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PE-8 Spatial and temporal trends of aboveground biomass and net primary production in mangrove *Kandelia obovata* stands at Manko Wetland, Okinawa Island

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Spatial and temporal trends of aboveground biomass, assimilation rate (NAR) and aboveground net primary production (ANPP) in crowded mangrove *Kandelia obovata* stands were investigated over five year. Aboveground biomass showed the same spatial and temporal trends, respectively, among plots and among years ($P < 0.01$). In addition, NAR showed also the same spatial and temporal trends, respectively, among plots ($P < 0.05$) and among years ($P < 0.01$). On the contrary, biomass increment and ANPP were different spatial trends among plots ($P > 0.05$), though they were the same temporal trends among years ($P < 0.01$). Aboveground biomass was almost the same from the riverside landward, excepting plots near the riverside and landward. On the other hand, aboveground biomass increased significantly year by year ($P < 0.01$), though it in the 3rd, 4th and the 5th years was not significant different among them ($P > 0.05$). The aboveground biomass increased significantly with tree age ($P < 0.01$), indicating that mature stands reached their maximum biomass. Biomass increment, NAR and ANPP were not significant different among plots ($P > 0.05$). However, they decreased significantly with increasing tree age and biomass ($P < 0.01$), which implies that *K. obovata* trees reduce their production ability when they matured. Decreases in biomass increment, NAR and ANPP significantly correlated with tree density and crown volume ($P < 0.01$). These results stand for that a decrease in production ability may be also due to decrease their crown volume. These results imply that *K. obovata* trees have a mechanism to maintain their production ability.