

## Intisari

Penelitian ini bertujuan untuk mengetahui dinamika plankton yang terjadi dalam kolam budidaya serta preferensi gurami, lele dan nila merah terhadap jenis plankton. Penelitian disusun menggunakan metode Rancangan Acak Lengkap (RAL) dengan dua ulangan. Setiap ikan dipelihara dalam enam kolam permanen berukuran 2 x 2 x 1 m dengan ketinggian air 60 cm. Budidaya dilakukan dengan penggunaan air terbatas yang bersumber dari sumur dan hujan. Pakan diberikan tiga kali sehari secara *ad libitum* menggunakan pelet komersial. Sampel plankton diambil dari air kolam dan saluran pencernaan ikan setiap dua minggu bersamaan dengan pengukuran kualitas air. Sampel ikan diambil sebanyak dua ekor pada setiap pengamatan dari masing-masing kolam. Sampel plankton diawetkan menggunakan 5% formalin, selanjutnya diamati di bawah mikroskop dengan pembesaran 100x. Hasil penelitian menunjukkan densitas plankton dalam ketiga kolam budidaya cenderung mengalami penurunan dengan tingkat diversitas plankton yang moderat. Jumlah plankton yang dimanfaatkan kurang dari 1 % volume isi saluran pencernaan ikan. Nila merah mengkonsumsi plankton lebih banyak dibandingkan gurami dan lele. Ketiga ikan menunjukkan perubahan preferensi terhadap jenis plankton selama penelitian. Gurami, lele dan nila merah memiliki preferensi yang sama terdapat jenis plankton, diantaranya adalah *Lepocinclis* dan *Scenedesmus*. Ketiga ikan juga memiliki preferensi terhadap jenis plankton yang berbeda. Plankton yang dimanfaatkan gurami adalah *Crucigenia*, *Diademesis* dan *Navicula*; sedangkan lele *Pediastrum*; dan nila merah *Microcystis*. Berdasarkan tingkat kesukaan ikan, gurami menyukai *Crucigenia*, *Oscillatoria*, *Spirullina*, dan *Synedra*; sedangkan lele *Navicula*; dan nila merah *Chrysamoeba* dan *Tintinnidium*.

Kata kunci : Plankton, preferensi, gurami, lele, nila merah

### *Abstract*

The aim of this study was to determine the dynamics of planktons in concrete tank culture and preference of plankton species by giant gouramy, walking catfish, and red Nile. This study was designed using Completely Randomized Design (RAL), with two replications. Each fish was kept in six concrete tanks with dimensions 2 x 2 x 1 m and 60 cm water level. Cultivation was done with limited water used that came from wells and rains. Feeding was given in three times daily by *ad libitum*, using commercial pellets. Plankton samples were collected from each pond and gastrointestinal tract of fishes every two weeks simultaneously with water quality measurements. Two fish samples were taken in each pond every two weeks. Plankton samples were preserved using 5% formaldehyde and were observed under a compound light microscope with 100x magnification. The result showed that plankton density in the three concrete tanks in aquaculture tend to decrease with moderate level of plankton diversity. The amount of plankton that used as feed source was less than 1% of the gastrointestinal tract contents volume. Red Nile consumed more planktons than other fish. Each fish had the same preference of plankton, among them were *Lepocinclis* and *Scenedesmus*. Each fish also had different preferences of plankton. The plankton that utilized by giant gouramy were *Crucigenia*, *Diademesis* and *Navicula*; walking catfish was *Pediastrum*; while red Nile was *Microcystis*. The plankton that preferred by giant gouramy were *Crucigenia*, *Oscillatoria*, *Spirulina*, and *Synedra*; walking catfish was *Navicula*; while red Nile were *Chrysamoeba* and *Tintinnidium*.

Keywords : Plankton, preference, giant gouramy, walking catfish, red Nile