

**Application for selection as “MULTIPLIER UNIT” for
dissemination of genetically improved rohu (AhR Jayanti)
and improved catla in India**



**ICAR-Central Institute of Freshwater Aquaculture,
Kausalyaganga, Bhubaneswar
Odisha, India**



Background:

For the first time in India, selective breeding was initiated at ICAR-Central Institute of Freshwater Aquaculture (CIFA), Bhubaneswar, Odisha, India in collaboration with Institute of Aquaculture Research (AKVAFORSK), Norway in the year 1992. Total six stocks including five stocks collected from different riverine sources in North India namely, Rivers Ganga, Gomati, Yamuna, Sutlej and Brahmaputra which are the native habitat of rohu and a local stock from the fish farm of CIFA was taken up as base population for the Jayanti rohu breeding program. The breeding program was started with an objective to enhance the growth rate (body weight at harvest) in rohu. Later from the year 2004, disease resistance against *Aeromonas hydrophila* was added as second trait for selection. The improved rohu, popularly known as "Jayanti" was named in 1997 since it was officially released during the 50th anniversary of Indian independence (Swarna Jayanti). Trade name was registered with Kolkata Court vide No. 1368991, Journal No- 1359, Class- 31 during 2008. Further it has been re-validated in the year 2013. ICAR-CIFA has completed 13 generations of Jayanti rohu which grows 50-60% faster than local rohu.

To create awareness regarding the superiority of the "Jayanti" strain of rohu over the local strain and the importance of "quality seed" among the farmers, hatchery owners and entrepreneurs, ICAR-CIFA conducted several workshops and Farmer-Scientist interactions throughout India. Genetic improvement programs can immensely contribute to sustainable aquaculture production. It would result in enhanced productivity through improved genetic gain and also substantially reflect the positive impact on farmers' income, which has already been demonstrated through the field trials conducted on the genetically improved rohu.

After the success of the first selective breeding program for growth improvement of rohu (popularly known as "Jayanti rohu"), ICAR-Central Institute of Freshwater Aquaculture (ICAR-CIFA) has initiated a selective breeding programme on Catla (*Labeo catla*) to improve the body weight at harvest during 2010 to cater to the needs of the farming community. Nine strains/populations of *L. catla* including two riverine strains (Ganga and Subernarekha) from different geographical regions of the country viz. West Bengal, Bihar, Odisha, Andhra Pradesh and Uttar Pradesh were collected for the establishment of the base population. At present third generation is produced following combined Family Selection method. After two generations of selection, 15% genetic gain per generation was obtained in genetically improved catla. Under the field trials in different states (Odisha, West Bengal, Assam and Maharashtra), the genetically improved catla, in the polyculture system, have attained a mean weight of 1.8 kg in comparison to the local strain of 1.2 kg, across all locations in one year.

This present advertisement is therefore given to select the interested carp hatchery operators in India to become the '**Multiplier Unit**' for dissemination of fast growing **Jayanti rohu and improved catla** to large number of farmers. The Criteria for selection of multiplier unit and application for is given in the annexures. Interested carp hatchery operators may apply in the prescribed application form to the Director, ICAR-Central Institute of Freshwater Aquaculture, Kausalyaganga, Bhubaneswar-751002, Odisha, India with supporting documents for consideration with superscribing on the envelop as "Application for selection as "MULTIPLIER UNIT" for dissemination of genetically improved rohu (AhR Jayanti) and improved catla in India"

The last date for application is 09.12.2024

ANNEXURE-I

Criteria for Selection of Multiplier Units for Improved Rohu (AhR Jayanti) and Improved Catla

| Sl. No | Criteria | Requirements |
|----------|--|--|
| 1 | Technical competence: Hatchery manager should have a sound knowledge about the breeding and hatchery management | |
| 1.a. | Education of the Hatchery i. owner ii. operator (if applicable) | Matriculation (Minimum)/ Graduation (preferred) |
| 1.b | Experience in eco-carp hatchery operation | Minimum five years (active in operation) with proven track record |
| 2 | Facilities: The hatchery owner/manager should have following minimum facilities to be considered for authorized multiplier unit | |
| 2.a. | Location of the hatchery | Those nearer to the major farming area will be preferred. |
| 2.b | Spawn production capacity | 50-100 million spawn per year |
| 2.c | Pond and hatchery facilities | Nursery ponds- minimum- 1 ha Grow out and Broodstock ponds- minimum 2 ha. Spawning pools – one or more (5 m dia) Hatching pools – Two or more (3 m dia) |
| 2.d | Supply of water | Adequate supply of good quality freshwater |
| 2.e | Accessibility by road | Those having good accessibility by road will be preferred. |
| 2.f | Manpower | Adequate manpower to manage the hatchery smoothly |
| 2.g | Land tenure (e.g., owned, long term lease) | Those who own the hatchery would be preferred followed by long term lease holders (Minimum 05 years) |
| 2.h | Soil and water quality testing facility | To test soil and water parameter (Optional) |

| | | |
|----------|--|--|
| 3 | Financial Capability: Multipliers should have the financial capability to build/maintain facilities, make necessary improvements, maintain appropriate levels of working capital and hire the staff they need to operate the hatchery | |
| 3.1 | Financial capability | Availability of minimum level of working capital for operation of hatchery |
| 3.2 | Positive credit reports | Those having positive credit reports will be preferred |
| 3.3 | Feedback from trade references | Positive feedback from trade references will be preferred |

ANNEXURE-II

TERMS AND CONDITIONS FOR MULTIPLIER AGREEMENT

Roles and responsibilities of NBC

The NBC agrees to the following to the **Selected Multiplier Units**

- ✓ To continue the selective breeding program and supply breeder seed of latest generations as per availability (as per price fixed by the NBC) every year during breeding season to build the broodstock for breeding program as per guidelines/directives given by NBC.
- ✓ License fee for the multiplier unit and the period of MoU will be decided by NBC
- ✓ To provide training and technical support in hatchery operations and broodstock management to multiplier units as per the need.
- ✓ To undertake brand development and marketing activities across the nation
- ✓ To conduct performance evaluation of the multiplier units.

Roles and responsibilities of Selected Multiplier Units

- ✓ To pay License fee of **Rs. 2,00,000/- for five year** for the authorized multiplier unit of improved rohu and catla on day of signing MoU.
- ✓ Culture and breeding plan to be followed as per protocols given by Nucleus Breeding Centre.
- ✓ Seed price for sale of seed to farmers is to be fixed by the **MUs**, and it should not under any circumstances, be more than 20% from the prevailing seed price of Government hatcheries in the state.
- ✓ **MUs** will give feedback to ICAR-CIFA at all important steps about the activities/developments. This will *inter alia*, include package of culture practices, quarterly sampling result as to be demanded by the **NBC for their record**.
- ✓ The **MUs** should maintain register for all beneficiaries along with postal addresses and phone numbers so as to enable the **NBC** to monitor feedback of activities as and when required.
- ✓ The **MUs** should maintain purity of improved varieties developed by NBC. They should not mix improved species with any local stock. With assurance of removing local stock phase-wise.

- ✓ The **MUs** under no circumstances can claim any scientific/genetic right on improved varieties developed by NBC. The **MUs** has to give/recognize due credit to the Nucleus Breeding Centre.
- ✓ The rules or guidelines (as amended, if needed) available from NBC need to be strictly adhered and IPR guidelines of ICAR will be followed in case of any ambiguity.
- ✓ The MUs should not collect back the broodstock from the seed supplied farmers or wild or any other source.
- ✓ Multiplier units should replace the old broodstock by taking latest generation breeder seed from NBC.
- ✓ Multiplier Unit status will be provided for a period of 5 years which can be changed based on the performance of MUs. Any violation of the above conditions will attract legal action and cancellation of the licence / MOU by the NBC.
- ✓ The **multiplier unit** shall arrange travel and logistic for the visit of Scientist from Nucleus Breeding Center for monitoring of the multiplier unit.

ANNEXURE-III

PROFORMA FOR MULTIPLIER UNIT

(AhR JAYANTI ROHU AND GENETICALLY IMPROVED CATLA)

| Sl. No | Particulars | Details |
|--------|--|--|
| 1. | Name of the Hatchery (If any) | |
| 2. | Category of Hatchery | Government/Private |
| 3. | Registration/License No. (if issued by State Fisheries Department) | |
| 4. | Type of hatchery | Cemented Chinese Circular/FRP/Jar hatchery |
| 5. | Name of the Hatchery Owner | |
| 6. | Gender | |
| 7. | Age | |
| 8. | Mobile Number and Email ID | |
| 9. | Complete Postal Address with Pin Code | |
| 10. | Education of Hatchery Manager/ Operator | |
| 11. | Experience in carp hatchery operation | |
| 12. | Ownership (whether freehold or on lease) | |
| 13. | If on lease, duration of lease | |
| 14. | Total Area of hatchery (ha) | |
| 15. | Annual seed production capacity (million spawn) | |
| 16. | Carp seed output per breeding cycle (million spawn) | |
| 17. | Current Seed price (per lakh spawn) | |

| | | |
|-----|--|---|
| 18. | Average number of farmers being supplied with seed | |
| 19. | Availability of ponds (Own /lease) | |
| | Nursery Pond | Number: Area (ha): |
| | Grow Out Pond | Number: Area (ha): |
| | Broodstock Pond | Number: Area (ha): |
| 20. | Source of freshwater | |
| 21. | Source/s for financial resources to meet the operational cost | |
| 22. | How long this hatchery is operational under your management? | |
| 23. | Year-wise source of broodstock in last two years | |
| 24. | Number of brooders (male and female) approximately used for seed production every year | |
| 25. | Broodstock of Jayanti rohu available in the Hatchery | Number: Weight (Kg): |
| 26. | Broodstock of GI catla available in the Hatchery | Number: Weight (Kg): |
| 27. | Seed production duration/breeding cycle duration (in months) | |
| 28. | Signature of the Hatchery Owner | |

DECLARATION BY THE APPLICANT

I/We----- son/daughter/spouse/Authorized Signatory/ies ofhereby declare that the information furnished above is true to the best of my/our knowledge and belief. I am/we are fully aware that if the information furnished by us in the application is found false any action as deemed fit for violation of this condition may be taken against me/us.

Name of Applicant:

Signature:

Date & Place:

ANNEXURE-IV

Endorsement by Assistant Fisheries Development Officer/Authorized Officer

1. Application together with documents have been verified and found to be in order.
2. Proposed hatchery has been inspected by the Departmental/Authorized Officer and found suitable for considering as '*Multiplier Unit*' for dissemination of Jayanti rohu and improved catla in the state.

Name & Designation of the Officer:

Signature & Seal:

Date & Place

ANNEXURE-V

CHECKLIST OF THE DOCUMENTS TO BE FURNISHED

| Sl. No | Document | Yes/No |
|---------------|---|---------------|
| 1. | Photocopy of Identity card: Aadhaar Card or any other ID Card issued by State or Central Government of India. | |
| 2. | Copies of Applicant's Bank Account details | |
| 3. | Enclose copies of Land Documents | |
| 4. | Photo/s of hatchery, including GPS coordinates (Latitude and Longitude) | |
| 5. | Details of availability of adequate supply of water and its source | |
| 6. | Source of Finance Proof: Whether bank loan/self-finance/other | |