

THE RESPONSE OF IMPROVED RICE VARIETIES BG 11-11 (4-4½ Months) AND Bg 34-8 (3 Months) TO PHOSPHORUS FERTILIZER IN THE BOLGODA AND KIRALAKELLE DRAINAGE AND RECLAMATION SCHEMES — YALA 1975

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The schemes referred to are located in the Histosol region of the Low-country Wet Zone. (South West Sector.) Rice lands within the schemes are lowlying (ie. below Mean Sea level to +5 feet above Mean Sea Level), frequently flooded, poorly drained and subject to coastal salinity.

Despite reduced flood risk, improved drainage and salinity control, frequently in the varieties used the tillering was poor, root growth retarded, leaves were pale-yellowish and yields were relatively low.

Fertilizer investigations on Bog, Half Bog and Gleyic Alluvial soils, low in available phosphorus, revealed a significant response to phosphorus up to 68 lb and 51 lb P_2O_5/ac (as concentrated super phosphate) at Bolgoda and Kiralakelle Schemes respectively, with both Bg 11-11 and Bg 34-8. ie. a response to 100% and 50% more P_2O_5/ac than recommended. Withholding the recommended quantity of Phosphorus (34 lb P_2O_5/ac) resulted in a greater depression in yield than withholding nitrogen. - This further emphasises the need for phosphours fertilization. The available phosphours (Olsen's) of soils did not reflect the magnitute of the responses obtained.

A significant response was shown to the recommended quantities of nitrogen too. (ie. 63 lb N/ac and 37 lb N/ac).