Cement ponds
- **Number of ponds:** 20
- **Size:** 6 M * 3 M
- **Depth:** 1 M
- **Stocking density:** 300 larvae / M³
- **Production cycle:** five to six
- **Production period:** one and half months

Production details cont...

- **Feeding**

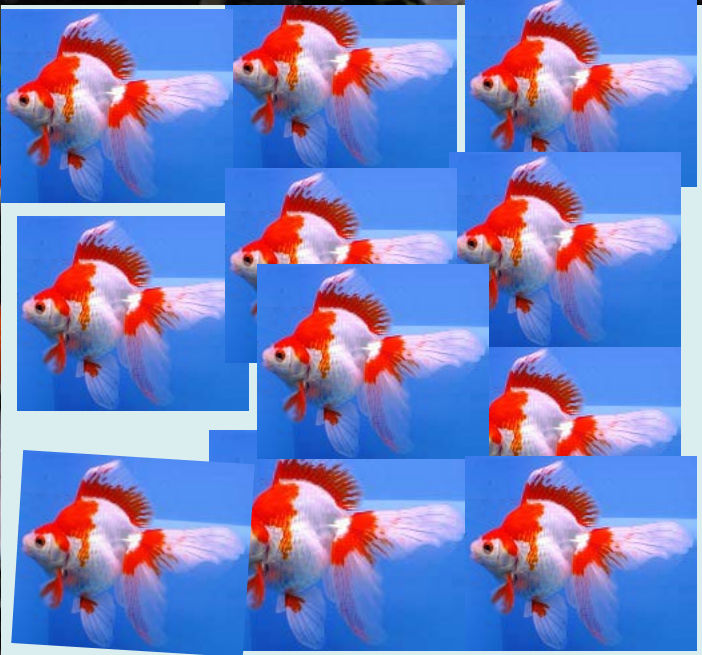
- 50 % feed naturally collected zooplankton
- Rest formulated pelleted feed (25%) protein
- Feeding frequency: 5 – 6 times daily
- Feeding amount: 10 % of Body weight
- Growth sampling: 15 days interval
- Water quality check up: Regular
- Disease check up: As required

Project details continue ...

- Labor force as needed will be made available by the group themselves.
- Record keeping: Each and every activities will be recorded for economic analysis.
- Technical support & services will be made available from Fisheries Development Center.

Output of the project

- The project aims to produce 300000 fingerlings of Koi carp and Gold fish.
- They will be produced in five production cycles.
- Produced fingerlings will be marketed by the women group with the assistance of Fisheries Development Center and Aquaculture Extension technician.



Project economics

Based upon:

- Survival rate 60%
- Cycles of production 5 cycles/year

Production estimates:

- Total fry production 3000000 fry
- Sell: 1000 fry/USD 17
- Total earning from fry USD 5000
- Total cost incurred (FC+VC) USD 4300
- Net benefit from 5 production cycles = USD 700

Sustainability of the project

- This is need based project.
- It is demand driven, self-initiated and self motivated.
- It is technically feasible, economically viable and socially acceptable.
- So, we expect this a viable project can sustain with out the support of government in the long run.

Environmental issues of the project

- This is an environmentally friendly project.
- Given an opportunity to the poor fisher- women community, will automatically reduce the fishing pressure in the surroundings.
- Project is using naturally collected feed from the natural water bodies, that will keep the water bodies cleaner.

Project associated risks

- The project is fully dependent on the hatchlings supplied by hatchery owners. Any failure in the production of hatchlings due to natural calamities i.e. drought, disease outbreaks may affect the output of the project.

Evaluation & dissemination of project outcomes

Evaluation of the project outcomes

- The data obtained will be recorded , tabulated and thoroughly analyzed by the fisheries specialists and future strategies will be developed based on the project outcomes.

Dissemination of project concept

- The outcomes of the project will be publicized by the through various means such as radio, FM, TV, newsletters, as well through progress report.

Thanks

