

Aquaculture

For many years now New Zealand has farmed mussels and oysters. There is potential for continued growth in both those areas as far as creating jobs and export earnings are concerned. There is also potential for the farming of paua – the Chinese farm around 90 times our annual wild harvest – and the ‘ranching’ of crayfish.

Ocean ranching of finfish species is also in the beginning stages of establishment and expansion in some districts. In many regards New Zealand lags behind a number of other countries where this type of protein farming is well established. Recent success in breeding blue cod in captivity for the first time is encouraging, both from an aquaculture perspective, and in terms of the possibility of seeding the wild fishery with additional fish stocks.

Salmon farming currently offers the greatest immediate and short-to-medium term opportunity for New Zealand in terms of creating wealth through sea-based food production. Farmed salmon is a high value commodity, with an established, growing, and globally under-supplied demand. New Zealand has many advantages both in terms of possessing the geographic and climatic conditions necessary for the successful farming of this fish species, and by way of the justified international perception of this country as a source of safe, high quality food.

Opponents of salmon farming claim problems from disease and seabed degradation, to nitrate overloading, to the despoliation of natural vistas, to foreign ownership, to the degradation of the wild stocks of the species. Claims include the discolouration of water around farm sites, bubbling seas, unpleasant odours, and high disease and fish mortality rates requiring the heavy use of antibiotics.

Conversely the industry itself maintains that New Zealand’s salmon farms are uniquely disease-free, with no antibiotics being used, and highlight the fact that New Zealand has the only large-scale commercial Chinook farming operations in the world, that species being worth up to two-and-a-half times as much as Norwegian Atlantic salmon. Industry are aware of conditions under the farms, and of the scale and formula that is followed in order to optimise production and minimise fallout and pollution. They speak of the possibility of a two-and-a-half billion dollar industry for this country, provided that everything is done right.

Somewhere in between these two versions is probably where the truth of the matter may be found.

The New Zealand First caucus has discussed these matters previously and it is my understanding that we have come to the conclusion that the expansion of salmon farming is something that can provide a great deal of net benefit to New Zealand, provided that it is done correctly as far as the environment and the wild populations are concerned, and we have decided to support such proposals, within those considerations. Several of us have visited a number of salmon and other aquaculture and fish farming operations in different parts of the country.

We have also had approaches along the same lines concerning ocean farming of trout, but have not as yet been persuaded.

New Zealand earns its way of paying the bills primarily through the Primary Sector. Three out of every four dollars this country brings in from overseas has its beginnings in agriculture, horticulture, viticulture, farming, forestry, or fisheries.

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Other countries have industrialised; New Zealand has not. We aim to increase our national income by producing the best of primary produce and adding as much value as we can to it. New Zealand First policies are designed and intended to take us further down that road, amongst others, and at an accelerated rate.

We pay for this in terms of a reduced national GNP, but apparently we gain in environmental terms. Other countries with similar populations to ours, but which are more heavily industrialised, make more money; for them, that is a trade-off they have decided they can live with.

Whether we should, as a nation, be emulating any of them in all or part, is a separate question.

Norway with a population of 5.2 million has a GNP of around	US\$ 389 billion.
Denmark with a population of 5.7 million has a GNP of around	US\$ 294 billion.
Singapore with a population of 5.5 million has a GNP of around	US\$ 292 billion.
Ireland with a population of 4.6 million has a GNP of around	US\$ 238 billion.
Finland with a population of 5.4 million has a GNP of around	US\$ 229 billion.
New Zealand with a population of 4.7 million has a GNP of around	US\$ 172 billion.

To add some context to these comparative figures, it should be noted that whilst Norway has a considerable oil resource, Singapore has nothing in the way of natural resources, and occupies a total land area roughly the equivalent of Lake Taupo in size. Ireland and Denmark are also considerably smaller in area than New Zealand.

One of the ways in which we can increase the value of our Primary Sector exports, and grow employment at the same time, is through aquaculture. And aquaculture is going to increase globally in both volume and value. In FY2014/2015 the tonnage of farmed ocean fish harvested globally exceeded the tonnage of wild-caught ocean fish harvested globally, for the first time ever. That trend will continue.

The world's human population continues to grow, and more people with hungry mouths to feed means more demand for food. In 2017 there are about 7.5 billion people sharing the planet with us, and by 2050, only 33 years from now (not a long time into the future, as a point of reference the Falklands War was 35 years ago) it is estimated there will be somewhere north of 9 billion.

Depending on whose figures you accept, there will be somewhere between 5.5 million and 6.5 million people in New Zealand by that time. Even that might turn out to be a conservative estimate.

It is only realistic to assume that these new New Zealanders will want to go fishing, and enjoy sea views, in at least equal measure to those of us living here today. This means that more is going to be taken from what is a limited resource, and that means quite simply that there is going to be less to go round and more individuals wanting a share of it. Individual quota shares and bag limits, for both commercial and recreational takes, will fall.

Food for all these extra people, here and overseas, will increasingly come from the sea, and more and more of it will be farmed – because it will have to be farmed. There is no other way of increasing the amount of food that needs to be produced, in order to keep up with the demand from the increasing number of people needing to eat. Maybe one day people will eat meat grown in laboratories and protein synthesised from algae, but that day is still a very long way off.

A hectare of sea surface area can produce about as much protein as 200 hectares of pasture-based beef farm. As a comparison, New Zealand's red meat sector (sheep, beef, and deer) currently

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occupies around 8.5 million hectares (21 million acres) and generates a gross return to this country of around \$7.5 billion including by-products. Salmon farming currently occupies about 18 surface hectares (that's 18 hectares, not 18 million hectares) and returns around \$330 million. The salmon farming industry's current expansion plans will require approximately another 20 surface hectares and bring the value of exports to around \$1 billion.

As another comparison, the wine industry occupies around 35,000 hectares and returns around \$1.4 billion in export receipts.

World production of farmed salmon is currently around 2.4 million tonnes, of which Norway produces about 1.3 million. It is worth more to the Norwegian economy now than North Sea oil, and Norway exports more salmon by weight than New Zealand exports red meat. New Zealand's production is around 12,000 tonnes. Present expansion plans will take that to around 50,000 tonnes.

A little over half of New Zealand's current farmed salmon output is produced by King Salmon, which is 51% owned by a Malaysian family-owned corporation and 49% owned by a New Zealand investor. It has recently listed on the Australian and New Zealand stock exchanges. To produce this tonnage, King employs around 400 people in the Marlborough and Nelson regions in its salmon farms and processing plant.

The great advantage for New Zealand is the Pacific salmon's Chinook variety, which no-one else apart from one small operation in Canada is farming. In addition to that, the Canadian operation is not able to produce fish all year round, unlike New Zealand. Everyone else farms the Atlantic salmon, apart from Chile who also farm Coho, which is another species of Pacific salmon. Chinook, also known as Quinnat or King, is considered to be the premium variety and commands a far higher per-kilo price in world markets. The premium end of the market is estimated to be around 10%, or 240,000 tonnes. New Zealand Chinook could potentially supply as much as half that total, which would require at most about 80 – 100 surface hectares of sea space and generate export earnings of around \$2.5 billion PA.

New Zealand's salmon farming industry is currently concentrated in the Marlborough Sounds. There are also salmon farms off the coast of Southland, in Akaroa, and inland in the canals of the Waitaki power scheme in the MacKenzie Country. However Marlborough is not ideal as a location from the Industry's point of view, as successful salmon farming requires water that is colder and faster flowing than the environment of the Sounds, as well as having the shelter that the Sounds do provide.

But the east coast of Stewart Island provides a near-perfect compromise from almost everyone's point of view. The water is cold enough, deep enough, fast-flowing enough, and sheltered enough, to provide ample space for all the expansion the NZ salmon farming industry is ever going to need or want, and it will be completely out of view of all but a very few hardy hunters and DOC staff. The economic returns to Southland and the nation are potentially enormous. There is the potential for in excess of 3,000 new jobs being created directly and around the same indirectly in supporting industries. In terms of economic potential, it's the Tiwai Point aluminium smelter all over again.

It is unlikely that the impact on the environment is either as bad as the naysayers proclaim, nor as rosy as the proponents make out. Obviously keeping a large number of fish in a cage will generate a layer of effluent underneath the cage. But that effluent itself stimulates the proliferation of such organisms as feed on it, and there are, once again, other organisms which do feed in such conditions, that can be farmed for profit in such locations.

At present the greatest impediment to the commercial breeding of certain species such as Sea Cucumber and Goey Duck, both of which command high prices as prized delicacies in Asian markets, underneath salmon, mussel, and oyster farms, is that they are quota species, and as such may not legally be farmed at present.

And the industry themselves, however much they try to dress it up and minimise it, are plainly aware that excessive detritus does have negative impacts, not only on the local environment, but on their own productivity and quality. As such they will be motivated to farm within the confines of the envelope of optimum economic production, and it is only realistic to assume that they will go as close to the edge of that envelope as they can get away with.

It is also a reality that in an ever-more populated and hungry world, where an ever-growing proportion of mouths are fed from an ever-growing fish farming industry, there will emerge a serious premium market for wild-caught ocean fish, and New Zealand is incomparably advantaged in being in a prime position to capitalise on this as well. We can have the cream of both worlds, but only if we sort our Fisheries management out properly – hence our call for a complete review including a Commission of Inquiry.

Our policy calls for the designated inshore fishery to be a recreational-only zone, out to the 12-mile as a default, but determined regionally through consultation with all stakeholders. In some areas this might mean a 3-mile limit, or a depth limit such as the 100-metre line.

Commercial fishing in this designated inshore will be limited to non-bulk harvest for local trade only, with no export permitted, whilst taking account of the realities of crayfish and paua and other shellfish and the places they live and grow. And until technology allowing farming further offshore becomes economically viable, fish farming will by default also exist inside the inshore zone.

ENDS

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