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"Pond Aquaculture Farmer's Guide" was compiled by Arinaitwe Andrew and Abaho Ivan. (Bulindi ZARDI)

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POND AQUACULTURE
FARMER'S GUIDE





Compiled by:
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Checklist A

Determine the likely annual range of water temperatures at your proposed site, so as to ascertain the potential duration of the 'growth season' for the species you are intending to cultivate. It is advisable to locate your operation in an area that offers the most favorable climatic conditions for growth.

Checklist B

The quality of the water available at your proposed site will dictate what species you can grow. Send a water sample to an accredited laboratory, or have the water quality parameters measured on-site. The results obtained can be interpreted by the ZARDI Aquaculture Research officer or a consultant.

This will vary, according to the species you intend to grow. You need to estimate how much water your operation will need on a monthly basis, in order to confirm the adequacy of supply at the proposed site, particularly in the dry seasons.

Checklist C

Day-to-day management of ponds requires only an estimation of the topping-up rate of the water supply, in order to have sufficient supplies available to combat evaporation and seepage losses. However, it should be noted that a large supply of water should be on-hand to flush ponds if needed, or refill them after draining. An annual water budget should be calculated for a potential farm site so that the supply is adequate for existing and future needs (to allow for possible pond expansion).

Checklist D

Determine whether the site is suitable for aquaculture pond construction. Soil needs a good clay content to facilitate pond construction and the availability of clay on the site has an effect on construction costs. Ideally the soil clay content should be greater than 20%. Have your soil analysis conducted professionally. Contact and discuss with an Aquaculture Advisor or a consultant.

Checklist E

In order to ensure that the proposed site choice is adequate for the aquaculture operation you desire, include in your estimation any future expansion in grow-out ponds, additional water supply storage and whether a farm of this size will be economically viable.
Contact and discuss with an Aquaculture Advisor or a consultant.

Checklist F

To reduce the risk of pond-bank failure and reduce costs by optimizing farm layout, design the aquaculture facilities with the assistance of professional surveyors and engineers, particularly the major grow-out ponds. The proposed site should slope at less than 5%, ideally between 1 and 2%. For a Large farm lay out, Check that the plans include: accommodation, a processing building, feed silos, a farm vehicle, a workshop, ponds/tanks, a water supply dam(s) or bores, reticulation to ponds, gravity drainage outlets on ponds/tanks, an effluent treatment plant, space for vehicle access, power lines, a back-up power supply, and support poles for overhead pond covers.

Checklist G

Extensive, low density high volume pond systems do not require mandatory access to electricity, although it would be desirable. However, access to mains electrical power for the ponds is essential for semi-intensive and Intensive aquaculture. For intensive and semi-intensive systems, the ideal power would be three-phase. You need to estimate is because the use of artificial aeration of ponds is the most effective way to prevent stock mortality during periods of low dissolved oxygen and ensure that the water quality is suitable for semi-intensive aquaculture.

Checklist H

Aquaculture is a very capital intensive investment. Very few aquaculture projects have the bio-economics to ensure positive cash flow in the short-term (one-two years). It is therefore essential that you determine the "bio-economic" feasibility of the operation and decide whether to proceed. Please consult an aquaculture expert, or an agricultural economist.

Checklist I

Fish farming requires a broad range of skills, more so than the production system and animal husbandry, to ensure the chosen operation is successful.
To gain additional information, consider enrolling in an aquaculture training course. You can also find information on how to grow a particular species by attending field days, conferences, workshops and other meetings associated with the particular industry. Join growers' associations, talk to traders, the Department of Fisheries, consultants and read the relevant aquaculture sections of books, newspapers, journals and magazines from the library.