Abstract: Management system implemented aimed to preventing land degradation and improve water availability in the rooting zone of Zea mays plantation. Increased availability of high water as inplikasi ability of organic matter in binding water. The research method using field experiments with Completely Random Design with five levels, ie, P0 = without Eichornia crassipess organic matter or control, P1 = 3 ton.ha\(^{-1}\) E. crassipess organic matter, P2 = 6 ton.ha\(^{-1}\) E. crassipess organic matter, P3 = 9 ton.ha\(^{-1}\) E. crassipess organic matter, and P4 = 12 ton.ha\(^{-1}\) E. crassipess organic matter. The results obtained showed that the treatment of E. crassipess organic matter 12 ton ha\(^{-1}\) can increase water retention at pF 1.00 and 2.00 times respectively at 1.19 and 1.17 times larger compared with the untreated organic matter (P0).

Key words: E. crassipess, water retention, Zea mays