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Title: Effect of stocking ratio on semi-intensive polyculture of *Colossoma macropomum* and *Oreochromis niloticus* in Honduras, Central America

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Abstract: Tilapia and tambaquí (*Colossoma macropomum*) were co-stocked in earthen ponds at 0, 25, 75, and 100% of each species. Total density was three fish m^{-2}. Fish were offered a 28% protein pellet. Mean treatment production ranged from 2537 to 5265 kg ha^{-1} after 182 days. Total production increased curvilinearly, and feed conversion ratios decreased curvilinearly as the rate of stocked tilapia increased. Feed conversion ratios ranged from 1.13 to 2.71. Total nitrogen and chlorophyll *a* decreased linearly as rate of stocked tilapia increased, because of grazing by tilapia on phytoplankton. Mean tilapia and tambaquí harvest weights ranged from 187 to 325 g, and 122-270 g, respectively. Tilapia mean weight decreased curvilinearly, and tambaquí mean weight increased linearly as the rate of stocked tilapia increased. Tambaquí growth appeared to be hindered by cool water temperature for part of the season. Thereafter, growth rate increased as stocking rate of tambaquí increased. The best species mixture for high production was 75% tilapia and 25% tambaquí, but the highest economic return would depend on prices for each species and size combination.

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