

ABSTRACT

The Utilization of *Spirulina* sp. Flour to Increase the Brightness of Sumatra Fish (*Puntius tetrazona*)

By

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Sumatra fish (*Puntius tetrazona*) is one of Indonesian endemic fishes that is found in the open fresh waters of Sumatra and Borneo. It has an interesting colors, and high economic value. The economic value of the ornamental fish depend on the type, color, size and shape.. Carotenoids are natural components of the primary colors of pigment-forming effect on the colors orange and black in fish color. *Spirulina* sp. Is one source of carotenoids. This research was aimed to study the effect of the addition of flour *Spirulina* sp. in feed to increase the brightness of the color of the Sumatra fish. The experimental design was a completely randomized design (CRD) with five treatments (addition of flour *Spirulina* sp. As much as 0%, 0.3%, 0.6%, 0.9%, and 1.2% in feed) and three replicates. The fishes were approximately 3-5 cm in length it an were cultured in aquarium of 50x40x40 cm³ in size. Variables there were measured including the incresing of brightness, growth, pH, temperature and DO. The results showed that the addition of flour *Spirulina* sp. to feed increased the brightness of Sumatra fish (*Puntius tetrazona*), variables of water quality in the research showed normal range for fish culture, there were DO of 3-5 mg/L, temperature of 25-29 °C, and a pH of 6-8.

Keywords: *Sumatra Fish, Color Intensity, Carotenoids, Flour Spirulina* sp.