

Teaching aquaculture skills to B40

UPM programme helping participants generate income, learn IoT while breeding red tilapia

WITH constant demand for the fast-growing red tilapia, the species has been chosen for a farming project by the People's Income Initiative-Agro Entrepreneur (IPR-Intan) programme at Universiti Putra Malaysia (UPM).

UPM Agriculture Faculty senior lecturer Dr Fadhil Syukri said that the first group of five IPR-Intan participants have been nurturing the fish in cages since December last year.

"They attended guidance classes in November and December.

"Once we confirmed that they had thorough understanding, we proceeded with practical training, which involved managing the fish in cages.

"We started by releasing juveniles measuring two to three inches each into the cages, with a total of 2,000 juveniles released into each cage," he told Bernama in an interview at the UPM Fish Breeding Centre in Serdang.

IPR-Intan's two-pronged strategy is to increase participants' income and to provide them exposure to smart agriculture based on the Internet of Things (IoT).

Fadhil, who has 15 years of experience in fish breeding, explained that each participant tends four cages.

He anticipated the fish – a farmed species that is resilient and easy to manage – to reach a weight of between 400g and 500g within three months.

"As the fish grow, we estimate that each participant will man-



At UPM's fish breeding facility, Fadhil and his colleagues train programme participants to use smart technology to farm red tilapia that can number up to 1,000 fish per cage. — Photos: Bernama

age eight cages," said Fadhil.

"Ultimately, we aim to house 1,000 fish in one cage."

Currently, participants need to feed the fish three times a day.

However, UPM would soon introduce automatic feeder

machines as a way of using smart agricultural methods.

"We want to encourage participants to incorporate IoT elements.

"With auto-feeders, fish will be fed according to suitability, such as every three or four hours.

"Consistent feeding will prevent hunger and promote growth," he said, adding that the feed comprises a blend of fish meal, fish powder, corn and soybeans.

In terms of market potential, Fadhil highlighted participants' promising income prospects as the tilapia would be sold for RM10 per kg.

"Considering that one cage can yield up to one tonne, we estimate that each cage could generate sales worth RM10,000."

On future plans, he revealed that new participants may venture into farming freshwater patin (a type of catfish) and barramundi in cages.

Fadhil explained that the IPR-Intan programme is open to the hardcore poor and B40 group who wish to increase their income through smart agriculture.

He said nine lecturers from the faculties of agriculture, engineering, veterinary medicine as well as business and economics were tasked with guiding participants.

"Admission is free. All participants will gain knowledge aimed at facilitating them to become successful farmers or breeders," he said.

On Feb 24 last year, Prime Minister Datuk Seri Anwar Ibrahim announced that the government had allocated RM750mil to the Economy Ministry, as part of the 2023 Budget, to implement the IPR-Intan programme.



Fadhil with an adult red tilapia that can grow to 500g and fetch RM10 per kg.



A juvenile red tilapia is one of thousands being bred in UPM as a way of creating income for the hardcore poor and B40 through skills building and smart aquaculture.

Participants are expected to earn between RM2,000 and RM2,500 per month during the 24-month monitoring period that began when the programme was launched last July by Economy Minister Rafizi Ramli.

The first batch of beneficiaries comprised 40% university graduates while the rest were from the

IPR-Intan and E-Kasih programmes.

UPM vice-chancellor Prof Datuk Dr Mohd Roslan Sulaiman said the government had invested RM31.5mil for plant and fish farming infrastructure at the 26.30ha Agricultural Industry Excellence Centre in Puchong.