UPLAND RICE DEVELOPMENT UNDER NO-TILLAGE AS AFFECTED BY ROW SPACING AND NITROGEN FERTILIZATION

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Rice yield is the result of the interaction between the environment and cultivar. Among the factors that influence this productivity is the arrangement of plants in the field and nitrogen fertilizer. The objective of the study was to determine the effect of row spacing and nitrogen fertilization on plant height and lodging, yield components, grain yield and quality of upland rice crop grown in a no-tillage system. The experiment was conducted during the growing season 2010/11 under field conditions in Selvíria, MS. The experimental design was a randomized complete block design in a factorial 2 x 4 with five replications. The treatments consisted of the combination of row spacing (0.35 and 0.50 m) with the N rates applied at sowing (0, 40, 80 and 120 kg ha^{-1}). The lower row spacing provided less height of rice plants, higher number of panicles m^{-2} and spikelet fertility and consequently higher grain yield of rice. The increased rates of N in the sowing provided greater height and lodging of rice plants leading to reduced crop productivity and hectoliter mass of grains. Row spacing and nitrogen do not affect grain quality of rice.

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