

# Hatch and catch nets big returns



A fish farm at Werribee is making a big mark in global markets, writes **SARAH HUDSON**

ON the outskirts of Melbourne, near Werribee, is Victoria's only barramundi producer, and the world's largest barramundi hatchery.

Yet few have heard of MainStream Aquaculture.

It's a low-key status that chief executive Boris Musa said until COVID-19 worked perfectly for the company, which produces 40 million fingerlings annually, and 2000 tonnes of whole fish sold under its Infinity Blue brands, across four farms.

"We're a multi-site, multinational business with a complex operation and supply chains, producing a sustainable product on Melbourne's doorstep," Boris said.

"For many years we've stayed under the radar. Up until recently we've not been able to satisfy market demands.

"Before the pandemic our biggest channels were food service and export, with about 20 per cent retail, but since COVID that has flipped, with retail now 80 per cent."

Boris said in the immediate aftermath of the pandemic in Australia, business dropped 80 per cent.

It speaks volumes about the company's leverage in the industry that as of this month, October, they have regained 100 per cent of sales, and are still on track to double capacity to 4000 tonnes of whole fish in the next two years.

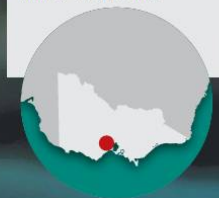
"Because we have transitioned the business model, focused more on the consumer and retail outlets, it's appropriate we tell our story and engage with the community," Boris said.

MainStream Aquaculture was started by four mates in 2001 and is now a private company with a board, 40 shareholders and 50 staff.

Production at Werribee is on a 1ha property, which includes a 700sq m hatchery, with eight 20,000 litre brood-stock tanks, as well as several smaller ones.



**MAINSTREAM AQUACULTURE**  
**WERRIBEE**  
 VICTORIA'S only barramundi producer  
 THE world's largest barramundi hatchery  
 PRODUCES 400 million fingerlings annually  
 ABOUT 2000 tonnes of whole fish is sold under its Infinity Blue brands



**Big catch:** MainStream Aquaculture chief executive Boris Musa with a barramundi produced at Werribee, and (above) barramundi fingerlings also grown at the hatchery.

## FEEDING FRENZY

THE hatchery also includes live feed tanks of brine shrimp and a microscopic invertebrate called artemia, which they feed to fingerlings, and also sell to local markets, including the Melbourne and Sydney Aquariums.

The Werribee farm also includes two grow-out areas. A 6500sq m section includes eight grow-out tanks, each holding 600,000 litres of water. A smaller 2300sq m grow-out area includes 97 smaller tanks up to 80,000 litres.

In Far North Queensland, MainStream Aquaculture has two farms each of 80ha, including grow-out ponds, as well as a hatchery at James Cook University.

Last year the company also took over operation of a 445ha farm in Arizona, in the US, where they ship Australian fin-

gerlings to grow out fish for the local market.

"It's a more sustainable and efficient way to supply fish for local US markets," said Boris, who has worked for the company for a decade, after a background in finance, including at Macquarie Bank.

The hatchery has potential to grow to 70 million fingerlings annually, but for now 40 million fingerlings, about 20mm in length or up to 30 days old, are sold domestically (about 10 per cent), with the rest exported to 25 countries; supplying a third of global and two-thirds of national barramundi industry production.

Pre-CVOID, 5 per cent of fresh fish was exported, with 95 per cent sold to domestic markets (80 per cent food services); now 80 per cent is retail.

Value-added fish was introduced last year, with about nine different products including hot and cold smoked fish, with more products planned in coming months.

Because barramundi is a tropical fish that requires warm water and ambient air, Queensland grows fish in outdoor

finity Blue Saltwater brand.

In contrast, Werribee grows 1kg size whole fish in tanks that contain geothermal water, sold as Infinity Blue Springwater.

## PUMPING IT UP

IN 2003 the company installed pumping to a depth of 100m to access the 28C geothermal saline spring, managed by Southern Rural Water.

"We are the biggest user of the resource, at 5 per cent of total usage," Boris said.

"My understanding is there's low demand for the

Boris said the company's hatchery, launched in 2007, used genomic testing or molecular markers to breed for desirable traits in breeding stock.

In particular they are breeding for faster growth rates, fillet yield, disease resistance and white flesh colour.

They breed from two barramundi variants, silver, and also the rarer golden (able to isolate the gene characteristic to produce a small number of sought-after golden barramundi).

While native barramundi spawn once a year in summer,

the artemia and brine shrimp, and in grow-out tanks they are fed a palletised feed, with 1.5kg of pallet creating 1kg of growth.

Most of the pallet is made from wheat, soy, potato starch and other agricultural inputs, with 5 per cent sourced from wild Peruvian anchovy.

Boris said they were working to reduce the reliance on wild-catch fish meal.

"One of the critical constraints to that is Omega-3. It's such an important health component and research shows that if you reduce the fish in their diet, you reduce the Omega-3," he said.

"Ultimately though, 75g of fish meal goes to grow 100g of barramundi, which is an efficient conversion ratio."

The 38-year-old said Australia's barramundi market was ripe to grow.

In 2014, aquaculture surpassed wild fisheries as the dominant source of seafood products, forecast to triple in size by 2050. But two-thirds of barramundi sold in Australia was imported, with inadequate country-of-origin labelling, Boris said.

"In Australia we consume 170,000 tonnes of white fish annually, of which 25,000 tonnes is barramundi.

"We believe barramundi can grow to 60 per cent of the market given we're competing

**'Before the pandemic our biggest channels were food service and export, with about 20 per cent retail, but since covid that has flipped, with retail now 80 per cent'**

water and it's not fully used because it's saline, which is not good for traditional agriculture and it's also very deep, which makes extraction cost high."

The Werribee farm exchanges 9.6 million litres per hour through a Recirculating Aquaculture System, which reuses 99.9 per cent of the water, leaving about 100 megalitres annually discharged into the public waste system.

The recirculated water is filtered for waste, which is sold as

MainStream Aquaculture spawns monthly, to demand, ranging from 700,000 up to 7 million a month for peak demand in summer.

"We have now had about 165 consecutive successful spawns," Boris said. "Because we have developed processes to have fertile brood stock year round, ensuring they are in the right condition based on feed, light and water chemistry."

## WHEAT ROOST





**Pooled resources:** Breeding ponds at the Werribee aquaculture farm.

ponds, producing large fish up to 4kg for fillets and portions, sold under the In-

a by-product, a compost called Barramundi Boost. (Another sideline is seconds fish sold through a pet food company).

FISH are moved about eight times through their life in various grow-out tanks. In the hatchery they are fed

against captive fisheries caught by trawlers, such as whiting, shark or dory, and given the level of imports."