

practices, in adjacent plots at the Potthkkulama Research Station, in IL₁ Agro-Ecological Region. Eight adjacent palms from each of four genotypes were selected. Palms were monitored throughout the 80-day natural drought experienced in early 2005. DB showed the highest ISP (24) while DG (22.5) and CL (21.5) were next with minor differences and CRD (19), being the lowest of all. Thus, CRD can be identified as a drought sensitive genotype compared to the rest. Therefore, four genotypes can be ranked according to drought tolerance in terms of ISP as DB>DG>CL>CRD. However, these results are substantially different from known conditions at the field level. Therefore, more careful observations on much harsher and prolonged drought are needed to verify the applicability of this method.

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Effect of bio control agent *Trichoderma* (*T. viride* and *T. konnigii*) on basal rot of *Cloropytum comosum* 'laxum' caused by *Sclerotium rolfsii*

K A L Priyadarshani and D B Kelaniyangoda

Department of Horticulture and Landscape Gardening, Wayamba University of Sri Lanka, Sri Lanka

At present, the biological control of soil borne fungal diseases is becoming popular in foliage industry of Sri Lanka, which is a nature-friendly ecological approach to overcome the problems caused by standard chemical methods of plant protection. With a suitable bio control agent pathogen can be suppressed and reduced the disease incidence could be reduced effectively. This experiment was conducted over a period of six months in polytunnel to identify a potential bio control agent for basal rot of *Cloropytum comosum* 'laxum' caused by *Sclerotium rolfsii* with five treatments of *Trichoderma viride*, *Trichoderma konnigii* and combination of *Trichoderma viride* and *Trichoderma konnigii*, Pormarsol forte 80% wp and control. The mean disease incidences of above treatments were 1.75, 2.75, 1.5, 1.75 and 10.75 respectively. It was revealed that *Trichoderma viride* and combination of *Trichoderma* spp. are suitable for the highly effective control of plant diseases caused by *Sclerotium rolfsii*.

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In vitro callus induction of *Spilanthes calva* DC [*Spilanthes acmella* auct. non L.,] (Maha Akmella)

S Hewage and W T P S K Senarath

Department of Botany, University of Sri Jayewardenepura, Sri Lanka.

Spilanthes calva DC. (Maha Akmella) is a valuable medicinal plant belongs to Family Asteraceae. It is widely used in indigenous medicine to treat toothache in most of the Asian countries. Not only it has anesthetic properties, but also contain secondary metabolites, with the insecticidal properties, which could be used as potential bio insecticide. This is an annual plant, which grows to a height about 30 cm. After flowering mother plant is dried off. Four to six weeks later seeds are germinated and new seedlings are produced. Viability of seeds loses within short period of time. Even though seeds are germinated percentage of germination is low (about 30%). Rooting of cuttings is also not possible. This is a limitation in using this valuable medicinal plant for commercial production. Therefore it is very important to develop a protocol for mass propagation through tissue culture and establishing cell cultures will be useful for large-scale chemical extraction in industrial purposes.

Leaf discs were used as explant for callus initiation. In order to identify the suitable maturity stage for callus initiation, leaves were harvested at different maturity stages i.e first, second and third fully opened leaf.

Leaves were washed with Dettol™ soap and soaked in a solution of Teepol™ for 5 minutes. After that leaves were washed with running tap water for 45 minutes. In order to surface sterilize. Leaves were washed with 10% Clorox™ (5.25% Sodium hypochlorite v/v) for 5 minutes and then with 70% alcohol for 30 seconds each followed by three successive washings in sterile distilled water. These operations were carried out inside the laminar airflow cabinet before inoculation. Basal media tested for the