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Full Length Research Paper

Competition between cultivated rice (*Oryza sativa*) and wild rice (*Oryza punctata*) in Kenya

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Abstract

This shade house study examined the effect of competition on the growth performance of cultivated (*Oryza sativa*) and wild (*Oryza punctata*) rice species in Kenya. Growth was assessed for the two species, grown together and separately, by measuring plant height and tiller number through the growing season, and flag leaf area and above and below-ground biomass at the end of the growing season. *O. punctata* grew to a higher final height (116.00 ± 13.63 cm) attained higher tiller number (9 tillers /plant) and accumulated more biomass (16.68 ± 0.50 g) than *O. sativa* while *O. sativa* attained a higher flag leaf area (35.00 ± 0.67 cm²) than *O. punctata* ($P < 0.05$). For both species, interspecific competition was detected as a reduction in flag leaf area, (1.4 and 2.5 cm²) for *O. punctata* and *O. sativa* respectively. Flag leaf area is known to relate directly to grain yield. It was concluded that *O. punctata* is a better competitor than *O. sativa* ($P < 0.05$) as it had more aggressive vegetative growth, less reduction in flag leaf area, attained higher final plant height and phytomass and matured faster than *O. sativa*.

Key words: Competition, growth, *Oryza sativa*, *Oryza punctata*, cultivated rice, wild rice.

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