

# On-farm trials of WorldFish Genetically Improved Rohu

Matthew G. Hamilton, Mohammed Yeasin\*, Md. Badrul Alam, Md. Rayhan Ali, Md. Fakhruddin, Md. Mazharul Islam, Benoy K. Barman, Kelvin Mashisia Shikuku, Colin C. Shelley, Cristiano M. Rossignoli and John A.H. Benzie

\*presenter (M.Yeasin@cgair.org)



# WorldFish Carp Genetic Improvement Program

#### Goal

Substantially increase aquaculture productivity in Bangladesh by developing and disseminating rapidly-growing carp strains

#### Scope

Rohu, catla, and silver carp, representing 34% of Bangladeshi aquaculture







Catla



Silver carp



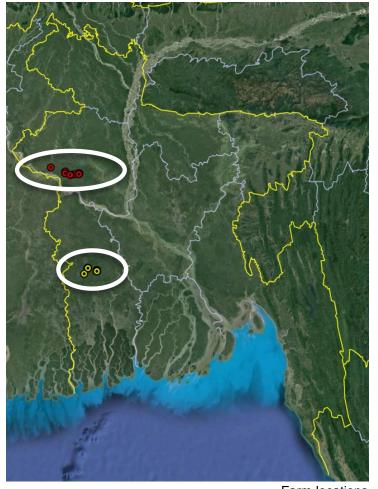
## WorldFish Carp Genetic Improvement Program

## **Key Facts**

- Initiated in 2012
- Accomplished three generations of selection for rohu, two generations for silver carp, and one generation for catla
- Released 'Generation 3' (G3) rohu in 2020 and 2021
- G3 rohu is available at 30 hatcheries across the country
- Eight hatcheries commenced spawning the fish for the first time in 2022
- WorldFish plans to provide additional hatcheries with broodstock as fingerlings in 2023



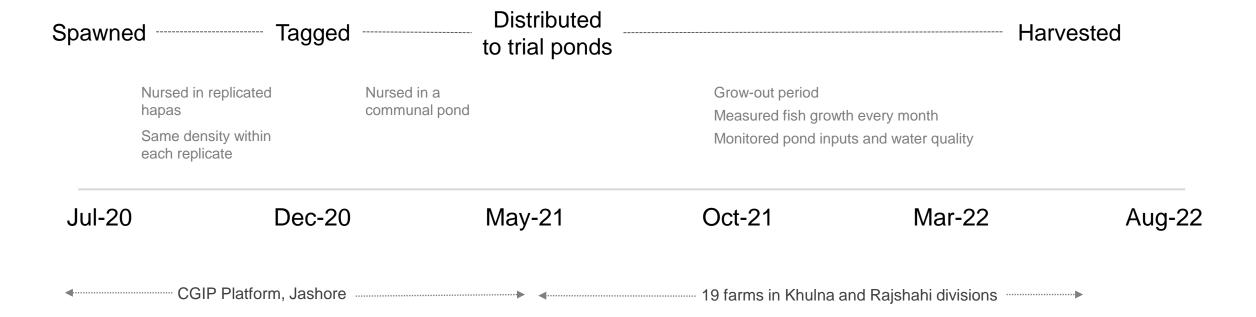
- Completed on-farm trials of G3 rohu in June 2022
- 19 semi-commercial farms in Rajshahi and Khulna divisions
- Three treatments G3 multiplier, control line (equivalent to riverine stock) and commercial rohu strains





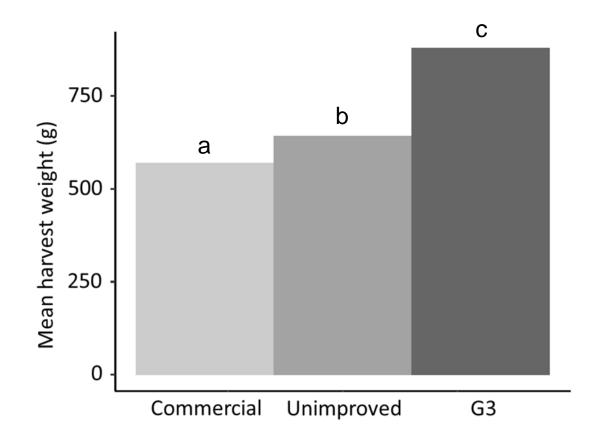


#### Methods

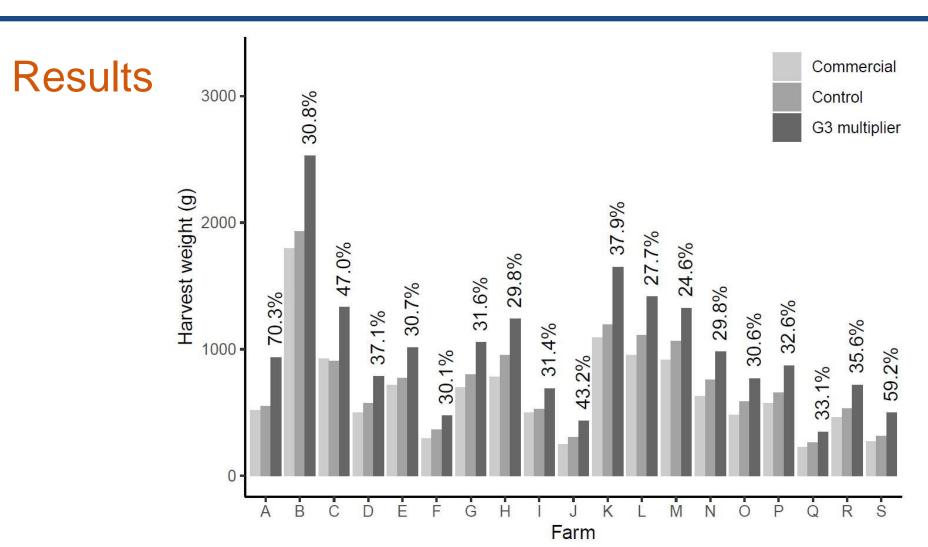




#### Results







A-J: Khulna division

K-S: Rajshahi Division



Hamilton, M.G., Yeasin, M., Alam, M.B., Ali, M.R., Fakhruddin, M., Islam, M.M., Barman, B.K., Shikuku, K.M., Shelley, C.C., Rossignoli, C.M., and Benzie, J.A.H. (submitted). On-farm performance of genetically improved rohu (*Labeo rohita*) in Bangladesh. Frontiers in Aquaculture

#### Conclusion

G3 outperformed both commercial and control strains at each of 19 farms.

Overall, G3 fish weighed 37% more than the fish from the control strain.

These findings will encourage hatcheries, nurseries and farmers to adopt genetically improved rohu and provide confidence in the approach to genetic improvement adopted by WorldFish.



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# **Thank You**

