Federal Ministry of Food and Agriculture

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LILONGWE UNIVERSITY OF AGRICULTURE AND NATURAL RESOURCES
LUANAR

BROODSTOCK MANAGEMENT & FINGERLINGS PRODUCTION METHODS

A Case Study of Bunda Fish Farm Hatchery

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IFFNT
INNOVATIVE FISH FARMERS NETWORK TRUST

QUALivES Ltd
QUALivES

GMA
Gesellschaft für Marine Aquakultur

Layout of Presentation

- Introduction
- Main Objective
- Sources of Broodstock
- Broodstock Production
- Breeding System
- Egg and Fry Harvesting

Introduction

- **Broodstock:**
  - Fish intended for reproduction**,** which should receive special management in separate ponds.

- **Management:** farm tasks
  - Provision of nutritional requirements,
  - Maintenance of good water quality (semi-intensive), etc.
  - Genetics

Main Objective

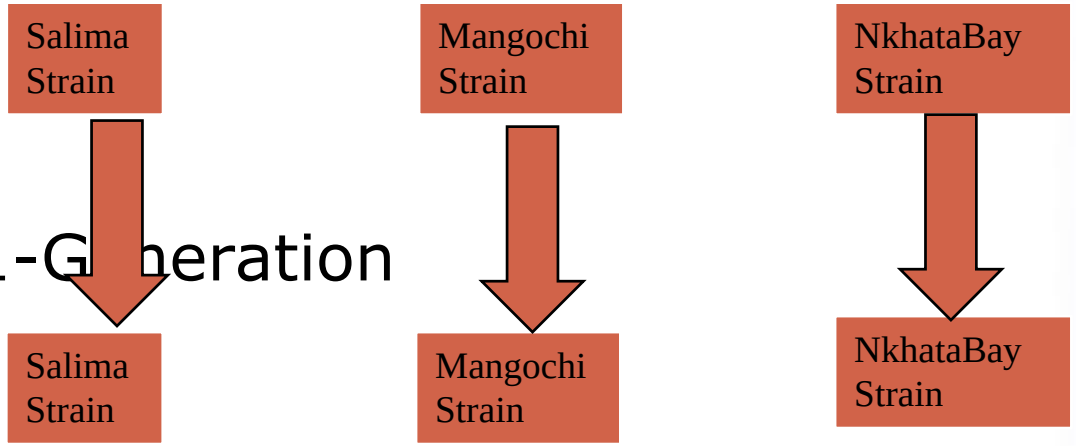
- Mass production of **good quality fingerlings**
  - Characteristics of a **quality** fingerling;
    - Optimum growth
    - Good survival rate
    - High tolerance to a wider environmental cues

Sources of Broodstock

- **Wild:**
  - Lake; Salima, Mangochi & NkhataBay
    - Size = 100g or 1-5g fry
- **Hatcheries:**
  - Govt.; NAC and Kasinthula
  - Pvt.; MALDECO Aquaculture
    - Size = 100g
  - "Farm produced Broodstocks"
    - F1 Generation

Broodstock Production

- Base population



- F1-Generation
  - Mix F1's = Bunda Broodstock
    - To improve on the genetic diversity of fingerlings.
  - Random Mating Strategy

Breeding System - Pond

- **Species;**
  - *O. shiranus, O. karongae, T. rendalli*
- **Selection, Conditioning & Pond preparation;** -August & September
- **Breeding Season;**
  - October to March
- **Sex ratio;**
  - 1 male : 2 females
- **Stocking Density;**
  - 3 fish/m^2

Egg & Fry Harvesting

- **Every 2 weeks**

- **Female brooder** are allowed to rest for 2 weeks
    - Need 2 sets of female brooders
  - **Fry;** Fry nursing tanks / hapas
  - **Eggs;** Solar Powered Hatchery

Future Breeding Plan for the Solar Powered Hatchery:

- **Egg** harvesting – Every 10 days
  - Need 3 sets of female brooders
  - Resting period of 20 days

Thank You