

Tank farms could grow salmon in South Africa

FAVOURABLE seawater temperatures, efficient designs of land based fish farming tanks and years of research indicate that salmon could be successfully farmed along the coast of South Africa's Western Cape Province.

Although previous attempts to introduce seawater salmonid farming failed, there is good reason to believe that, using modern technology, it could now well become a reality for South Africa.

After six years of intensive research into the subject, fish farming specialist Ramon Kourie, has just released his book *The Potential For Atlantic Salmon Farming in South Africa*.

Atlantic salmon is already being successfully farmed in the southern hemisphere, notably in Chile and Tasmania. So why not in South Africa?

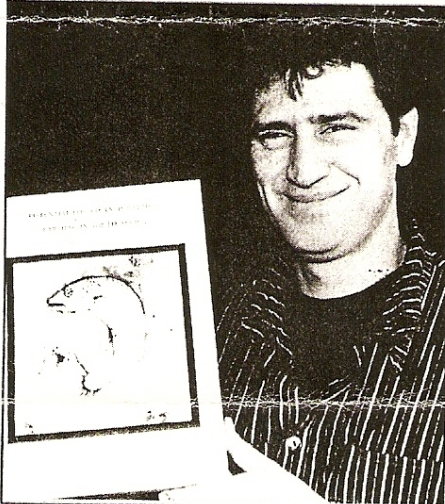
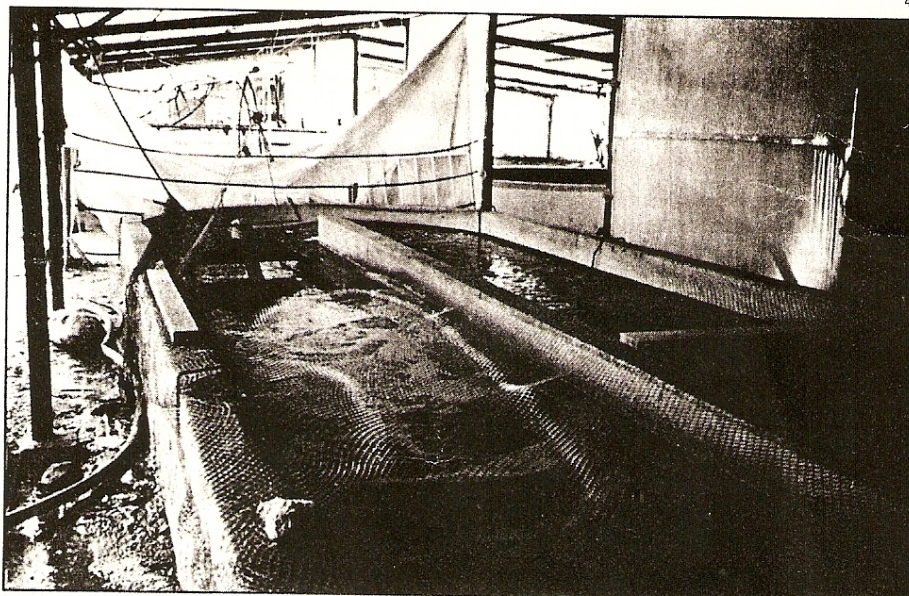
From Mr Kourie's work, it seems that South Africa has a history (albeit a short one) of unsuccessful seawater fish culture. Two seawater trout farms along the West Cape coast were unsuccessful for technical reasons. A third is still in operation, but its financial and production status is unknown.

Notwithstanding earlier problems with the growing-on of trout in sea water, Mr Kourie says things have so changed over the past decade or that it is now worth looking again at salmonid sea culture.

The seawater systems

Right: A battery of fish growing tanks at the National Centre for Mariculture Research at Eilat in Israel, similar to those recommended for salmon farming in South Africa.

Below: Ramon Kourie with his book on the potential for South African salmon farms.



used in the two failed seawater trout farms could be classified as first generation technology, he says. But farming using appropriate second generation marine pump ashore tank farms is potentially very viable.

Possibly the greatest advantage for future South

African salmon producers is favourable sea temperatures off the South-west and West Cape coastlines.

They could also have technically superior land based tank farm equipment which are now being used in Norway and Scotland, says Mr Kourie.

Atlantic salmon grow at a faster rate in water temperature around 16°C, he adds. The optimum temperature range for farming Atlantic salmon in the marine on-growing phase is 14-18°C.

Comparing the mean monthly seawater temperatures of the more important salmon farming locations of the world, he argues that the South-west Cape Coast from Cape Hangklip to Danger Point (especially Gansbaai) followed closely by the West Coast from Bloubaai to Port Nolloth and into Namibia (excluding the bays) appear to be well suited for salmon.

However, conditions off the West and South-west Cape coasts could be described as being rough or exposed with maximum wave heights potentially reaching or exceeding ten metres (from trough to crest).

The few sheltered bays that are potentially available for cage farming, including False Bay and Saldanha Bay, are either generally too polluted or show too high sea temperatures during summer (False Bay) or too great winter-summer variations (Saldanha Bay) to be

suitable for efficient salmon growing.

Consequently the approach towards salmon farming in South Africa would have to follow only two alternatives, according to Mr Kourie.

These would be floating off-shore or submerged off-shore cage culture; or tank farming using seawater pumped ashore.

Risks

Although the off-shore cage farming of salmon seems to be a potentially viable option, Mr Kourie says he is very reluctant to recommend this because of risks of red tide, stock

escapes, storm damage and economic penalties when it comes to the loss of quality and management control.

He is therefore more in favour of land-based, pump-ashore farming, using the latest in tank and other technology. He points out that tank systems are now proving suitable for salmon, trout, red tilapia, sea bream, sea bass, eels and other high value fish where both quality and profitability are of paramount importance.

Further information, and copies of his book, are available from Ramon Kourie, Intensive Fish Farming, PO Box 430, Somerset West 7129, South Africa. Fax: +27 24 517708.

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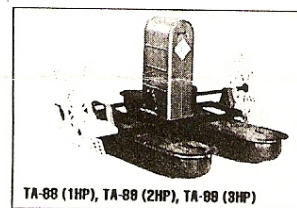
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