

Q: Can I do aquaculture in a farm dam?

A: Not unless the dam can be drained and managed like a farm pond. However, you can utilize a dam for cage-culture.

Q: Does one need heavy machinery to make earth ponds?

A: Small ponds of 10-50 square meters can be made with hand labour, however a tractor with a blade or a dam-scoop can make ponds of up to 0.25 hectare in area or larger. For large ponds, and major earthmoving, a bulldozer may be required.

Q: Is a filtration system necessary?

A: Extensive or semi-intensive earth ponds are generally unfiltered. Many raceway systems are flow-through with no filter. Where water volume is limited, or the fish are cultured intensively, a filter becomes vital to maintain water quality. Fish cannot be grown in small tanks (<5000 l) of stagnant water without filtration or flow-through.

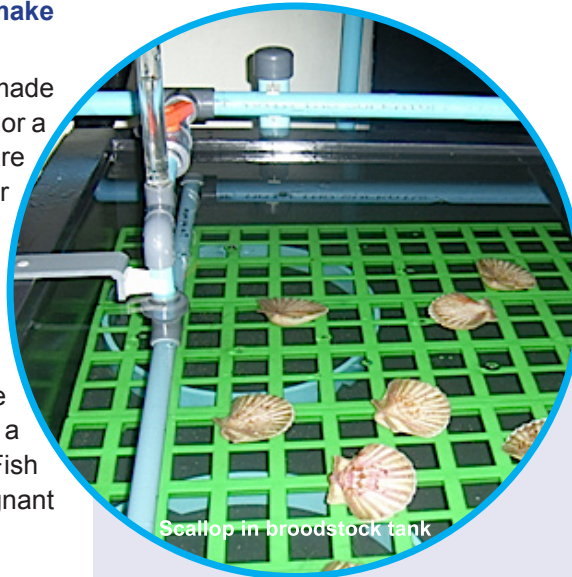
Q: How much water does one need?

A: This is a function of stocking density, food input, fish density, water quality, water replacement rate and filtration (if any). In semi-intensive ponds, a stocking density of 1 fish per m² water surface area is a rough guide.

Q: Is predator protection vital or a luxury?

A: It is essential to have protection against animal predators as they can reduce stocks to almost nil if allowed unlimited

access to the ponds or tanks. Fish farms in areas near human habitation also need protection against theft of the stock (fencing and alarms) if the fish stock can be easily stolen, which usually happens at night.



Scallop in broodstock tank



AQUACULTURE Q & A



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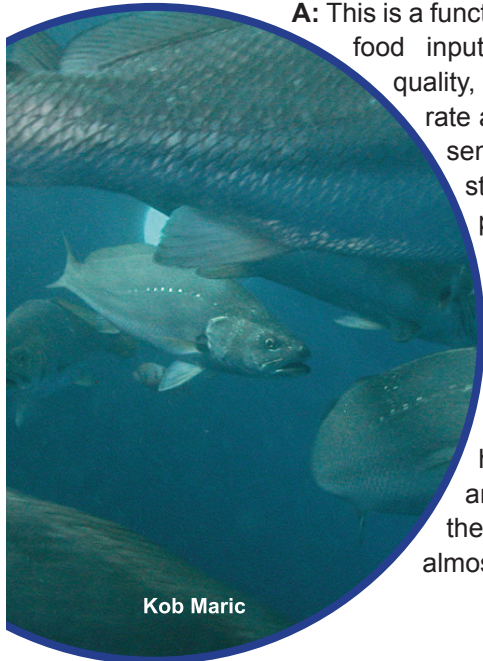
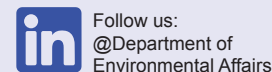
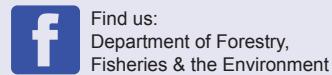
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Scallop

Aquaculture is the fastest growing food production sector in the world, with the global aquaculture industry producing approximately 67 million tonnes per annum (mtpa) of fish from freshwater (42 mtpa) and marine (25 mtpa) sources (FAO, 2014). An additional 50 million tonnes of fish is required to feed the world population by 2030 and it is anticipated that worldwide this production will come mainly from aquaculture.

South Africa's aquaculture industry currently consists of a limited range of marine and freshwater species of plants and animals. The industry provides approximately 6 000 tonnes per annum (2012, including seaweed), which is less than 1% of South Africa's total marine wild catch which is in the order of 700 000 tonnes per annum.

DID YOU KNOW?

Sustainable livelihoods can be achieved through aquaculture growth and fisheries economic development.

WHAT IS AQUACULTURE?

The definition of aquaculture is the farming of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants.

NB: The definition does not include fisheries, which is the harvesting of organisms from the wild of which there is no ownership or intended intervention to increase production.

FREQUENTLY ASKED QUESTIONS:

Q: Do you need a university degree in zoology or ichthyology to become a successful fish farmer?

A: No, a good practical ability is more important, although a basic understanding of and 'feel' for animal husbandry is essential. If you have no 'feel' for animals, do not become a fish farmer.

Q: Does one need lots of water for fish farming?

A: No, the Israelis (for example) farm fish in one of the driest parts of the world. The quantity of water available determines the methods used, whereby intensive water recirculating methods tend to predominate where water is scarce, and extensive ones where water is abundant.

Q: Is fish farming profitable?

A: Fish farming is a business just like any other, and the growing of the fish is only one aspect, just like the growing of crops is only one aspect of traditional farming.

Q: If I have no money, can I start fish farming?

A: If you want to start your own operation of any type, you need some sort of start-up capital, otherwise you should gain experience on someone else's fish farm first. A small-scale operation can develop into a viable business if carefully designed.

Q: What expertise do I need to undertake my own fish farming venture?

A: A spirit of hard work coupled with preparedness to undertake more than just fish farming itself. Fish farming demands that one be a master at many trades. Be prepared to try to learn how plumbing works, how dams are built, how fish breed, and don't depend on others to fix the daily problems associated with the lifestyle of a fish farmer.

FISH BIOLOGY:

Like any animal, a basic understanding of how fish function is necessary if one is to try to culture them. Fish are different to land animals as they have evolved to live in water, which makes movement, breathing, buoyancy and food or predator detection very different to that encountered on land. One of the most fundamental differences between fish and land animals is that the former are essentially weightless in their environment and dependent on it for their temperature, being 'cold-blooded', and this means that they neither need food energy for fighting the force of gravity nor for keeping themselves warm, as do land animals like cows and sheep. This makes their conversion of feed into mass more efficient than with land animals, given the right environmental conditions.

Q: Can I grow fish in a concrete or plastic water-storage tank?

A: Not economically; fish tanks are best purpose-built, as they must be shallow, drainable, have clean water (preferably filtered) and be large enough to produce economically viable quantities of fish. One tank does not make a fish farm.



South Coast Rock Lobster