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**Captive Breeding of Dwarf Gourami *Trichogaster lalius* with and without Hormone**

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The Dwarf gourami (*Trichogaster lalius*), also commonly known as Colisa, is highly valued both as an ornamental fish and for its food potential. Despite this, breeding efforts for this species have been largely neglected in the Nepalese aquarium industry. In addition, its natural populations are declining due to habitat destruction and overfishing for human consumption.

This study was conducted at the Agriculture and Forestry University, examined the breeding performance of *T. lalius* in captivity, utilizing both natural methods (only substrate) and induced breeding (Ovaprim hormone and substrate) in glass aquariums (Figure 1). Each treatment was replicated twice, with a single pair of broodstock in each aquarium. The water parameters maintained included temperatures of 24-28°C, pH levels of 7.00-8.80, and dissolved oxygen levels of 5.30-7.30 mg/L.



Figure: Male (right, colorful) and female (left, dull) *T. lalius* in the glass aquaria.

Female gourami, weighing 2.29-3.00 g, laid approximately 802-1740 eggs in bubble nests constructed by males weighing 2.03-2.78 (Table 1). Fertilization rates ranged from 70-80%, with hatching success rates of 64-87% after an incubation period of about 24 hours, producing hatchlings measuring 1.8-1.9 mm in length. In induced breeding, ovulation occurred after a latency period of 12 hours. The hatchlings began swimming freely by the fourth day post-hatching. Male gouramis exhibited territorial behavior and parental care, guarding both eggs and hatchlings. The hatchlings were reared in aquariums with a 100% survival rate. This study indicates that Dwarf gourami can be successfully bred in captivity with and without the use of Ovaprim hormone.

Table: Weight of brood stocks, and dose of hormone used in induce breeding of *T. lalius*.

S.N.	Breeding approach	Sex	Weight (g)	Dose (ml/kg)
1	Induced Breeding (Hormone Ovaprim)	Female	2.29	0.50
		Male	2.78	0.25
		Female	2.83	0.50
		Male	2.69	0.25
2	Natural Breeding (No Hormone Used)	Female	2.30	
		Male	2.03	
		Female	3.00	
		Male	2.47	