



INTISARI

Secara biologis gurami merupakan ikan dengan pertumbuhan yang lambat. Pertumbuhan yang lambat mempengaruhi pertama kali matang gonad dan memijah. Penelitian mengenai diferensiasi kelamin dan kematangan gonad gurami bertujuan untuk mengetahui kapan gurami pertama kali terdiferensiasi, perkembangan gonad jantan dan betina kapan gurami betina berfungsi memijah pertama kali. Diferensiasi kelamin dianalisis secara molekuler pada umur ke 4, 6, 8, 10, 12 dan 14 sebanyak 4 ekor secara PCR untuk mengelompokkan jenis kelamin ikan dan Real Time PCR untuk melihat nilai ekspresi. Perkembangan gonad dan kematangan gonad, sampel gurami dengan berat 100-1400 g sebanyak 35 ekor jantan dan 35 ekor betina diambil dari pembudidaya gurami di Daerah Istimewa Yogyakarta. Sampel ikan dibedah dan diambil jaringan gonad dan hati gonad diuji histologi. Pada diferensiasi kelamin gurami jantan hari ke 8 dan larva gurami betina hari ke 12. Gurami jantan matang gonad pada berat 1000 g dengan tahapan spermatozoa. Gurami betina matang gonad pada berat 1000 g dengan tahapan vitelogenik tersier. Berat dan panjang ikan yang bertambah, tahapan perkembangan gonad juga terus berkembang hingga mencapai matang dan siap untuk memijah. Gurami jantan dan betina matang gonad dan dapat memijah pertama kali pada berat 1000 g.

Kata kunci: Diferensiasi kelamin, gurami, *dmrt1*, *cyp19a1a*.



ABSTRACT

Giant gouramy is well-known to be biologically slow growth in aquaculture environment. The characteristic affects gonad maturation and spawning. Research on the sex differentiation and maturity of gouramy gonads is carried out as basic knowledge in the reproductive process of gouramy, so it aims to determine when gouramy first differentiated, development of male and female gonads and when female gouramy first functioned. Sex differentiation was analyzed molecularly at the age of 4, 6, 8, 10, 12 and 14 as many as 4 tails by PCR to classify the sex of fish and Real Time PCR to see the expression value. Gonadal development and gonad maturity, samples of gouramy weighing 100-1400 g as many as 35 males and 35 females were taken from gouramy cultivators in the Special Region of Yogyakarta. Fish samples were dissected and gonadal tissue and liver were taken for histological examination. On the sex differentiation of male gouramy on day 8 and female gouramy larva on day 12. Male gouramy matured at 1000 g weight with spermatozoa stage. Gonadal mature female gourami weighing 1000 g with a tertiary vitellogenic stage. The weight and length of the fish increase, the stages of gonad development also continue to develop until they reach maturity and are ready to spawn. Gourami males and females are gonadally mature and can spawn for the first time at a weight of 1000 g.

Keyword: Gonad differentiation, gouramy, *dmrt1*, *cyp19a1a*.