

Success story of first fish farmer in India to be awarded 'Padma Shri'

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Sri Batakrushna Sahoo.

Padma Shri Award

Instituted in 1954, the Padma Shri is awarded by Government of India to Indian citizens on occasion of Republic Day in recognition of their distinguished service and contribution in the fields of art, education, literature, science, medicine, social service, public affairs, agriculture and others (animal husbandry). Padma Shri, the fourth highest civilian award of the country, is conferred by Hon. President of India at ceremonial function held at Rashtrapati Bhawan at New Delhi city, usually around March or April every year.

Sri Batakrushna Sahoo, an elderly, progressive and professional fish breeder-cum-fish seed producer of Odisha State, was conferred with the Padma Shri Award in 2020 in the discipline of animal husbandry. Reputed Indian fishery scientist and former Director of the ICAR-Central Inland Fisheries Research Institute, the late Dr Vishwa Gopal Jhingran, was

awarded Padma Shri in 1977. In the history of this award, Sri Sahoo is only the second person to receive it from the fishery and aquaculture sector, under the broad discipline of animal husbandry. Scientists from Krishi Vigyan Kendra (KVK) or Farm Science Centre, Khurda District, recommended his name for the Padma Shri Award to the Government of India in mid 2019.

The beginnings of Sri Sahoo

Elderly fish breeders, hatchery operators and fish farmers often show strong passion and keen interest in fish farming. They provide extension services, demonstrate proper technology of induced breeding and hatchery-oriented fish seed production, and recommend the right dosages of fertilisers, manure, lime and other inputs in fish ponds so that other farmers can grow their crop profitably and sustainably.

Sri Batakrushna Sahoo is an ideal example of such. By virtue of good planning and management of carp hatchery and nursery/rearing ponds and unique efforts, he successfully established his vocation of spawn and fry production of major carps in hatchery and fish seed production units. 'Padma Shri' Sri Sahoo was pleased to spend much time with the author at his hatchery on 15th March 2020. The author noted the



Sri B. Sahoo and the author.



The farm also serves as an Aquaculture Field School.



experience and achievements of Sri Sahoo, and his emphasis on 'dedication, perseverance and devout hard work' as key to success.

Sri Sahoo, presently aged 69, was born and brought up at Sarakana Village, Khurda District, Odisha. On 1 June 1986, he gained possession of a panchayat pond of some 11,000-12,000 m² in area for fish farming for the first time, leasing it for 3 years at a cost of Rs. 12,000/-, thus venturing into pisciculture. He met the late Dr Radheyshyam, then Senior Technical Officer and expert in aquaculture extension and rural aquaculture at KVK, Khurda (under aegis of the ICAR-Central Institute of Freshwater Aquaculture, Bhubaneswar) and sought technical advice. After constructing a night shelter hut on the embankment and establishing proper pond treatment, with the onset of the monsoon he stocked total 200 kg stunted major carp fingerlings. These were yearlings of 40-80 g and about 4000 in number, previously maintained in his 1200 m² parental pond and partly bought from fish seed traders. Every day he fed them with feed obtained from ICAR-CIFA and a mixture of wheat flour, rice bran and pulverised ground nut oilcake (GNOC) procured from market. He started harvesting fish from January 1987, selling 1.3 – 1.4 tonnes of fish weighing around 600-800 g apiece, in addition to those he used for household consumption. He invested Rs. 13,000/- in production costs in addition to lease and recouped the total investment within one year with a satisfactory profit as well.

Venturing into fish seed production

In order to stock major carp spawn in a 1,200 m² pond to raise as fingerlings, Sri Sahoo brought spawn from a distant source transported via rickshaw-trolley and aluminium hundi but experienced considerable mortality at the pond site due to transportation conditions. There was no provision of oxygenated packets for spawn transportation at that time. In 1988, he decided to produce good quality carp spawn at his pond site at Sarakana Village using inner and outer hapa (cloth) enclosures fitted in pond. With inspiration and guidance from Dr Radheyshyam, he started maintaining a part of his adult major carps as broodstock (2 -3+ years old) in a separate pond, using pituitary gland extract as an inducing agent. Beginning with induced breeding of *Cyprinus carpio* var *communis*, he obtained 400,000 spawn and stocked his pond for further rearing up to 60 days. He managed the tender stages efficiently with proper feeding, sold advanced fry (early fingerlings) to grow-out farmers and earned Rs. 8,000/-. He realised that fish seed production was more profitable than grow-out fish farming (Rs. 8,000/- earned in 2 months from small pond in comparison to Rs. 25,000/- in 8-10 months from much larger pond). It kindled his interest in fish seed production. He took 3-4 additional ponds on lease for spawn and fry rearing.

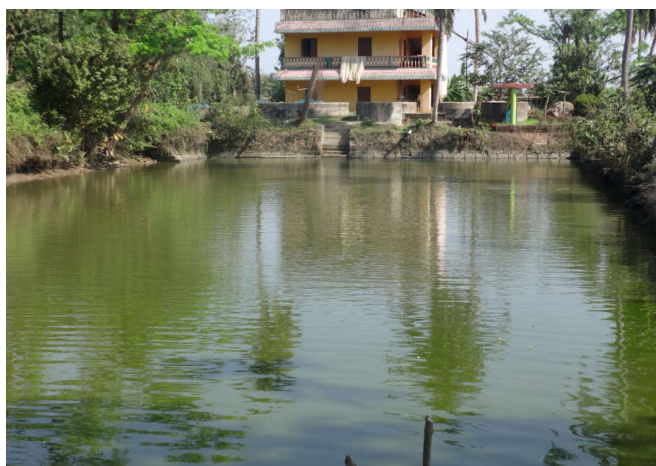
Carp hatchery of Sri Sahoo: a centre of learning

As observed in March at Sarakana Carp Hatchery, Sri Sahoo presently possesses sixteen well-maintained earthen ponds for broodstock, nursery and rearing units covering a total of 40,000 m² water area. He has widened his carp seed production operations, which he has been practicing commercially since 1992. He adopted the scientific package

of practices on major carp breeding, spawn and fry production and broodfish maintenance developed by scientists of ICAR-CIFA, Bhubaneswar and KVK, Khurda. Aquarium fishes such as black and red molly, gold fish and fertilised eggs of golden carp *Carassius carassius* attached to roots of water hyacinth and hatchlings are maintained in circular concrete enclosures of 3.0-4.0 m diameter. Chinese carp hatcheries exist at two sites 150-200 m distance apart; he has four fish breeding pools, eleven egg hatching-cum-incubation pools, two overhead tanks of 60,000 litres and 25,000 litres capacity. He produces spawn, fry and advanced fry of Indian major carps, *Puntius sarana*, exotic carps *Ctenopharyngodon idella*, *Hypophthalmichthys molitrix*, *Cyprinus carpio* and *C. carassius*. About 160-200 million healthy spawn and five million carp fry are produced at this hatchery every season (during April to mid September), supplied in oxygenated packets to 40-45 regular fish farmers in 7-8 districts of Odisha, in addition to neighbouring villages. Spawn are stocked in nurseries @ 2.4-2.8 million / 4,000 m² pond for fry and advanced fry production. A mixture of rice polish and GNOC are used as feed. His three sons help him in this enterprise along with eight permanent labourers.

Some exceptional features

Many of the technologies developed by ICAR-CIFA in aquaculture have been tested and demonstrated at Sri Sahoo's hatchery (Courtesy: OrissaPost, 4th Feb, 2020).



Aquaculture Field School Training Centre at Sarakana.

In 2013, Sri Sahoo was advised by ICAR-CIFA scientists to test the broodstock feed "CIFABROOD" for early maturation of major carps in his pond. He observed attainment of fish gonadal maturity by the first week of April within 48 days of onset of feeding and achieved success in early breeding and spawn production with the help of this newly-developed special feed. The Aquaculture Field School was established by ICAR-CIFA at this hatchery site in 2009, where, according to Sri Sahoo, training programmes are organised 3-4 times every year. It is a school without walls where one farmer learns from another. Knowledge and improved technology



Fertilised eggs of *Cyprinus carpio* maintained in hatching pool.



A part of Sarakana Fish Hatchery and a nursery pond.

on fish breeding, grow-out fish culture, pond management practices and related aspects are disseminated by Sri Sahoo and other resource persons to participating fish farmers and experiences shared.

He has introduced many fish farmers in Khurda and other districts of Odisha to freshwater pond aquaculture, extended co-operation and motivated them to take it up as means of livelihood. Inspecting condition of fish ponds, he used to give necessary advice and extended help voluntarily without any remuneration to many fish farmers (upon receiving their phone calls) seeking for help. He also provides hands-on training and skills development to rural youth and fish farmers in carp spawn production through conventional hapa breeding systems and has visited 8-10 private carp hatcheries in Odisha as a consultant. Until January 2010, Sri Sahoo had been engaged in fish seed production in addition to his office responsibilities. He served as a permanent employee in the Finance Department, Government of Odisha for 24 years including 7 years in the posts of Head Clerk and Section Officer, and also as Desk Officer in the Home Election Department of the Odisha Government. He retired from government employment in 2010.

End note

Sri Sahoo was felicitated by ICAR-CIFA on occasion of the National Fish Farmers' Day on 10 July 2011 and on the Silver Jubilee Year of the institute on 30 January 2012. While talking with author, he fondly expressed gratitude and respect to technical consultant the late Dr Radheyshyam and former Principal Scientist of ICAR-CIFA Dr Sampad Kumar Sarkar, who helped him to grow. Dr Radheyshyam used to come to Sarakana Fish Hatchery frequently. Recently Sri Sahoo added an ornamental fish breeding and rearing component in his hatchery premises, and received a subsidy-based Government loan scheme, which is being implemented. According to him, guarding the ponds, good quality seed stocking, wise routine feeding and proper water quality maintenance will definitely bring good profit up to expectations. He spoke about importance of rural pisciculture for rural development and family nutrition, the benefit of stocking and rearing yearlings instead of normal major carp fingerlings (50-100 g yearling stocking and harvest done on the 5th month with two crops in a year). The expertise of Sri Sahoo is a boon to hundreds of young entrepreneurs in Odisha and neighbouring states willing to establish and operate carp hatcheries, as the availability of good quality fish seed in adequate quantity will dictate the success and progress of grow-out fish culture in days to come.