

All male tilapia production

# Methods



Earthen pond



Concrete tank

# Collected egg from the tilapia's mouth





# External and Internal Characteristic

Female:

- Smaller than male
- Red and round papilly



# External and Internal Characteristic

Male:

- Bigger then female
- Pair of testis a long genitle papille



# Embryo development of Tilapia

## Stage 1: Uneyed

Tilapia egg is pale yellow yolk and no any development

Incubation period: 1day

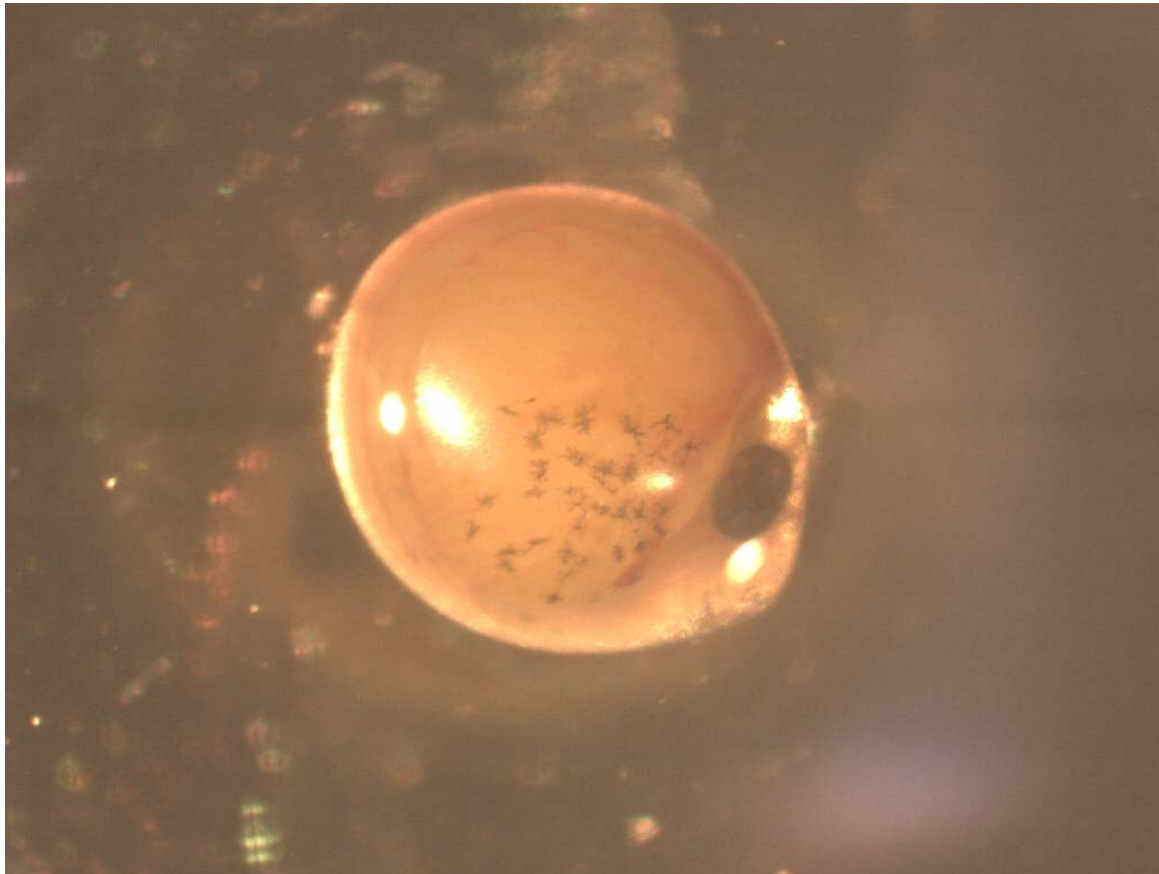


# Embryo development of Tilapia

## Stage 2: Eyed

Tilapia egg is yellow yolk and 2 black eyes developed

Incubation period :1 day



# Embryo development of Tilapia

## Stage 3: Pre-hatch

Tilapia egg is brown yolk and two black eyes developed

Incubation period : 2 days

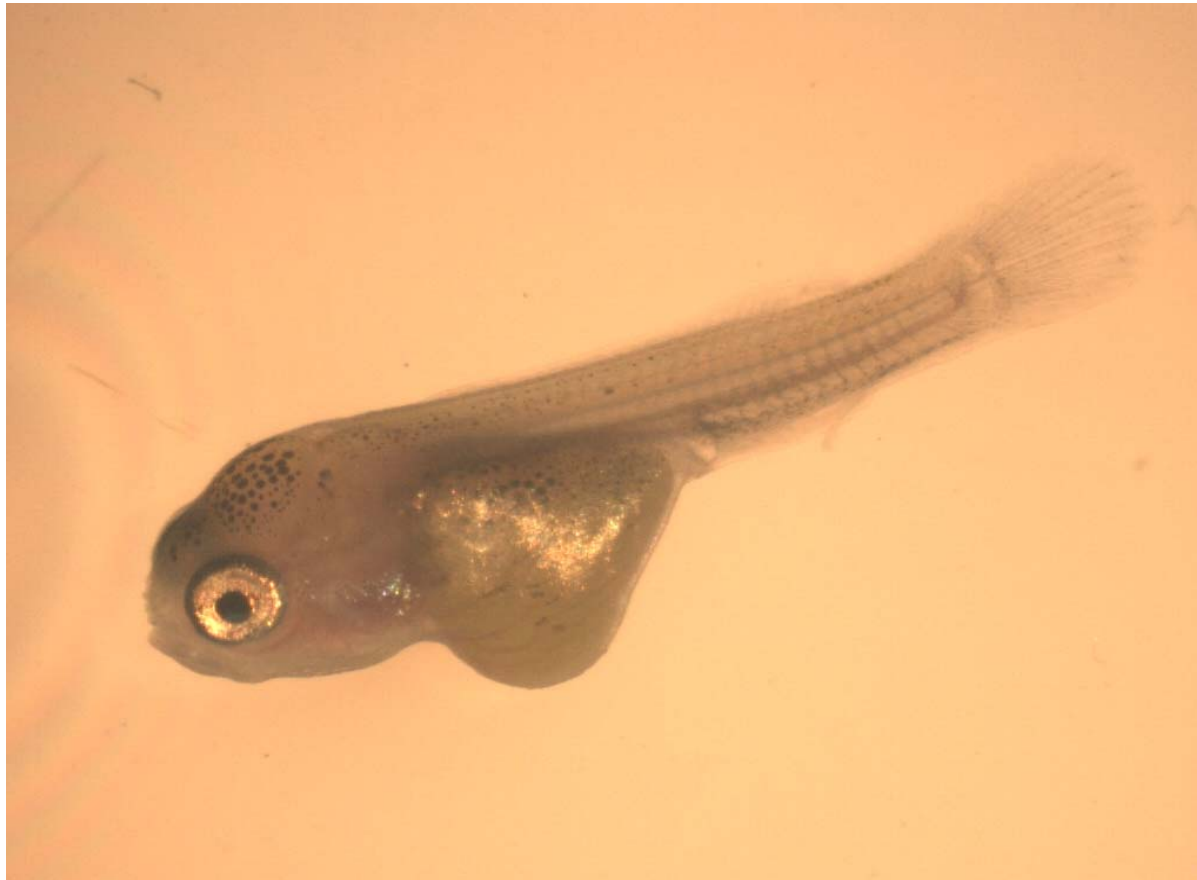




# Embryo development of Tilapia

## Stage 4: Hatch fry or yolk sac fry

Tilapia larva has hatched already but still has yolk  
Incubation period : 2 days



# Embryo development of Tilapia

## Stage 5: **Swim-up fry**

Tilapia larva has hatched already and been yolkless



Stage 1 – stage 5 takes 6 days

# Prepare feed hormone and control









# **Feeding Tilapia:**

First week feed 30% of body weight

Second week feed 20% of body weight

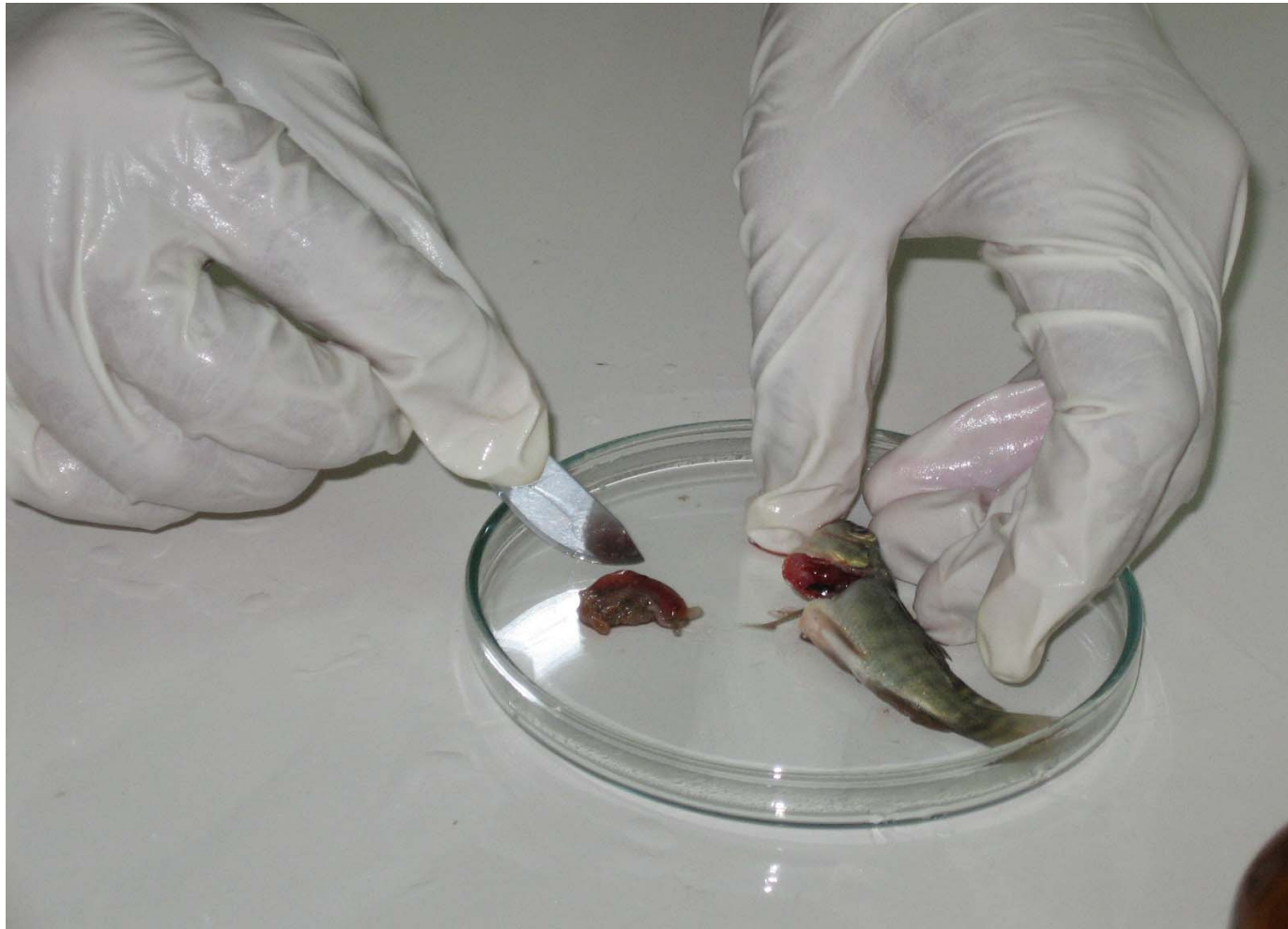
Third week feed 15% of body weight

# Sex determination of tilapia

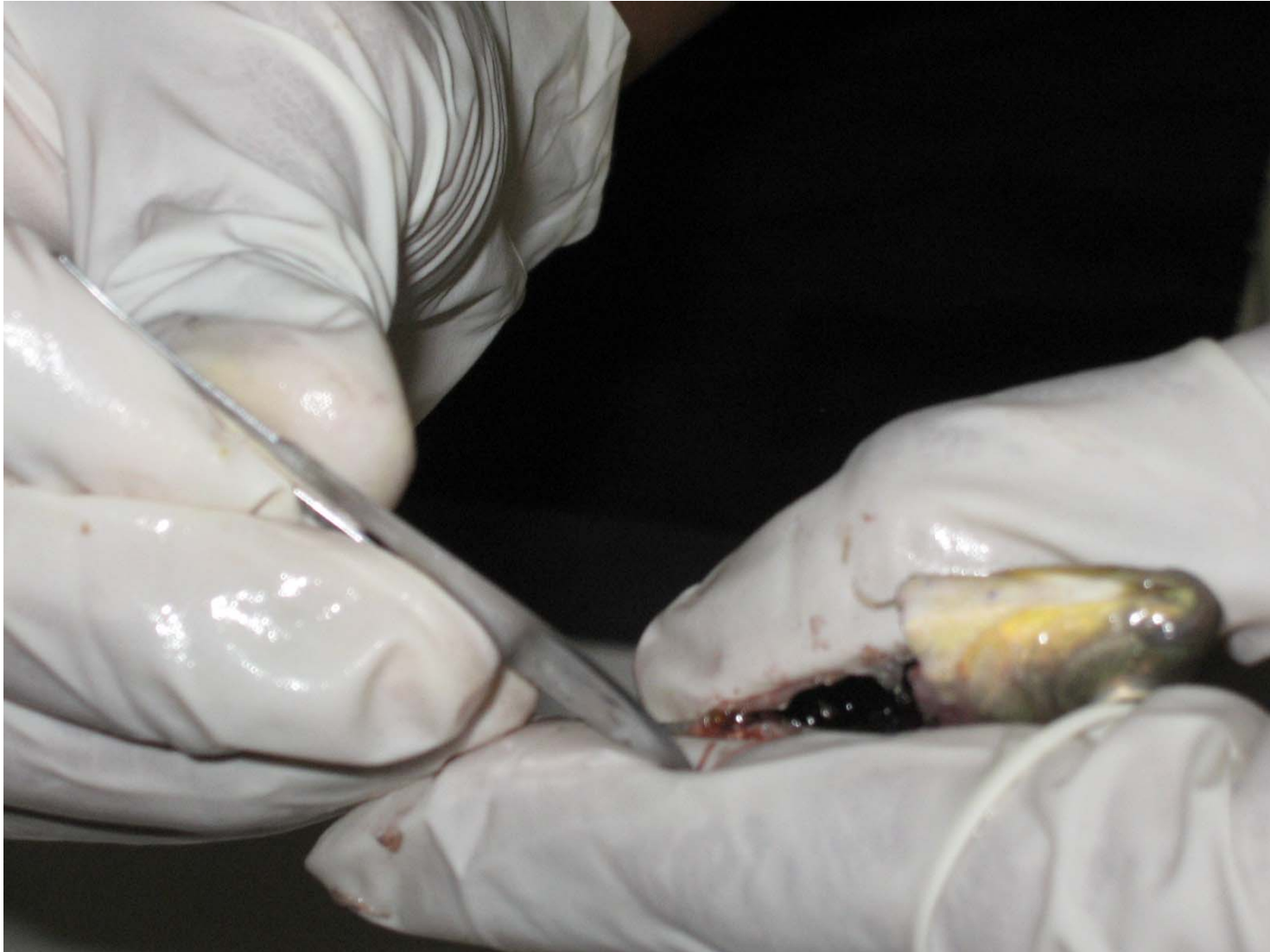
Sampling **0.1 %** of each population for testing tilapias will be unconscious with ice.



# Dissecting Fingerling



Gonad collected

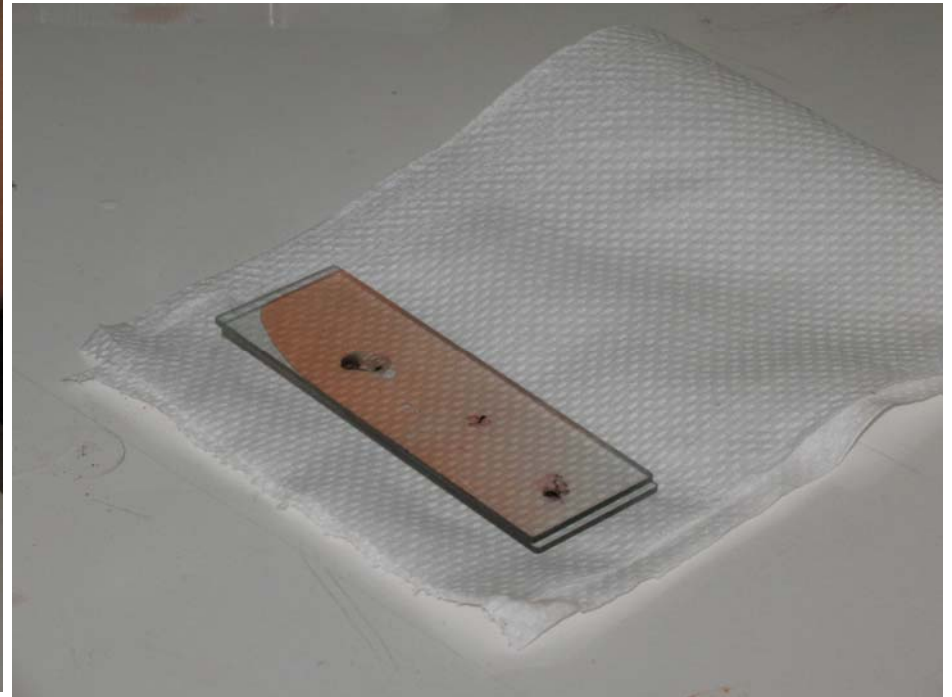




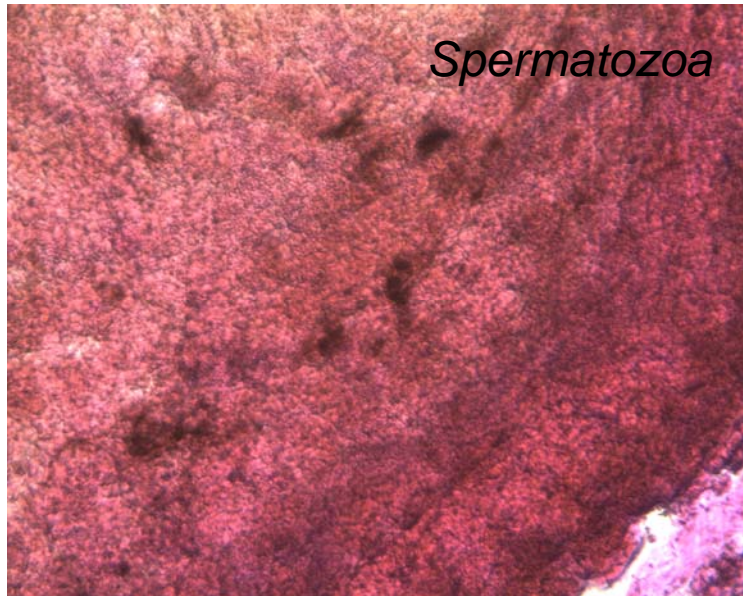
- Sex determination will be determined under microscope



- Staining and squashing of gonads



# Sex determined under microscope



male ↗

↙ female ↘

