**Njuki-ini fish farm**

Started the farm in 2020 with ornamental fish

Water source is from Sagana river

There is no treatment of incoming water

He has liner ponds

He pump has a screen before water gets in the ponds

The used water from the ponds is drained to the farm for growing crops

Semi-intensive method with a lot of pond fertilisation

Most of the parasites are observed in ornamental fish such as goldfish and koi carps

Nematodes are found on the skin of tilapia

Some parasites can be seen moving on the body (anchor worms and lice are the most seen)

The main challenge in his farm is predators

He thinks that disease and parasites kill fish

One time he lost about 20,000 kes when his fish died

He is able to identify parasites through observation when harvesting his fish

He uses industrial salt to treat sick fish

He has never called any expert to report on parasite or disease incidences

There is no record for mortalities

The source of parasites could be from neighbouring farms as they share nets

**Gacheru farm/ Henna Maina**

Gets his water from Tana River

Use screens

Main challenge is pumping water from the river as fuel is expensive hence cannot frequently change water

Pelicans, herons and kingfishers are the main predators in the farm

There is no ready market for fish; depends on walk-ins or buyers on request

The farmers were promised market for the fish by the ABDP which never happened

The government trains occasionally the farmers on aquaculture matters

There are mortalities but not as many

Uses urea, cow dung in a sac to fertilise the ponds

She would not have started farming fish if the county government did not support it (fingerlings and feed were provided for the start)

**James Ng’ang’a**

The source of fish was Kamuthanga fish farm in Machakos

He stocked 1000 fish in february 2023

The water source is tap water from Ukanga water and sanitation company

The water is chlorinated from the company

The pond was overstocked

Birds and monitor lizards are a major problem

The drained water from ponds is used to grow crops

The farmer has been trained by fisheries officers and also formally through university

The farmer is knowledgeable about fish although he has no experience with fish diseases

**Fredrick Ngari**

The source of water is borehole and loca water and sanitation company

The fish were stocked in august 2023

The drained water from ponds goes to banana plantations

Never seen parasites or experienced diseases

Different bird species are predators in his farm

Never received any training on fish farming

Fish bought from Emu fish farm

No reported diseases in his farm

Looks upon the government for support

An organisation called Caritas taught them about fish diseases

**Green algae highland fish farm**

A trained fish pond constructor

24 years experience in fish farming

The farm is 5 acre big

He farms catfish, tilapia and ornamentals

The demand for fish is very high

He only sells broodstock and fingerlings

He sells 3-4 month old brooders

Every two months they use industrial/rock salt or even two weeks

They have a pH meter and flush water out every week

They experience some mortalities only after handling; rare morts

Source of water is nearby river

Keep records of mortalities, sales and stocking

**Mwea Aquafish farm**

The farm started in 2009

Keeps catfish and tilapia

Source of brooders is Jambo fish

Source of water is river Nyamindi and also from the borehole

Screening is done when drawing water from the river and also when draining

Fish health is generally ignored

There is no ready market for fish

There is no single cooperative that involves fish

Kirinyaga fish farmers association

Earthen ponds are limed to maintain neutral pH

The farm trains farmers; they also teach students (attachment)

Record keeping is very important

**Ornamental aqua fish farm**

Has interest in understanding fish diseases in order to avoid selling infected fish

The water is drained in crop lands

No complains on disease

Mainly sells fingerlings as they find it more profitable

**Francis Kivuti**

Over 200 morts

Sharing nets between farms

Asked how fish behave when sick?

Does not know the correct stocking density

**Farmer Group Nyeri**

15 farmers in attendance

Ushindi self help group

Has 20 members but more are joining

Started around 5 years ago

Have ponds with fish for consumption

Fisheries officer meets them either ad individuals or during group meetings

Farmers records are with the fisheries office

Some observed some floating fish (5 farmers), popping eyes, isolating fish

They think that fish do not get sick

When the fish die, they are disposed off

Birds and otters are the main predators

They share nets

They are very new in the aquaculture practice and need more training

Tilapia does not do well in Nyeri

During the cold season, some farmers experienced 70% mortality on both catfish and tilapia

The ABDP programme was meant to increase protein uptake among people

**Karungu fish farm**

Have experienced fungal infections with catfish

Mortalities are the first signs there is a problem

Catfish die during the cold season

They treat with industrial salt

They also go for trainings and workshops

Concerned about fish health and ready to learn about it

Sell fingerlings to other farmers

Acknowledges that fish get sick

Wants to understand all the requirements on pond management

Keeps records

Experienced several mortalities, with some dying and staying at the bottom

The source of water has no screens

Got the first stock from Kamuthanga and Makindi fish farm

**Samuel Njue**

Observed mortalities in catfish

Using aloe vera and saltto treat the sick fish

The fish start dying slowly and increase in numbers

Got fingerlings from Munyeki

Human predators are a big problem (using tobacco leaves) or the trumpet flower plant (Brugmansia)

Gets water from river Rupingazi which is very cold

He has water storage problems

He uses screens

He thinks that fish do not have diseases

However, he believes that disease problems will increase with aquaculture intensification

Vets are needed to address disease problems

**Brenda’s farm (MCA)**

Has knowledge about pond management and diseases

Feed is a problem

Knows about bacterial infection

Mortalities can increase within hours if pond management is neglected

Isolates sick fish

Uses no medication

Keeps records in the farm

He has been attended trainings by organisations such as FAO, Bendo Fish farm and Makindi Fish farm

Also rears and sells fingerlings

He reckons fish health is a neglected aspect

In Embu county, fish farming business picked up in 2023

Farmers benefited from the ABDP programme

He needs training on fish health, disease identification

The major problem is water from Rupingazi river is very cold which sometimes shocks the fish

Does not have water testing kits

He got his fingerlings from ABDP which were sourced from Kamuthanga farm

Sometimes the feeds are contaminated

**NYATI FARM**

Loss of eyes in tilapia

For catfish he has observed skin loss and the extension officer asked him to treat with salt

In 2014 he lost almost 100% of his stock

Challenges include predators, expensive feed and market problems

He finds fish farming easy especially for old people as it requires less work than cattle

**NUSU-NUSU FARM**

His source of water is tap water

Human predators and hammerkops are the main predators

Fish can get sick, no vets for fish, fish do not have many diseases

Hard to notice disease in fish

Fish is not livestock

Demand for fish is high

**DENNIS MUGENDI**

Gasping for oxygen

Changes his water monthly

Topography problems

Bird predators

Doesn’t have enough knowledge on fish health

Changing environments brings about disease

He thinks fish get sick due to stress, inadequate feeding and handling

**PEGI FISH FARM**

Sells broodstock and fingerlings

Has seen some of his fish lose eyes

**KALIMONI FISH FARM**

Fungal infections

Lumps on skin

Mostly does trial and error with treatment methods until he finds what works

Disease started when he employed someone who did not observe biosecurity measures

At one point his fish were infected heavily with lice

He hired a vet to check what happened to his fish but the vet could not tell what really caused the infection

Uses potassium permanganate, formalin and salt

He treats a few sick fish then checks if the progress is okay then he can decide if he treats the entire stock

**LAGUNA FARM**

Experienced mortality in big fish two months ago

The fish were not feeding well

Some fish had gill rot

Washed the pond well, salted then limed it

Take farm records

Attended a workshop on water quality, feeding, pond management and hatchery management

Willing to learn about fish health

Needs practical applications about fish parasites

Sells fingerlings

Asked this question: what is healthy??