ABSTRACT

HUMAIRANI. Effectivity of zeolite, activated carbon, and clove oil addition on closed transportation of BEST tilapia fish seed *Oreochromis* sp. at high density. Supervised by EDDY SUPRIYONO and HARTON ARFAH.

Fish transportation was usually held at high density to efficient the transportation cost, but higher density of fish carried inside the container will be increase stress level of fish. Some stress will result in increased activity of fish physycology that could worsst the water quality especially DO, CO₂, and NH₃. An attempt done to neutralize toxic ammonia that is by adding zeolite and active carbon to packing medium, and adding clove oil can condition the fish in a state of calm. Transportation is carried out for 24 hours and 20 days old maintenance with the packing of BEST tilapia fish seed 2-3 cm size with a density 700 fish/L and add the ingredients according to the dosage of 20 g of zeolite, 10 g of activated carbon. Treatment difference is the addition of clove oil dosage is 12 mg/L, 24 mg/L, 36 mg/L, and 48 mg/L. The results showed the addition of the treatment dose of clove oil 24 mg/L is more effective than other treatments with the SR of 93.36 %. It is also seen on the water quality better than other treatments, TAN 2.73±0.07, NH₃ 0.0137±0.0004, CO₂ 39.95±0, temperature 24.75±1.06, pH 6.98±0, and DO 2.20±0. Value of SR seed maintenance post treatment for 20 days was 97.12 %, higher than other treatments, with the rate of daily weight of 8.74 % and the cost for transportation of IDR 47.70, -.

Keywords: BEST tilapia fish, Survival Rate, zeolites, activated carbon, and clove oil