Establishment of a Satellite Nucleus of the GIFT Strain at Rajiv Gandhi Center for Aquaculture (RGCA), India: Phase II

Project brief

April 2019—March 2020

Project Summary

Rajiv Gandhi Center for Aquaculture (RGCA), India, and WorldFish have been collaborating since August 2009 that led to the establishment of GIFT satellite breeding nucleus and breeding program in India. Phase I of the collaboration running from 2011 to 2016, saw the establishment of a fully-pedigreed genetic improvement program for GIFT tilapia in India. The program successfully achieved five generations of selection at RGCA's research station in Vijayawada.

Phase II of the collaboration with Rajiv Gandhi Center for Aquaculture (2019-2023) is to continue to improve the genetic performance of the GIFT strain in India, and aims to further develop viable dissemination models that can facilitate the long term delivery of high-quality tilapia seeds to the Indian aquaculture sector. The project will also explore the development of viable economic models that will allow the breeding program to continue beyond the duration of the project. In addition, the project will design and implement a data collection and recording platform to allow monitoring of GIFT dissemination, and understand how variations in on-farm performance of GIFT in different farming climates or systems will impact the variability of farmer production, allowing better extension advice and recommendations to be shared with producers.

GIFT germ plasm was supplied to RGCA in 2011, 2014 and 2016. Considering 2011 as G0, RGCA now has 109 families of G7 in 2019. RGCA and WorldFish will continue to pursue work in the following areas and strengthen the cooperation to deliver the benefits of GIFT to a large number of fish farmers and value chain actors in India:

Research country

India

Donor

Ministry of Commerce & Industry, Marine Products Export Development Authority, Rajiv Gandhi Centre for Aquaculture - MOCI - MPEDA - RGCA

Project duration

2019 – 2021

Budget

USD 0.14 million

1. Develop an approach for exchange of breeding program data from RGCA (from ongoing genetic improvement program in RGCA) to WorldFish genetics team for assisting with data analysis and provide recommendations on breeding value and mating list for producing new generations of GIFT in RGCA.
2. Undertake GIFT performance studies in selected states of India – Kerala and Odisha.
3. Facilitate GIFT (Tilapia) policy discussions to ensure smallholder farmers access international public goods (GIFT) and benefit from it.
4. Develop an India tilapia (GIFT) strategy to reach the target production of 500,000 MT by 2030.
5. Establish a certification/accreditation system for clean GIFT seed
6. Increase GIFT seed supply .

WorldFish will conduct an independent National-level survey on the present status of tilapia production (both wild and farmed), seed production, domestic markets and export markets, tilapia consumer profiling, farmer needs and preferences and policy bottlenecks. A forecast for tilapia production and demand over the next 10 years including a comprehensive Action Plan (Business Plan) with time-bound milestones will be prepared.

Contribution to Outcomes

1 Innovation

Generation 7 of genetically improved farmed tilapia (GIFT) has been produced in India (*Read more*)

1 Outcome Impact Case Report

Successful establishment of the of GIFT Satellite Breeding Program in India with more than 4,000 grow-out farmers (*Read more*)

References

V.Chadag. Establishment of a Satellite Nucleus of the GIFT Strain at Rajiv Gandhi Center for Aquaculture (RGCA), India Phase II. Annual Report April 2019 - March 2020

Link : https://hdl.handle.net/20.500.12348/4092

Acknowledgements

This work was undertaken as part of the CGIAR Research Program on Fish Agri-Food Systems (FISH) led by WorldFish. The program is supported by contributors to the CGIAR Trust Fund. Funding support for this work was provided by Ministry of Commerce & Industry, Marine Products Export Development Authority, Rajiv Gandhi Centre for Aquaculture - MOCI - MPEDA - RGCA in the framework of this project.

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