

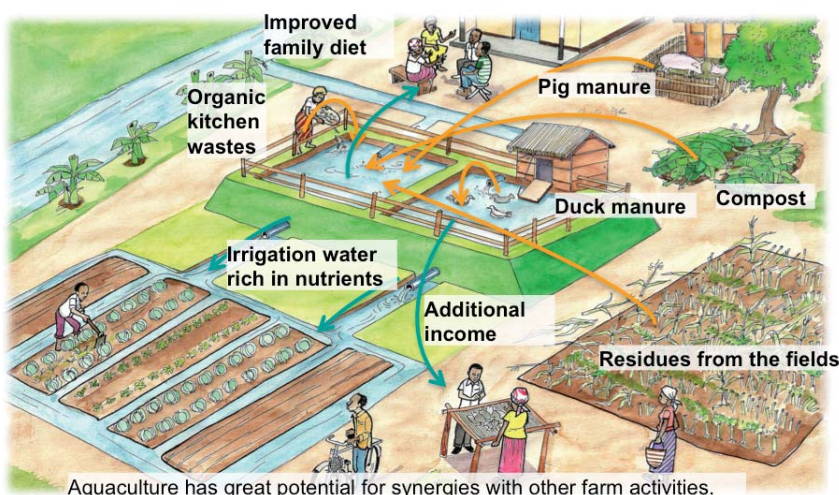
KEEPING FISH THE ORGANIC WAY



Fish farming can be a valuable option to extend your farming activities. It integrates well into small-scale farms and generates additional income.

According to the International Federation of Organic Agriculture Movements (IFOAM, 2008) organic agriculture is «a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.»

Potential for small-holder farmers



Why keep fish?

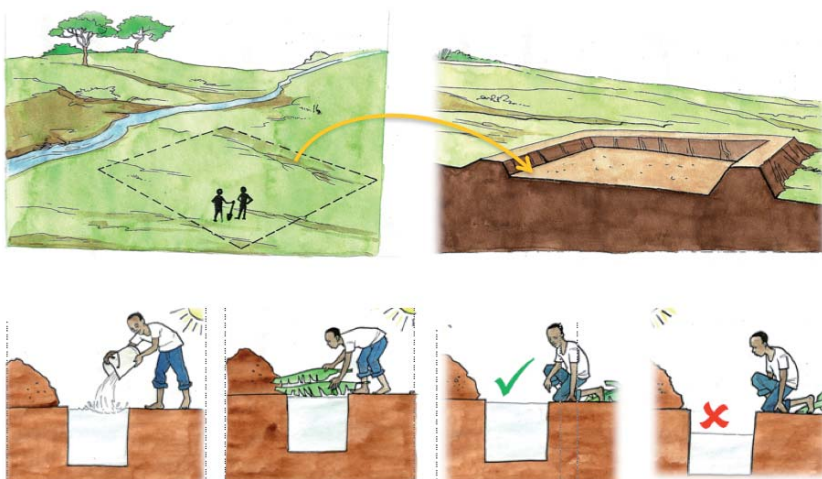
Raising fish

- > integrates well with other farming activities.
- > complements your diet with protein.
- > generates additional income.

What needs to be considered?

- > Land and labour costs
- > Suitability of the site
- > Availability of a reliable source of quality fingerlings
- > Solid demand for fish

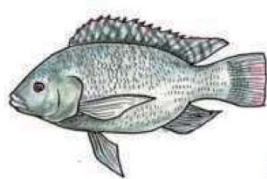
Evaluating site suitability for a fish pond



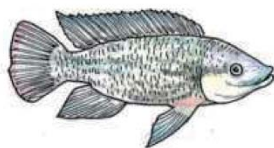
Site requirements for ponds:

- > Easily accessible and secure
- > Permanent water source in proximity
- > Soil with high clay content and minimal permeability to water
- > No risk of water contamination from surrounding areas
- > Slight slope, therefore, saving a lot of digging

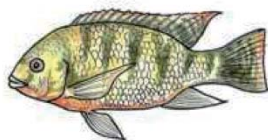
Choosing the appropriate fish species



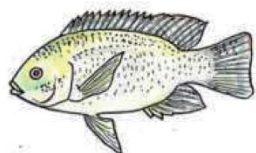
Blue tilapia
(*Oreochromis aureus*)



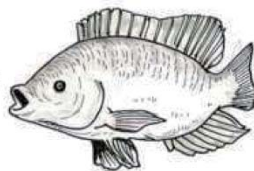
Mozambique tilapia
(*Oreochromis mossambicus*)



Red breast tilapia
(*Tilapia rendalli*)



Green headed perch
(*Oreochromis machrochir*)



Nile tilapia
(*Oreochromis niloticus*)

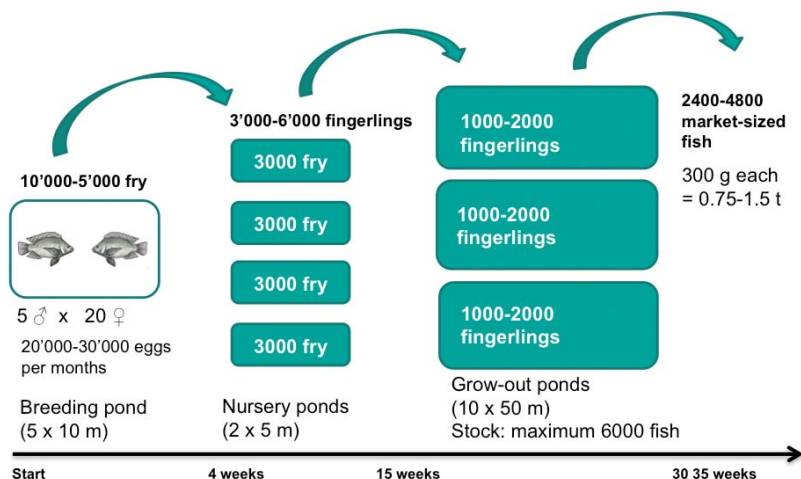
Points to consider:

- > Local climatic conditions
- > Demand on the local market
- > Regional hatchery accessibility for re-stocking

Why is a tilapia species a good choice?

- > Easy to manage
- > Can be kept on a purely vegetarian diet
- > Popular in Africa

Cycle and stocking of Nile tilapia as an example



Basic infrastructure

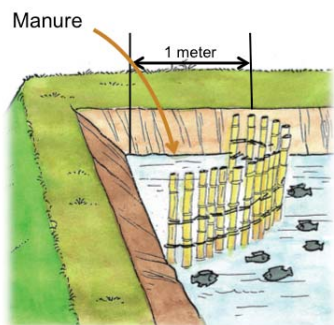
- > At least 2 ponds with a water depth of 50 to 150 cm for growing-out fish
- > If a hatchery is to be included, a minimum of 6 ponds of varying size and depth is needed.

Stocking of growing-out ponds

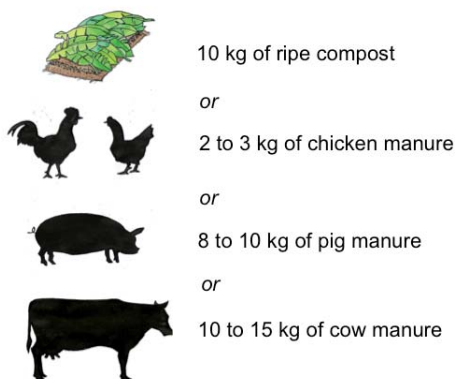
- > 2 to 4 fish per m² of pond area
- > Over-stocking results in oxygen depletion and health problems.

Feeding with help of pond fertilization

1. Build a crib from bamboo or wood at the shallow side of the pond to hold the fertilizer



2. Apply the recommended rates per 100 m² of pond area and week



- > Enhance the growth of microalgae and microorganisms as a main feed for fish through fertilization with animal manure and compost.
- > Use plant materials such as processing leftovers, kitchen waste and crop residues as additional feed.