



S P E E D

Support for Private Enterprise Expansion & Development

Fish Farming Report

Submitted by:

Chemonics International Inc.

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Recommended actions:

1. Sagana Fish Farm Study Tour (located 105 km from Nairobi)

Justification: several people said they wanted to see the new ponds constructed at the farm, view harvest basins and examine the various options for construction. They will probably go themselves any way but it would be better to group the visitors and assure proper instruction and backstopping. This is not a commercial farm but the research section does have a commercial outlook.

What the visitors should see:

Standpipes in ponds with anti-seep collars

Harvest basins for tilapia fry production

Sex-reversal happas

Holding tanks with standpipes

Knife gate valves

Sluice gates

Water intake structures

Filter socks

Pond liners

Some design mistakes such as outside standpipes, old monks, misplaced canals.

Guides for the visit:

Host: Mr J. Kinyanjui, head of station, Betheul Omolo Kenya Fisheries Dept.

Main advisors: Dr Charles Ngugi, Moi University

Mr William Kiama, director of African Bulldozers

Facilitator:

Nellie Isyagi, Kajjansi Fish Station: knows many of the fish farmers in Uganda, has had a continuing relationship with Sagana Fish Farm.

Who should go: Owners of medium scale farms and prospective managers of large-scale farms.

Time frame:

As early as March if it can be arranged. If a flight arrives Nairobi 10:30 AM, then the group could be in Sagana by 1 or 2 PM. A short station tour could be made the day of arrival. A full day the following day and departure from Sagana either that evening to reach Nairobi or the following morning.

Cost information:

Hotels in Sagana cost 200-300 KSh per night. A higher priced hotel is located about 5 km from Sagana. The facilitators would have to quote their price. Dr Ngugi makes about 150\$/day for training. Some overhead to the station should be offered.

Immediate actions: I will ask the Director of Fisheries if she will approve such a visit and will ask the recommended facilitators if they are available. Will report back before end of Feb.

2. Pond construction training

Justification: When people have actually sited, planned and pegged out a pond they can more confidently manage construction. Even hand-built ponds follow the same planning and construction procedures as machine-built ponds. As they see the way the work proceeds, they have a better understanding of the planning and pegging process. This course has been given to fisheries extension workers in Kenya who have noted that it was very informative. A pond is constructed during the course. The participants do much of the work but laborers are used to move things along more quickly, especially while participants are in class receiving information about pipe sizes and flow.

Suggested venue:

At Nel Fish Project, sited just below Ranch on the Lake hotel. Kampala is only 20 minutes away. Lodging and classroom are also available nearby in Kajjansi at a local training center. This site has a good pond location, already cleared and a ready water source.

Instructors:

Charles Ngugi, (co-taught 4 pond construction classes with me)

4 from African Bulldozers laborers who will help guide and assure construction. The owner of the pond should provide some supplies such as a 4-inch drain pipe, hoes, wheelbarrows and additional local labor.

Timeframe:

This training usually takes 2 weeks. Some pond management instruction is given as well. Dr Ngugi may be available for this as of end May.

3. Other consulting services

Fish Feeds:

Elsen Karstad, Director, Tamfeeds, Nairobi. Advise on medium-scale extruder design, feed formulation, and use of keratin-containing ingredients such as fish scales and feather meal.

Can advise NUVITA, Sunfish Farms, Gomba Fishing Industries, and others.

Tel: +254-2-882375. I will get his e-mail address.

For farm design and construction:

I do not have e-mail address for any of these, but can get them. I have already provided these names to some people here in Uganda.

Mevel Engineering: consultant in pond and cage fish farming; design and construction.

Dr Thomas Popma (wrote many of the training modules I used.) Extensive experience in farm design and commercial warmwater fish production in Central and South America, and SE Asia. Good understanding of the African context.

Dr Jesse Chappel: Owner/operator of a freshwater and saltwater fish hatchery. Experience in Asia.

Pond construction and management:

Some members of African Bulldozers can accompany me to Uganda on a short 2-day trip after 6 March to introduce them to the sites and the work that others have in mind for them. After this visit, they could return to Uganda themselves and begin construction. Six people have specifically requested their services. Three of these are very serious about the request

and will not have a problem paying the workers. The other 3 may not have the available cash so soon.

4. Trips to U.S. – I am not exactly recommending these but if SPEED wishes to sponsor some visits, the following possibilities come to mind:

Dr Joseph Kusaasira, Mill manager, NUVITA. Visit fish feed mills. One feed manufacturer in the US (Zeigler Bros.), located in Pennsylvania, will welcome such a visit. Further information could be gathered from Auburn University and the nearby USDA lab.

Many medium-scale farmers could benefit from a visit to the US but the actual production benefit may not justify the expense. It could be more beneficial to train an extensionist or other advisor who could demonstrate what they learn to other farmers. The training should include active participation in sex reversal of tilapia and verification of sex ratios in juvenile tilapia, transport of live fish, large-scale harvest, visits to recreational fishing operations, ornamental fish farms, other fish farms. Auburn University will conduct “custom training” at a cost of 500\$US per trainee per week. They prefer to have a minimum of 9 trainees.

Prospective large-scale farmers: feed mills, fish farming equipment companies, large processing plants and large fish farms are ideal sites to visit but the farms and processing plants will be almost impossible to visit. There is one large processing plant in Alabama that may be interested in a quality-controlled tilapia fillet to purchase from overseas. I will check this out and inform SPEED if they are still interested. If so, it would justify a visit from a large processor from Uganda.

5. Uganda Fish Farmers Association

This association should have original copies of the documents made available for photocopy during the workshop. It will be easy to assemble them and post. Cost will be about 50\$ and this can be added as a miscellaneous expense in my claim for reimbursement. Further assistance would depend on the association’s performance and membership.

6. Makerere University was the foremost Fisheries teaching and research institute in Africa at one time. They have just adopted a new aquaculture and fisheries curriculum. The training modules presented at the workshop attracted the interest of the department head, who requested copies. I will ask the authors’ permission and notify SPEED once they have agreed to release copies. SPEED has copies of all presentations given and can cut a CD for the university. A further request was made regarding distance learning. Auburn currently conducts a course in Aquaculture at University of the North, RSA.