Fish Farming

The art of growing fish in ponds is of great antiquity and when the Australians take it up, they naturally do so with some diffidence. In a delightful note on 'Fish Farming' in a recent issue of the Australian News Letter, the subject is introduced in the hope that it would appeal to the people of Australia if not from a commercial point of view at least for the sake of the variety it may add to the diet. Many clams and billagongs in that arid country could be turned into fish farms for very little trouble or expense. Needless to say, South-East Asia has been the oldest practitioner of this art and if the figures of yield per acre in ponds in the USA and Canada can be taken as a guide, many a proud owner of fish ponds in Bengal, Bihar, Orissa or Assam should he able to give a tip or two which FAO experts may not disdain. The yield on 'fish farms' in these countries, which utilise the latest that science has to offer in this field, is given as 150 to 450 lbs of edible sized fish per acre. On a rough guess, a tank of that size in Bengal where proper care is taken of the fish surely gives a much larger yield, 100 maunds of fish a year being nothing uncommon.

Monks better known for their success in distilling liqueurs and growing peas elsewhere in Europe held the palm for centuries for fish farming in England which was taken up seriously on any scale only during the last war. Poland has been an old practitioner of the art, ever since the 12th and 13th centuries 'in fact and if statistics are to be relied upon—those of fish are more than usually fishy—43 per cent of the fish consumed in Poland came from breeding ponds a few years ago. In average yield, however, the claim of Poland is modest, being only 120 lbs per acre.

In modern fish farming, the main emphasis is put on fertilisation though the latter is no substitute for good fish pond management. This is a subject, however, on which even the maestro in Bengal has something to learn. It is well recognised, of course, that fish will grow well only in those ponds which have a lavish growth of algae and a green, small type of weeds. That such weeds may be grown with the help of fertilisers does not appear to have received the same attention. On many other points, current practices in Bengal appear to be on proper scientific lines. It is recognised, for instance, that in order to give a good crop of fish, the tank must have a muddy bottom, comprising a mixture of organic matter, derived from decomposed plants; that the water must be alkaline and not acid and that fish do not like muddy water. Acid water is corrected by adding lime and cattle are kept away from ponds reserved for fish culture as they stir up the mud and make the water turbid in which fish do not thrive.

The fertiliser that is recommended as more beneficial and more easily handled is inorganic fertiliser which can be broadcast by hand from the banks of a small pond or from a boat on a larger pond. Of organic fertilisers, sheep manure is a good one To be used at the rate of one lb for each 16 gallons of water, though smaller quantities are needed for 'good' ponds. The method of use is to tie the manure in gunny bags and place them in the water, replacing about every two months. Cowdung would do just as well, but what good is this advice in a manure hungry country?

There is not much either for the Bengal fish farmer to learn about the matching of different kinds of fish in the same pond. Compatibility is so well known that they never present a problem of any magnitude, except where undesirable varieties that get in with flood waters have to be eliminated from a pond.

An obstacle to extension of fish farming elsewhere is the absence of hatcheries. Unless these are established under Government auspices, no progress is possible. In Bengal, this is no problem at all. For there is a regular supply of spawns for restocking for those who care for it. And all good householders do attend to restocking.

Fish farmers elsewhere, however, do not appear to be aware of, not to speak of believing in exercise as a factor in the growth of fish. On the banks of Bengal ponds, it is usual to have coconut, palmyra and betelnut palms, on the theory that wind rustling through the dry palm leaves startle the fish and send them scuttling along. This gives them the exercise which they miss in the placid waters of the tank, a good substitute for swimmings against the current in the rivers which make them grow so fast.

Fish farmers in other countries do not appear to find it necessary to give a scrubbing to the fish any more than exercise. This may be a special problem for the moist and humid climate of lower Bengal where fish needs to be given a scrubbing as soon as they have grown to some size. Maybe the problem is purely local but it is, nevertheless, very real for fish grown in ponds tend to develop a gelatious exudation which hardens into a thick layer and retards growth. One method is to catch them once in a while; give them a scrubbing and set them free again. Another is to let the fish do it themselves by fixing bamboo or wooden poles in the pond against which fish love to rub their bodies and thus do away with what is after all a very bothersome process.

Advice from Australia, bent on fertilisation, is for planting trees on the hanks for their shade. This aspect is not neglected by a good fish farmer who understands the value of a deep undergrowth of weeds which help the fish to keep cool when the surface water gets too hot from the sun. But he does not look to trees primarily for this service.

After this one may legitimately feel a glow of pride at the knowledge and skill of our fish farmers and ask what has been their quantitative contribution to the supply of this important nutritious food? One turns hopefully to the Report on the Marketing of Fish in India which has run into a second edition, but alas, the Report does not say how much of the supply comes from ponds and tanks. Apparently very little, too little perhaps to provoke its statistical ingenuity which does not stop at estimating the percentage of the population which is fish eating. But if 67 per cent of the population eat fish, and marine fishing is difficult to develop, being capital intensive, fish farming certainly deserves huge scale promotion. Rivers will not continue to yield the same rich crop if they are to turn turbines and irrigate the fields. Inland fisheries are reported to be going down fast. Ponds and tanks are multipurpose, their construction is labour intensive. Why should not fish farmers demand their place in the Plan?