

Thematic area: Fish Production & Disease Management

Problem definition/Name of OFT: Assessment of efficacy of chemotherapeutics against prevalent disease in Muzaffarpur district i.e., Argulosis.

Title of On farm Trial	Assessment of efficacy of chemotherapeutics against prevalent disease in Muzaffarpur district i.e., Argulosis.
Problem diagnose	Argulosis causes a potential rapid escalation of infection, causing substantial economic loss to the aquaculture industry.
Details of technologies selected for assessment/refinement	Technology Option I:- Farmer's Practice Use of insecticide (Cypermethrine) @ 50 ml/acre/meter depth Technology Option II:- Use of lactoclean @ 40gm/acre/meter depth Technology Option III:- Use of CIFRI-ARGCURE @ 40ml/acre/meter depth
Source of Technology	CIFRI, Barrackpore, West Bengal
No. of Replications	07
Production system and thematic area	Fish Production & Disease Management
Performance of the Technology with performance indicators	Prevalence (%), Intensity of disease, Antiparasitic efficacy (%), Mortality (%)
Constraints identified and feedback for research	CIFRI-ARGCURE was found more effective against Arugulas. Further research may be conducted to assess its efficacy against other fish ectoparasites.
Process of farmers participation and their reaction	Random sampling and Group meetings.

Sampling for observation & data collection



Distribution of CIFRI-ARGCURE and other input



Results: An On-farm trial was conducted to study the efficacy of chemotherapeutics against prevalent disease in Muzaffarpur district i.e., Argulosis. Which a crustacean ecto-parasitic disease, most common and predominant disease causes serious loss to aquaculture industry. Infected fish when treated with CIFRI-ARGCURE as per technology option TO2, shows higher anti-parasitic efficacy (86.95%) than treatment option used in farmers practice FP (80.95%) and TO1 (31.70%). Mortality rate was also found to be least in technology option TO2 (10%) than treatment option used in FP (23%) and TO1 (39%). Assessment provides a significant basis for use of CIFRI-ARGCURE solution @40ml/acre/meter depth for the treatment of fishes infected with ectoparasites Argulus.

Table 1: Effect of different chemotherapeutics against Argulosis disease.

Treatment	Prevalence			Prevalence %	Intensity (Mean)	No. of Argulus sp. after treatment (T)	Antiparasitic efficacy (AE) [B-T/B*100] (%)	Mortality %
	No. of fish examined	Infected	No. of Argulus sp. (B)					
Farmer's practice Use of insecticide (Cypermethrine) @ 50 ml/acre/meter depth TO1	120	46	1995	38.33	43.36	380	80.95	23
Use of lactoclean @ 40gm/acre/meter depth TO2	135	53	1230	39.25	23.20	840	31.70	39
Use of CIFRI-ARGCURE @ 40ml/acre/meter depth	112	76	1748	67.85	23	228	86.95	10