B-115: *In vitro* plant regeneration from tuber - core explants of potato

D P Rajapakse, M H Mendis, H J Warshakoon, P Ganashan
(Plant Genetic Resources Centre, Gannoruwa)

Potato (*Solanum tuberosum*) improvement programmes mainly depend on the availability and efficient induction of genetic variability. Tissue culture techniques facilitate potato improvement by generating heritable variation which is known as

somaclonal variation. Availability of an efficient plant regeneration system which includes a callus phase is a pre- requisite for the successful application of such techniques for potato improvement. This study describes a protocol for regeneration of plants from callus established from tuber - core tissues of potato.

Tissue (explants) of minitubers of 6 potato cultivars (Serrana inta, Atzimba, G-1, Wauseon, accessions 444 and 381388.34) were tested for their regeneration ability *in vitro*. Explants (0.5 x 0.5 x 0.1 cm^3) were obtained from the core of the tubers, after removing the outer portion. These were cultured on MS (Murushige and Skoog, 1962) medium supplemented with sucrose (3% w/v), IAA 0.3 - 0.5 mg/1), Zeatin (1.5 - 2 mg/1) and agar (0.8% w/v). The cultures were incubated under fluorescent light (2,000 lux, 10 h) at 25 $\pm$ 1°C.