Effect of soil moisture and depth on sprouting of rhizome of *Panicum repens*

D P P Jayakody[1]* and J M Gunawansa[2]

Regional Agricultural Research & Development Centre, Makandura, (Gonawila/ NWP)

An experiment was carried out to find out the effect of moisture regime and soil depth on the sprouting of rhizome of *Panicum repens* under green house, upland and lowland conditions in the low-country intermediate zone of Sri Lanka. Three moisture regimes (i.e. dry, field capacity and saturated) were maintained as main plots taking different depths of the soil as the sub plot in separate cement pots (30 x 30 x 30 cm^3) containing red yellow pod zolic soil. Rhizome pieces (2 – 3 cm) were buried in soil of each pot at 5,15 and 25 cm depth (25 pieces/ each depth) from the surface. This two factor factorial treatment arrangement in RCBD experiment was replicated thrice and conducted under green house condition in Maha 1998/1999. The pieces of rhizome were removed and number of sprouted pieces was counted at three weeks after initiation of the experiment. This experiment was repeated using the same soil type under upland condition in *Maha* 1999/2000 and under lowland condition in *Yala* 2000. Rhizome pieces, obtained from all depths of dry and saturated soil, did not sprout in the experiment conducted in green house, upland and lowland conditions. However, the rhizome pieces obtained from field capacity level sprouted (68-92 %) in all conditions of soil and difference of the sprouting among the soil depths was significant at the experiment conducted at green house and lowland condition. Sprouting of rhizome of *Panicum repens* could be stopped by allowing the soil to dry or by inundating the field with water.

Present Addresses:

[1] *National Plant Quarantine Service, Dept of Agericulture, Katunayake*

[2] *Field Crops Research and Development Institute, Mahailluppallama*

* Tel: 031 2237892 (R)