

# THE PRIVATISATION OF GOVERNMENT FISH HATCHERIES: A POSITIVE STEP TOWARDS SELF-SUFFICIENCY IN FISH FINGERLING PRODUCTION IN NIGERIA.

By C.T. Madu

*National Institute for Freshwater Fisheries Research (NIFFR),  
P.M.B. 6006, New Bussa, Niger State.*

## ABSTRACT

---

There are over 200 fish hatcheries in Nigeria with at least two hatcheries in each state of the federation but unfortunately over 50 per cent of these hatcheries are either non-functional or function far below their optimum production capacities. About 85 per cent of the non-functional hatcheries belong to the government (-either Federal, State, Local Government or Institutions). The major problems associated with the non-functional hatcheries include poor management due to low attitude and lack of commitment to government work, inadequate funding, inadequate infrastructure, poor maintenance of hatchery facilities, high cost of feed inputs, problems of differential growth and cannibalism in catfishes which result in poor fingerling harvests.

In this paper, privatisation/ownership options are suggested and clues to the solution of the above mentioned problems through privatisation are presented. Some problems associated with privatisation and private investments are also highlighted. Hatchery production of fingerlings as the quickest revenue yielding aspect of fish farming (with high internal rate of returns and short pay back periods) capable of attracting revenue within 2-3 months of a breeding exercise are emphasized. It is also suggested that if all the existing hatcheries are put into full production the national demand for fingerlings which is placed at 4.3 billion annually, could be met with ease.

## INTRODUCTION

Fish hatchery is the bedrock upon which true and sustainable fish farming can be built. This is because, as the adult and table fish sizes are sold out from ponds and reservoirs for food, young ones (fingerlings) must be procured to replenish the stock. A diagnostic survey of the status of fish hatcheries and fish fingerling production in Nigeria (NIFFR, 1995) and updated in 1998 shows that there are over 200 fish hatcheries in Nigeria with at least two hatcheries in each state of the federation. Unfortunately, over 50 per cent of these hatcheries are either non-functional or function far below their optimum production capacities. Over 85 per cent of non-functional hatcheries belong to the

government- either federal, state DFRRI or institutions. The major problems highlighted by the hatchery operators centred on technical, management, economic and social issues. Most of these problems can be solved through privatisation.

## PRIVATISATION AND OWNERSHIP OPTIONS

According to Kalu (1999), the primary objective of privatisation is to increase the efficiency of the economy through the transformation of state-owned enterprises to public owned companies run by the private sector. By this, the public resource is

reallocated to private ownership so that the use will be maximised. Privatisation of government hatcheries, therefore, implies the transfer of the hatcheries from government control or ownership to private ownership. Such transfers could be directed to private individuals, corporate bodies, non-governmental organisations, co-operative societies or farm associations. There are two major options that can be adopted: -

(i) Full or Total transfer of ownership

(ii) Partial transfer of ownership.

In total transfer, the hatcheries are sold out completely to the private individual or organisation and the hatcheries cease to be the property of the government. In this way, the government washes off its hands completely from the funding and management of such hatcheries.

In partial transfer, the government still owns the hatcheries but can lease the facilities out for a given period of time under definite terms or memoranda of understanding. In both options, the funding and management of the hatcheries are invested on the private owners.

### **PRIVATISATION FOR INCREASED HATCHERY PRODUCTION OF FINGERLINGS**

The major problems associated with non-functional and low production hatcheries in Nigeria were identified to include:-

(a) Poor management due to low attitude and lack of commitment to government work

A fish hatchery is like a breeding factory and the production process is time consuming, time specific, labour intensive and most times requires 24 hour services because of the delicate nature of some of the activities (i.e.-attending to baby fish). Hatchery management, therefore, requires a lot of devotion and dedication to duty on the part of the hatchery staff. For example, injected ripe brooders

must be stripped after a definite latency time otherwise, fertilization and hatchability will be poor. Zooplankton must be collected and fed to fry at definite rates otherwise, the growth and survival of fry will be poor. For the catfishes, fish must be sampled at definite time intervals otherwise, differential growth or cannibalism will set in. This level of dedication and devotion to duty has not yet been instilled into the Nigerian civil service but can easily be attained in the private sector with good incentive and regular supervision. The private hatchery owner is commercial and business oriented and will do any thing possible to maximize profit. He can fire or hire his staff with minimal sentiments as against what is obtainable in the government sector.

(b) Inadequate Funding. Insufficient, irregular and untimely release of funds due to government bureaucracy and protocols was also identified as a major problem in government hatcheries. Hatchery operations are time specific and the activities come up in successive progressions i.e broodstock management induced spawning egg incubation hatching of eggs nursery management of fry to fingerlings. Each stage of the breeding process has its own management protocols/procedures and any hindrance at any given stage will adversely affect the overall productivity of the breeding exercise.

Irregular and untimely release of funds are not prominent in private hatcheries because there are minimal bureaucracy and official protocols. The interest of every staff or stakeholders is vested in the project because their salaries, economic welfare and prosperity depend on the success and revenue from the project. The private sector is also more cautious in spending and accountability.

(c) Inadequate infrastructure and poor maintenance of hatchery facilities.

This problem emanates from low commitment to government property. Most of the government hatcheries were constructed by contract without

due involvement and supervision by the end user the hatchery operator. Technical errors and omissions in the infrastructure would be difficult to rectify. Hence, there are so many abandoned government hatcheries due to poor drainage, tank leakages, collapsed walls, etc. Also, where the hatchery infrastructure is relatively good, funds will not be adequate to sustain the structures and facilities. This is because a government hatchery hardly generates enough revenue to sustain itself. Privatising a government hatchery will make it more revenue yielding.

Recently, hatchery technology in Nigeria has advanced into the use of water re-circulating systems for both fingerling production and broodstock/table fish production. A typical re-circulating system has four major components, the bio-filter, the UV radiation, the holding unit and the water pump. Depending on the water exchange rate, a holding unit of 2m x 2m x 1m can conveniently nurse and produce up to 100,000 fingerlings per spawning exercise. The sources of electricity and water will, however, be very constant and reliable. The use of these high technology re-circulating systems for hatchery production of fingerlings is gradually gaining grounds in Nigeria but can only be effectively adapted by the private sector.

(d) High cost of feed inputs: This is a common problem in all aquaculture investments. Feed inputs constitute about 40% - 60% of the recurrent expenditure but if feeds of appropriate dietary protein levels are supplemented with non-conventional feedstuffs such as maggot and trash fish, the feed conversion ratio will be low and the profit index improved. The farm will always make good profit on the investment.

(e) Differential growth and cannibalism in catfishes resulting in low percentage survival of fry and fingerlings.  
Differential growth and cannibalism in catfishes

result from poor feeding and sampling regime. If the fish are fed adequately and sampled at regular intervals of not more than a fortnight, cannibalism will not develop. This problem is also a clear manifestation of poor management and low commitment to duty. This may not be tolerated in private fish hatcheries.

#### **PROBLEMS ASSOCIATED WITH PRIVATISATION AND PRIVATE ESTABLISHMENTS**

Privatisation of government fish hatcheries cannot be executed without some inherent problems. Such problems include the thinning down of staff strength, lack of job security and pension schemes, payment of salaries and emoluments not commensurate with the job input. Because private investments are strictly profit demanding and the salaries of staff are paid from the revenue of the hatchery, a staff in excess of the minimum number required for the job will not be accommodated. The staff inherited from the government must be thinned down based on relevance and revenue from the hatchery. Sometimes junior or unskilled staff will be stretched to perform duties of trained or skilled staff.

Also private employees have little or no job security. There is no pension scheme for retired staff. A staff can be fired any moment at the discretion of the proprietor and without prior notice. Most times, private employees are paid salaries and emoluments which are lower than their counterparts in the civil service. Such salaries are usually not commensurate with the job inputs and efforts of the staff. The employer makes sure that the staff is exhaustively utilized and every kobo paid to him/her must be genuinely worked for. There is good machinery for job supervision. In this way, the hatchery becomes economically productive.

## CONCLUSION

Hatchery production of fingerlings has been considered by Madu, (1995) as the quickest revenue yielding aspect of fish farming, capable of attracting revenue within 2-3 months after the commissioning of a breeding project. The internal

rate of return is usually above 60% and the payback period can be less than 2 years (Madu and Ita, 1991). If the non-functional government hatcheries are privatised and all the existing hatcheries are put into full production, the national demand for fingerlings which is put at 4.3 billion annually (FDF, 2003) can be met easily.

## REFERENCE:

- FDF (2003), Need for a National Fish seed/fingerling service. *Presentation on the Fisheries Development Sub-sector at the Presidential Forum, Abuja*. Federal Department of Fisheries (FDF, FMARD, Abuja. pp 24-25.
- Kalu, I.K. (1999), Modalities for privatising state enterprises. *The Guardian Newspaper, Wed, Dec. 29, 1999*. p. 25.
- Madu, C.T. (1995). Fish Seed Production and Management. *Invited paper presented at "Aquaculture 95" a National Aquaculture Workshop jointly organised by the Fisheries Society of Nigeria (FISON) and the government of Israel, at Jos, Plateau State, from 19<sup>th</sup> - 29<sup>th</sup> November, 1995*. 9p.
- Madu, C.T. and Ita, E.O. (1991). Simple techniques for large scale production of fingerlings. *Proceedings of the 4<sup>th</sup> Annual Seminar of the Committee of Directors of Research Institutes (CODRI) held at NIOMR, Lagos, 10<sup>th</sup> Dec. 1991* (Tabor, J.G. and Ezenwa, B.I.O., Eds) pp. 28-39.
- NIFFR (1995). *Report of national aquaculture diagnostic survey, May-July, 1994* (J.S.O. Ayeni, ed.) National Institute for Freshwater Fisheries Research (NIFFR), P.M.B. 6006, New Bussa, Niger State, Nigeria. 10p.

