

**RESEARCH ARTICLE :**

## Growth performance and survival of *L. vannamei* in biofloc treatments grown with different carbon sources

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**SUMMARY :** Impact of *L. vannamei* rearing with biofloc by using different carbohydrate materials (wheat flour, tapioca flour and molasses) as a carbon source to boost the production by improving the conversion of nutrients into harvestable products while maintaining good water quality. The carbohydrate sources for this study were selected based on easy availability and economic viability. In the present study it has been evaluated to identify the efficient carbon source to develop the quality biofloc which play significant role in growth and survival of *L. vannamei*. Enhanced shrimp growth was noticed in biofloc treatment tanks. There was a significant difference in the final average body weight of ( $15.92 \pm 0.07g$ ) in the wheat flour treatment than those treatments and control group of shrimp. The FCR differs significantly between biofloc treatment group and control ( $P < 0.05$ ). FCR lowest ( $0.5 \pm 0.07$ ) was recorded in wheat flour as carbohydrate source biofloc treatment. Highest SGR (4.59) was observed in the wheat flour treatment than those treatments and control. Wheat flour utilization as carbohydrate source to biofloc development for rearing of *L. vannamei* was proved to be the best option among all treatments. The addition of carbohydrate for biofloc development affected the survival of *L. vannamei*. The highest survival of (73.36%) was recorded for wheat flour used as carbohydrate source in biofloc treatments. All the carbohydrate sources (wheat flour, tapioca flour and molasses) utilized for biofloc treatments indicated highest growth and survival than control treatment.

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