

**ORL-AAQ-16****Growth and Production Performance of Old-Stock and Pure Line Common Carp *Cyprinus Carpio* Fry and Fingerling in Kailali**

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Common carp is one of the most popular freshwater fish species which ranks fourth in terms of global aquaculture production. In order to address the problem of lack of comprehensive understanding regarding the growth and production of old stock and pure line Common carp fry and fingerling, an experiment was conducted from 4<sup>th</sup> May to 1<sup>st</sup> October, 2021 for 150 days in Fisheries Development Center, Geta, Kailali. The experiment was conducted in 2 × 3 factorial design including two treatments i) old stock Common carp and ii) pure line Common carp with three stocking densities i) 20 fry/m<sup>2</sup>, 30 fry/m<sup>2</sup> and 40 fry/m<sup>2</sup> as factors in 18 experimental hapas. Fry of old stock Common carp were obtained from Fisheries Development Centre, Geta, Kailali while those of pure line Common carp were procured from Pure Line Fish Breed Conservation and Promotion Resource Center, Bhairahawa, Rupandehi. Fry were stocked in 1m<sup>3</sup> nylon hapa suspended in earthen pond of 300 m<sup>2</sup>. Throughout the culture period, fish were fed with commercial pellet feed of 32% CP at 5% body weight. Feeding was done twice a day at 10 AM in the morning and 3 PM in the afternoon. Water quality such as temperature, dissolved oxygen and pH were measured weekly in pond water.

The result showed that the total harvested weight, total weight gain, EGFY and ENFY of pure line was significantly higher ( $p < 0.05$ ) at 40 fry/m<sup>2</sup> than 20 and 30 fry/m<sup>2</sup>, and old stock Common carp at different stocking densities of fry and fingerlings. Similarly, gross return and gross margin was also significantly higher ( $p < 0.05$ ) in pure line Common carp at 40 fry/m<sup>2</sup>. Hence, present study showed that pure line Common carp at a stocking density of 40 fry/m<sup>2</sup> has better production and performance. However, further research regarding the different stocking densities should be conducted to assess the optimum stocking density of pure line Common carp in hapa based rearing system.

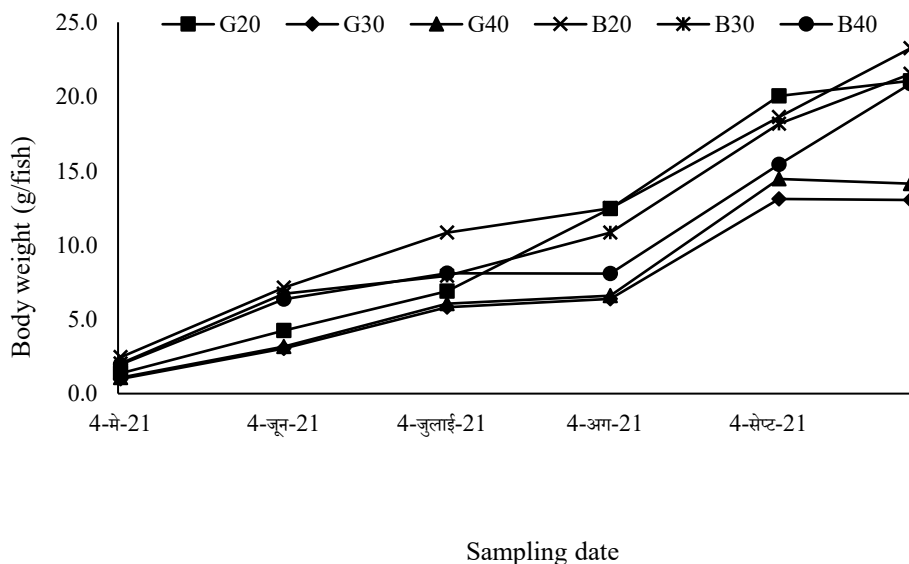


Figure: Average body weight (g/fish) of Common carp in different treatments during experimental period