

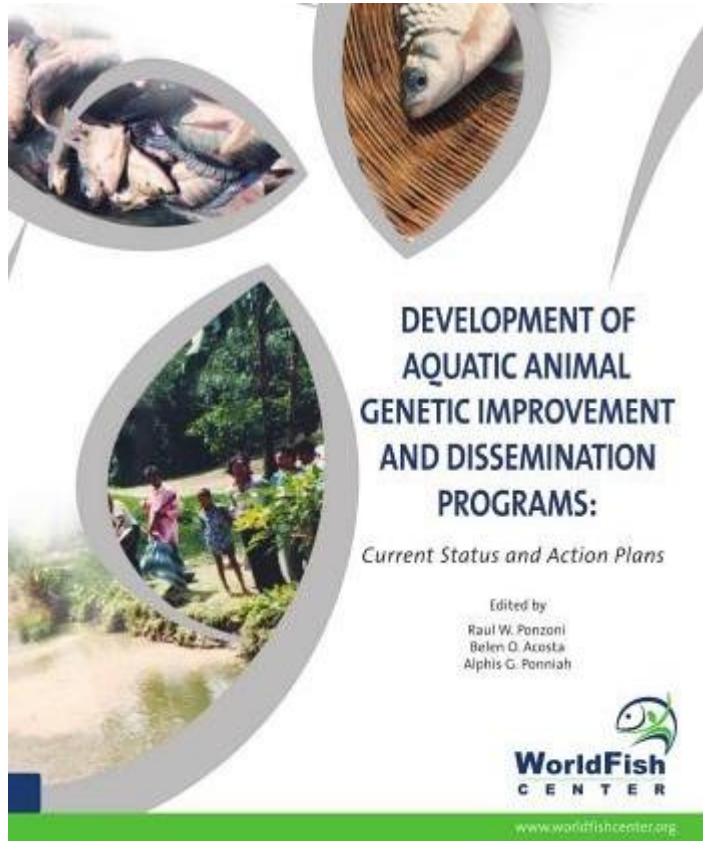
High quality fingerling availability and dissemination in Mozambique



1. Introduction
2. The need for good seed
3. The Xibaha strain from Vilankulo
4. Dissemination through INAQUA delegations
5. Direct deliveries around the country
6. Accreditation of hatcheries

1. Introduction

Speeding up Tilapia farming in Mozambique by providing high quality fingerlings

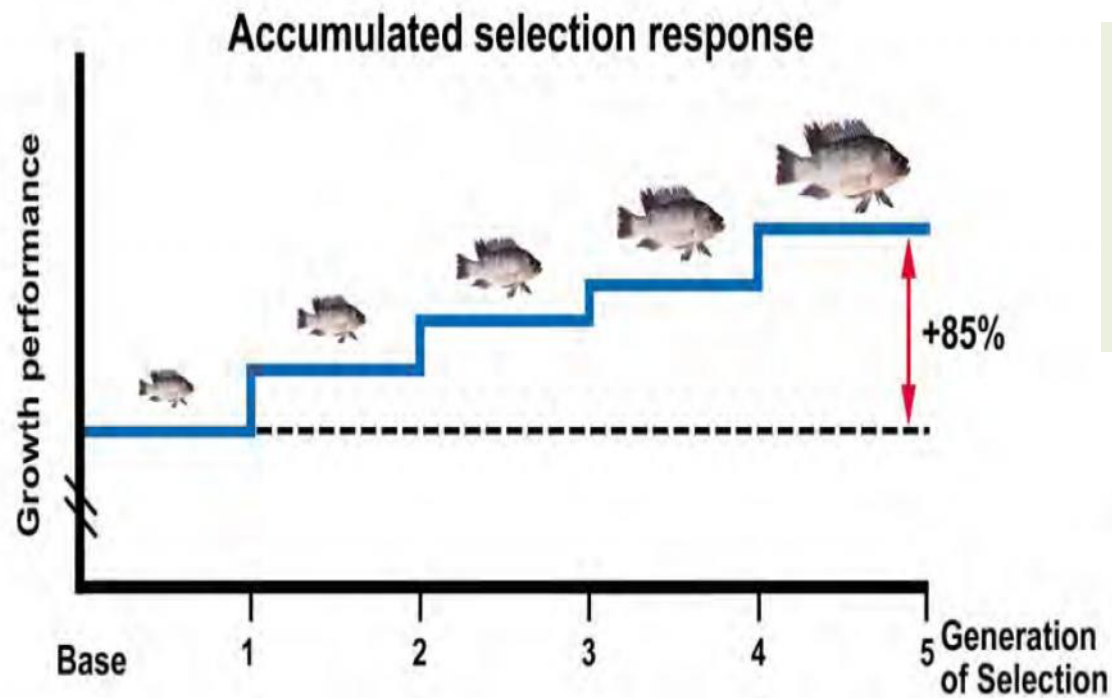


- Provide an improved strain easily accessible for all farmers in Mozambique
- Prevent inbreeding in the following ways:
 1. Not using old inbred stains
 2. Making quality fingerlings easily available to everyone at the right price.

Guidelines from:

Genetic improvement and effective dissemination: Keys to prosperous and sustainable aquaculture industries. Raul W. Ponzoni. The WordFish Center. Malaysia. 2006

2. The need for good seed



The WorldFish Center has shown that Genetic Improved Farmed Tilapia can have an 85% improvement in growth rate over wild stocks.

- The need arises from experiencing production failures.
- Good production results sells the improved strain to unbelievers.
- Large commercial farms normally plan to have the best stock available

3. The Xibaha strain from Vilankulo

- A wide genetic base is used which includes already improved strains
- The central breeding nucleus contains the Xibaha germplasm
- Each country or breeding program develops its own strain

Picture of adult males to the right comes from the nucleus breeding program. They became too large for breeding and were culled.

Sex reversed fingerlings below.

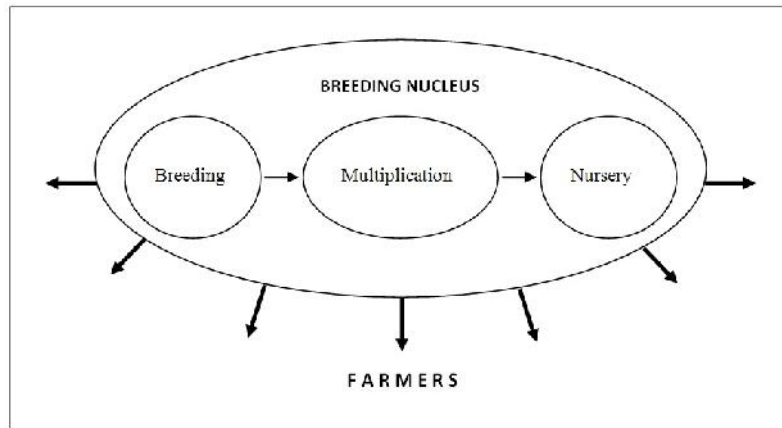


At lake Gombene, picture to the right, we keep the nucleus breeding program and egg production hapas



4. Dissemination through INAQUA

Model 1: Centralised supply to farmers



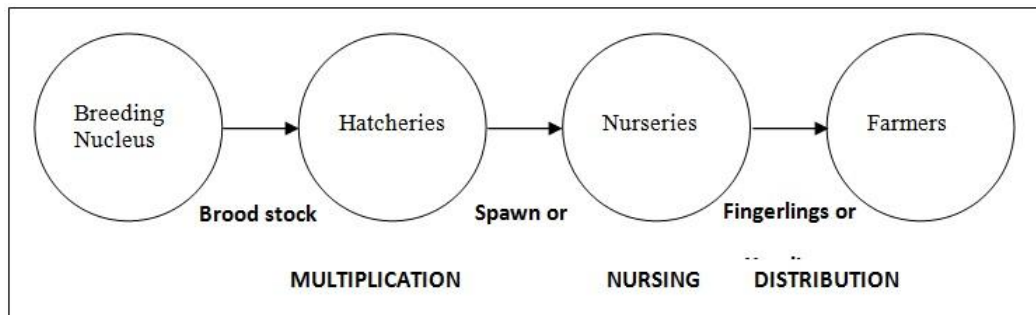
Model 1

INAQUA pays and Xibaha delivers directly to farmer

Model 2

INAQUA receives fingerlings in a nursery 'hatchery' from where they distribute to farmers in the area

Model 2: Using intermediaries



5. Direct deliveries around the country



- Vilankulo airport has flights to Maputo in the South sending directly to Farmers in Maputo and Gaza Provinces.
- The North needs a Xibaha branch in Quilimane which is currently being arranged.
- Equipment and training is required for the nursery stage

- Intermediaries as resellers are considered.
- Reselling is done with simple equipment.
- Opportunities for small businessmen are created



6. Accreditation of hatcheries

- The saving on fingerlings fallacy.
- The well structured breeding nucleus prevents inbreeding.
- Sex reversal requires a specific type of hatchery operation.

- Large commercial farms could serve as responsible multipliers.
- Contractual accreditation.
- Regular supply of the latest improved strain, at least every two years.



Incubation of eggs in an incubator, above, could replace the mud pond breeding system, below

Mozambezi, pictures below, on the lake Cahora Bassa could for example, benefit from an improved strain in their own hatchery.

