

Tilapia feed trials conducted at the Navuso Agricultural Technical Institute in Fiji

The Pacific Community (SPC) and Navuso Agricultural Technical Institute (NATI) in Fiji have been conducting trials of a new Pacific Maleya formulated diet on tilapia. This new diet was formulated by Dr Albert Tacon, world-renowned tilapia feed expert, during a feed training consultancy in 2019.¹ At the conclusion of the seven-month trials at NATI, tilapia were partially harvested using seine nets and sold in fresh bundles on ice to customers after they had been weighed and counted. Similar on-farm trials were also conducted simultaneously at Eden's Garden farm in Nausori. Replicated trials were undertaken at Naduruloulou Freshwater Research Station with the Ministry of Fisheries.

According to NATI Farm Manager, Mr Basilio Rokorauwa, the feed trials have resulted in large fish being produced in a shorter production cycle. "We are currently harvesting and selling the fish. Once we have completed the process in the coming weeks, we shall evaluate the economic viability of this new feed as it is slightly more expensive than our current feed, which is purchased from the same manufacturer". Any improvement in growth rate must be assessed against the increase in cost of ingredients to ensure value for money for fish farmers. SPC's Aquaculture Section will assist NATI with calculating the cost of production in order to select the best-value feed.

Mr Rokorauwa added that tilapia has been an important source of nutrition and protein for local people around Suva, Nausori and Sawani, where the fish are sold. Especially during these tough COVID-19 times, having access to good fresh fish helps people feed their families. He said that, "Our staff and church members also love this fish and are placing regular orders. We have kept prices as affordable as we can to help our customers".

Mr Rokorauwa also highlighted that NATI was now placing regular orders for male-only tilapia fingerlings from Kaybee Enterprise, a private hatchery based in Nakasi. "These fingerlings are being delivered at larger-than-normal initial size, and this is yielding better growth and survival in our production ponds". More work is still required for large-scale marketing of tilapia, because live or fresh fish are currently being partially harvested and sold in batches that the current market can utilise.

Preliminary results from the on-farm trials showed that when comparing different farms, it was farm management practices that had the bigger impact on the growth performance of fish, rather than the type of feed being used. Good pond preparation, water management and feeding practices by skilled farmers leads to better growth,

survival and production. Large variation in these practices among different farmers was the main explanation for big differences in growth and production, despite all farms in the trial being stocked from the same batch of fingerlings of the same size that were fed the same feed. Implementation of improved farm management practices is, therefore, of great benefit to farmers, potentially leading to lowered production costs and higher output. This is good news because it means that tilapia farming businesses can be significantly improved by making changes that are within the farmers' control. This result further highlights the need for access to knowledge and information by farmers that the Sustainable Pacific Aquaculture Development Project,¹ which is operated by SPC along member-country national institutions – is helping to address.

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Photo on next page: Pulling the net requires a lot of work.
(image: ©Avinash Singh, SPC)

¹ See: Jimmy R. 2019. Tilapia farmers in Fiji learn to make floating feed. SPC Fisheries Newsletter 159:13. Available at: <http://purl.org/spc/digilib/doc/ww97c>

² The Sustainable Pacific Aquaculture Development (PacAqua) project aims to increase adoption and application of aquatic biosecurity standards, enhance business acumen among aquaculture operations, and increase uptake and adoption of improved aquaculture practices.

