

## **Effect of adding appropriate mixture of npk and chicken manure on growth and yield of tr-9 paddy variety on Beach Ridges Interspersed with Swales (BRIS) soil**

### **ABSTRACT**

Conversion of fertile lands to other uses has been one of limiting factors for paddy production in Malaysia. Infertile soil such as Beach Ridges Interspersed with Swales (BRIS) soil has a potential for paddy production if its fertility has been improved. We, therefore, conducted a study to determine the optimum rate of NPK and chicken manure for growth and yield of TR-9 paddy variety grown on BRIS soil and also to determine the nutrient content of the BRIS soil after different high application rates of NPK and chicken manure. Treatments were three NPK rates at 60:30:30 kg ha<sup>-1</sup>, 100:60:60 kg ha<sup>-1</sup> and 150:90:90 kg ha<sup>-1</sup>, and three chicken manure rates at 20 t ha<sup>-1</sup>, 40 t ha<sup>-1</sup> and 60 t ha<sup>-1</sup>, arranged in a complete randomized design. Our results showed that TR-9 paddy variety growth and yield were not significantly affected by combination of NPK and chicken manure when grown on BRIS soil. NPK rate of 60:30:30 kg ha<sup>-1</sup> produced the highest percentage of productive tillers (71.62 %) and 1000 grains weight (24.73 g). Chicken manure rate of 20 t ha<sup>-1</sup> produced the highest plant height (127.75 cm), culm height (85.58 cm), percentage of filled grains (83.73 %), 1000 grains weight (25.81 g), extrapolated yield (11.16 tons ha<sup>-1</sup>) and dry weight (464.44 g). Furthermore, application of high NPK and chicken manure to BRIS soil have significantly increased soil nutrients and organic carbon content which in turn can promote better growth and yield.