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INTERGENERIC CATLA - ROHU HYBRIDS : F2 GENERATION

R.K. LANGER*, J. SOMALINGAM AND U.K. MAHESHWARI
Freshwater Fish Farm of the Central Institute of Fisheries Education, Powarkheda, Hoshangabad (M. P.)

ABSTRACT

Intergeneric catla-rohu hybrids were bred through hypophysation and about 5.25 lakh spawn of F2 generation were produced. The rate of survival from fertilized eggs to spawn ranged from 62.5 to 96.4% at 26-30°C.

During 1983-1987, F1 generation of intergeneric hybrid of *Catla catla* male x *Labeo rohita* female was produced in large numbers at the Powarkheda centre of Central Institute of Fisheries Education in Hoshangabad (Somalingam *et al.*, 1988). Although the general appearance of these hybrids are like that of catla, the head is smaller than catla and body deeper and broader than rohu. It showed much better growth than rohu and comparable growth to catla.

In the present study, these intergeneric catla-rohu hybrids were bred through hypophysation to produce its F2 generation in order to study their reproductive potential and develop a knowhow of producing F2 hybrids under tropical climatic conditions.

It was observed that the hybrids attained sexual maturity in the third year. F1 generation hybrids were reared in 0.1 ha ponds following normal management practices. Once a week, water in cultured ponds was partially replenished. The hybrids were fed on a diet of rice bran, mustard oil cake and dried prawn (4.5 : 4.5 : 1.0) @ 1% body weight daily. The hybrids were regularly examined. Majority of the hybrids reached adult stage and both the testes and the ovaries showed definite signs of development. The females developed well defined bulging of abdomen during the fully ripe stage, while the testes in fully ripe males developed freely oozing condition.

In all, 6 females (6.75 kg) and 10 males (9.0 kg) were used. The females received two injections of pitutary gland at an interval of 4-5 hours @ 3 mg /kg body weight and 6 mg/kg body weight respectively. The male on the other hand received only one injection @ 3 mg/kg body weight at the time of second injection to the females. After 4

Table 1 : *Details of spawn production of F2 Generation of Catla -rohu hybrid*

Date of obser-vation	Weight of females (kg)	weight of males (kg)	Total No. of eggs (in lakhs)	Fertili-zation (%)	Total No. of fertili-zed eggs (in lakhs)	Hatching (%)	No.of spawn (in lakhs)	Temperature(°C) Air	Water
21-6-86	1.100	0.600 0.800	0.75	86.67	0.650	92.30	0.60	34.0	26.0
21-6-86	1.200	0.600 0.700	1.00	83.00	0.830	96.39	0.80	34.0	26.0
21-6-86	1.000	0.900 0.900	0.80	84.75	0.678	88.50	0.60	34.0	26.0
24-7-86	0.750 0.500	0.500 1.250	3.00	66.67	2.000	62.50	1.25	28.0	27.0
12-8-86	2.200	1.750 1.000	4.00	75.00	3.000	66.67	2.00	34.0	30.0

* Present address : Central Institute of Fisheries Education, (Deemed University), Versova, Bombay.

hours of 2nd injection dry stripping method was followed to fertilize the eggs.

A total of five experiments were conducted. All the sets bred successfully (Table I) and a total of 9.55 lakh eggs were produced. The rate of fertilisation ranged from 66.67 to 86.67 %. The eggs were incubated in modern hatchery (Model CIFE, D-81 & 85; Dwivedi and Reddy, 1986). The rate of survival from fertilized eggs to hatching ranged 62.50 to 96.39% with an average of 73.34%. In all 5.25 lakh spawn of catla-rohu hybrid (F_2) were produced.

Chaudhari (1973) indicated that among the carp hybrids produced through hypophysation technique, catla-rohu hybrids were the best having good qualities of the parents. He conducted experiments on a small scale to produce F_2 hybrids of catla-rohu. The present observations on the large scale production of F2 hybrids of catla-rohu goes a step further to show that this hybrid responds to hypophysation and has the potentiality to produce the next generation under controlled ecological conditions.

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