ABSTRACT

FAJARRUDDIN MANURUNG. Manipulation of catfish *Clarias* sp. rematuration using gonadotropin hormone and *Spirulina* sp. powder enriched diet. Supervised by Agus Oman Sudrajat and Harton Arfah.

This experiment was done on May until August 2011 in experimental pond facility in Babakan, Fisheries and Marine Science Faculty, Bogor Agricultural University. This experiment was aimed to accelerate rematuration period of *Clarias* sp. using gonadotropin hormone (GtH) at a dose of 5 IU and 10 IU that combined with feeding fish by *Spirulina* sp. powder 2% enriched diet. This experiment was consisted of 9 treatments and 5 replication, treatment 1 (GtH 0 IU without *Spirulina* sp. powder 2%), treatment 2 (GtH 0 IU and *Spirulina* sp. powder 2% for 1 week), treatment 3 (GtH 0 IU dan *Spirulina* sp. powder 2% for 2 weeks), treatment 4 (GtH 5 IU without *Spirulina* sp. powder 2%), treatment 5 (GtH 5 IU dan *Spirulina* sp. powder 2% for 1 week), treatment 6 (GtH 5 IU and *Spirulina* sp. powder 2% for 2 weeks), treatment 7 (GtH 10 IU without *Spirulina* sp. powder 2%), treatment 8 (GtH 10 IU and *Spirulina* sp. powder 2% for 1 week), treatment 9 (GtH 10 IU dan *Spirulina* sp. powder 2% for 2 weeks). This experiment was succeed, marked by gravid fish rate reached 80% and 60% of fish reached gonadal maturation in 30 days. Combination of GtH 5 IU/kg/week for 4 weeks and 2% *Spirulina* sp. powder enriched diet for 1 week showed the best performance which fish produced was 51,720 eggs/kg broodstock, and fertilization rate, hatching rate, and survival rate more than 90%. Rematuration period of catfish can be accelerated by using combination of GtH and *Spirulina* sp. powder.

Key word: Rematuration period, *Clarias* sp., gonadotropin hormone, *Spirulina* sp.