ABSTRACT

This research aimed to find out effect of Azolla and Nila fish in cultivation of irrigated-paddy rice to increase rice production, and to find out reduction of inorganic fertilizer usage due to integration of Azolla and Nila fish. An experiment was carried out in Maros, South Sulawesi from December 2005 to March 2006. It was arranged in a split plot design. Results showed that Azolla–Nila integration in rice field increased grain by 17.05% (30.245 kg plot\(^{-1}\)) and decreased weed growth by 20.47% (0.946 kg). Azolla rate of 6 t ha\(^{-1}\) increased dry weight by 13.29% (27.937 kg), tiller number by 14.48% (16.248), weight of 1000-grain by 6.01% (22.673 g) and grain yield by 21.03% (30.245 kg plot\(^{-1}\)) and decreased weed growth by 27.13% (0.946 kg). Interaction between Azolla and Nila fish did not significantly affect growth and yield. Level of land fertility (C-organic, N-total and available-P\(_{2}O_{5}\) and exchangeable-K) ranged from low to fair at harvest, whereas high C/N ratio on no-Azolla treatment with quite low pH.

Keywords: irrigated-paddy rice, integration, Nila fish, Azolla