













was in the optimum range for the growth of bonylip barb. The average temperature in the maintenance media is in the range of 22.5 °C - 26.6 °C, pH in the range 7.3-8.2, DO is 7.7-8.1 mg L<sup>-1</sup>, and ammonia is 0.0014-0.01 mg L<sup>-1</sup>.

## CONCLUSION

Based on the results of the study it can be concluded that:

1. Addition of fish herbs to commercial feed has a good effect on growth, feed conversion ratio and protein efficiency ratio on bonylip barb, but does not affect the survival rate.
2. The optimal addition of fish herbs to feed is 50 ml Kg<sup>-1</sup> of feed.

## REFERENCES

- [1] Directorate General of Aquaculture, the Ministry of Maritime Affairs and Fisheries of the Republic of Indonesia. 2016. *Performance Report 2016*. Jakarta p.17
- [2] Haetami, K., Abun, dan Y. Mulyani. 2008. Study of BAS Probiotics Making (*Bacillus licheniformis*, *Aspergillus niger*, and *Sacharomices cereviseae*) as Feed Supplements and Its Implications for the Growth of Red Tilapia. *Research Report*. Faculty of Fisheries and Marine Sciences. Padjadjaran University
- [3] Li P, A. Lawrence, F.L. Castille, D.M. Gatlin. (2007). Preliminary evaluation of a purified nucleotide mixture as dietary supplement for Pacific white shrimp (*Litopenaeus vannamei*). *Aquaculture Res.* 38: 887-90.y.
- [4] Esteban MA, Rodriguez A, Mesguer J. (2004). Glucan receptor but not mannose receptor is involved in the phagocytosis of *Sacharomyces cerevisiae* by seabream (*Sparus auratus* L.) blood leucocytes. *Fish Shellfish Immunol.* 16: 447-51
- [5] Puspitasari D. 2017. Effectiveness of Herbal Supplements on Growth and Survival of Catfish Seeds (*Clarias* sp.). *Ilman Journal*, Vol 5 (1) :53-59
- [6] Steffens, W. 1989. *Principles of fish nutrition*. Ellis Horwood Limited, West Sussex, England.
- [7] Tacon, A. E. J. 1987. *The nutrition and Feeding Farmed Fish and Shrimp. A training Manual Food and Agriculture of United Nation Brazilling*, Brazil.
- [8] Zonneveld, N, Huisman E.A, and Boon J.H. 1991. *The Principles of Fish Farming*. Jakarta. Gramedia Pustaka Utama. p.318.
- [9] Effendie, M. I. 1979. *Biological Fisheries Methods*. Bogor: Yayasan Pustaka Nusantara
- [10] Samsudin, R., N. Suhenda dan Kusdiarti. 2008. Determination of the Frequency of Feeding for Growth and Synthesis of Asian Redtail Catfish (*Mystus nemurus*) Seed. *Aquaculture Technology 2008*. Aquaculture Fisheries Research Center, Jakarta.
- [11] Arifin P. P. 2015. Evaluation of Curcuma Longa Linn Extract. on Feed towards Digestive Enzymes and Growth Performance of Gourami Fish (*Osphronemus gouramy*). *Journal of Ichthyology Indonesia*, Vol 16 (1) :1-10.
- [12] Darwis S.N. 1991. *Medicinal Herb of Zingiberaceae Family*. Bogor : Puslitbang Tanaman Industri
- [13] Fadillah, R. U. 2014. Antidiabetic Effect Of *Morinda Citrifolia* L. As a treatment of Diabetes Mellitus. *J Majority* Vol. 3 (7). p. 107-112.
- [14] Lestariningsih., O. Sjoftan dan E. Sudjarwo. 2015. Effect of Leafflower Plant Flour (*Phyllanthus niruri* Linn) As Additional Feed Against Small Intestine's Microflora of Broilers. *Agripet* Vol. 15 (2).
- [15] Rojtinnakorn J, Rittiplang S, Tongsiri S, ChaibuP. 2012. Tumeric extract inducing growth biomarker in sand goby (*Oxyeleotris marmoratus*). *2nd International Conference on Chemical, Biological and Environment Sciences*.
- [16] Kimball and John W., 1983, *Biology*, Addison-Wesley, Reading.
- [17] Poedjiadi A. 1994. *Biochemical Basics*. UI-Press Publishing: Jakarta
- [18] Andriani, L., Soeharsono. 2010. *Scientific review of probiotics*. In *Probiotics: Scientific Bases, Applications and Practical Aspects*. Widya Padjajaran. Bandung
- [19] Mulyani, Y. R., Yulisman and M. Fitriani. 2014. Growth and Feed Efficiency for Tilapia (*Oreochromis niloticus*) Periodically Fasted. *Indonesian Swamp Aquaculture Journal*, 2 (1): 01-12.