GROWTH, YIELD AND NUTRIENT CONCENTRATION OF TWO RICE VARIETIES TREATED WITH FOUR LEVELS OF SALT AND NITROGEN

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ABSTRACT

PATRICIO, HOPE GAYLAN, University of the Philippines at Los Baños, January 1984. Growth, Yield, and Nutrient Concentration of Two Rice Varieties Treated with Four Levels of Salt and Nitrogen.

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The effect of NaCl and nitrogen on the soil solution EC and pH; and on the growth, yield, and nutrient concentration of IR52 and IR26 rice varieties were studied in a pot experiment in the screenhouse of the Department of Soil Science, UPLB, College, Laguna, from December 17, 1982 to April 23, 1983.

The results show that the soil solution EC increased, whereas pH decreased with increasing salinity. The different salt levels also significantly delayed flowering and harvesting, depressed growth and yields, and generally increased the concentrations of nitrogen, phosphorus, sodium and chlorine, but decreased potassium concentration in the straw of both varieties.

Varietal response to applied nitrogen, however, differed. In terms of their straw yield, IR52 responded more to the application of 90 kg N/ha whereas IR26, to 135 kg N/ha application. Furthermore, fertilization with 90 and 135 kg N/ha increased

the concentrations of nitrogen in the root and of potassium and sodium in the straw of IR52. The same nitrogen levels increased the concentrations of phosphorus in the grain and of potassium in the straw of IR26. The highest nitrogen rate (135 kg N/ha) increased chlorine concentration in the grain of IR52, but decreased that of IR26.