

**GROWTH, YIELD AND YIELD COMPONENTS OF RICE
(*ORYZA SATIVA L.*) AS INFLUENCED BY NITROGEN
FERTILIZER PLACEMENT METHOD AND PLANTING
PATTERN AT KADAWA, NIGERIA**

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ABSTRACT

Field experiments were conducted at Kadawa irrigation sub-station (11° 39' 08" 02'E) of the Institute for Agricultural Research, Ahmadu Bello University, Zaira during the 1996-1998 wet seasons, to determine the effect of nitrogen placement and planting pattern on the performance of rice (*O. sativa L.*). Treatment consisted of two N-fertilizer placement methods surface and deep placement, and four planting patterns-surface, rectangular, triangular and hexagonal laid out in a Randomised Complete Block Design (RCBD), replicated three times. Deep placement of N-fertilizer resulted in significantly higher crop growth rates, days to 50% flowering, grain weight per panicle, 1000 grain weights, grain yield, number of ear bearing tillers, percent filled grains, and plant height. The hexagonal and triangular planting patterns were statistically superior to the rectangular pattern in terms of crop growth rate, grain yield, number of ear-bearing tillers and plant height.

Keywords: Nitrogen placement, planting pattern, rice growth and yield