

## Technology for diseases

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## The industry in Australia

Mainstream Aquaculture CEO speaks about unique challenges in Oz farming

# FISH FARMING INTERNATIONAL

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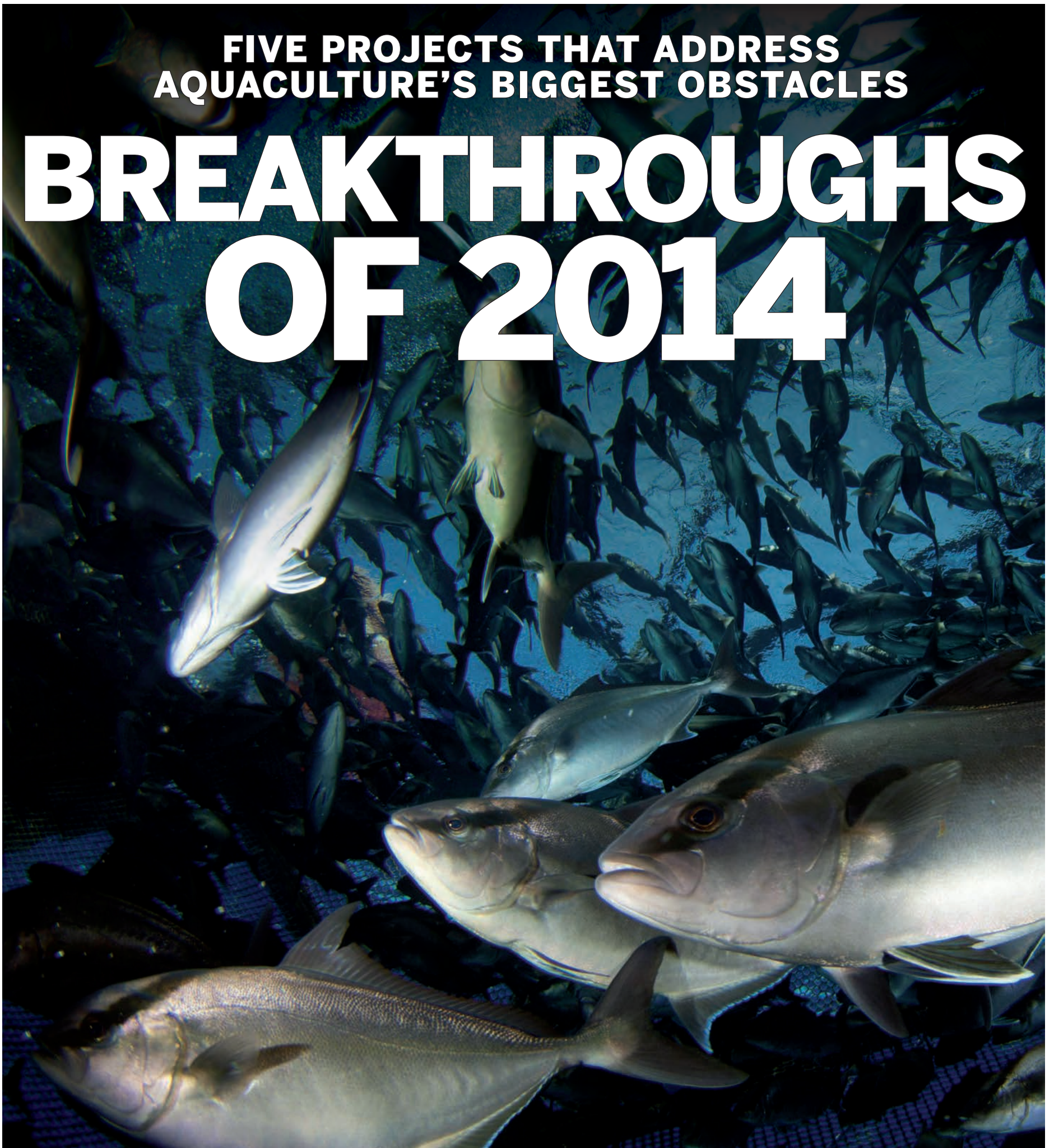
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# BREAKTHROUGHS OF 2014



# Q&A



The CEO of Australia-based Mainstream Aquaculture talks about the challenges that his country's fish farming industry faces -- and its future.

Avani Nadkarni

**Q** Tell us about your background in the aquaculture industry and how you got to Mainstream.

**A** My background is in the finance sector, and my last role prior to joining the aquaculture industry was as a director with Macquarie Group, a diversified financial services business. I joined

Mainstream in 2010 in a part-time non-executive director role while maintaining my duties as an executive at Macquarie.

In 2012, I commenced at Mainstream in a full time capacity with a view to adding a complimentary commercial skill set to the organization's extremely strong technical team.

**Q** Tell us a little about the company. What is the most important thing Mainstream does, in your opinion?

**A** Mainstream Aquaculture was founded in 2003 with a vision to build a business for the future by becoming the world's leading provider of recirculating aquaculture fish products. Headquartered in Melbourne, Australia, Mainstream operates two Barramundi hatcheries, including the world's largest, and two recirculating aquaculture plants, including the biggest in mainland Australia.

In my opinion, Mainstream's most important business activity is our stock improvement program, focused on producing fish that demonstrate:

- Rapid growth with improved feed

conversion efficiency.

- Reduced size variation.

- Disease resistance.

- Increased fillet yields.

- Lighter coloration with no grey pigmentation or flesh irregularities.

Advanced stock improvement programs are a characteristic of all industrialized agriculture sectors, and Mainstream operates an industry leading selective breeding program for Barramundi.

We are sharing the benefits of the substantial investment the business has made in this area through the provision of fingerlings to farms all over the world. The attributes our fish possess support industry development through better production efficiencies and market outcomes. To date, we have exported fish to 18 countries across five continents.

**Q** What are the two biggest challenges aquaculture faces? What can be done to overcome them?

**A** Sustainability – As a planet, we will need to produce more food over the next 30 years than has been produced during the entire history of human civilisation. This will put pressure on all intensive agricultural industries to improve sustainability credentials.

Access to capital – The industry is capital intensive and many potential culture species present a long lead time before they can be commercialized. Access to institutional capital will support industrialization and larger-scale investment in research and development.

The two challenges are intertwined. From my background in financial services, I understand the perception around aquaculture is the operational risk is high and in account of this elevated risk profile, the industry does not generate acceptable returns on invested capital.

Patient capital is required and the aquaculture industry needs to do a better job of promoting its successes to investors. Access to institutional capital will drive sophisticated, large-scale research and development programs, which will improve industry profitability and environmental sustainability.

An example of research and development investments impact on profitability and sustainability is Mainstream's feed efficiency program. In 2007, our commercial FCR (FCR after waste, mortalities and purge losses) was 1.54.

In 2014, after significant multi-year

investment in stock improvement and system engineering, our commercial FCR was 1.30. Our feed efficiency improved by 16 percent and, furthermore, we have reduced the percentage of fishmeal we use in our diets over this period by in excess of 10 percent.

What does this mean in sustainability terms? Evidently, we use 240 grams less feed per kilogram of production, which improves our direct and indirect environmental impact.

Financially, if we assume an average landed feed cost of \$1.80 per kilogram, based on the stated 16 percent improvement in feed efficiency; it costs Mainstream \$0.43 less to produce a kilogram of end product.

**Q** What is different about the Australian aquaculture industry than industries in other countries?

**A** The Australian industry is higher cost and more heavily regulated. Businesses successfully operating in this market leverage Australia's recognized quality standards; provide differentiated products and/or exploit technological capabilities to produce more efficiently.

**Q** About a year ago, you opened up the largest barramundi hatchery in the world. How has the first year been going?

**A** We are pleased with business performance. Shortly after our opening, we were executing monthly batches of approximately 2 million commercial-grade fish.

There is no better commissioning test than the need to scale up quickly and this progressed as planned, which is a real credit to the team. In addition to being able to offer existing clients increased volumes, we have secured new clients in Southeast Asia, Australia, the Middle East and the United States. We look forward to providing them with a reliable supply of high performance fingerlings.

**Q** What can we expect from Mainstream in the next five years?

**A** Growth – in addition to organic growth from our wholesale, hatchery and consulting businesses, we are planning a 1,000-ton addition to our main site in 2016. By 2020, our aim is to produce and sell 4,000 tons per annum of barramundi. This product will service the Australian consumer with a reliable supply of premium, locally grown, sustainable whitefish.

## BORIS MUSA

### MAINSTREAM AQUACULTURE