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Allelopathic effect of sweet potato [*Ipomoea batatas* (L.)] on Torpedo grass (*Panicum repens* L.)

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An investigation was carried out to study the allelopathic effect of sweet potato (var. Wariyapola red) on the germination and growth of seedlings of *Panicum repens* L. (couch grass) under green house conditions. 10 % (w/w) aqueous solutions were prepared separately using the crushed materials of tubers, leaves and stems of sweet potato (obtained at harvesting in maha 1993 / 94). Rhizome pieces (2-3 cm long) of *P. repens* were then immersed in the above solutions for one hour. After the removal of rhizome parts they were planted (20 pieces / pot) in clay pots filled with washed sand. The control treatment was prepared with water. These four treatments were arranged in a RCB design and were replicated four times. The germination % and dry weight of seedlings were measured at 14 days after treatment (DAT) and 24 DAT, respectively. Furthermore, during yala 1994, leaves, stems and tubers of sweet potato were harvested at maturity and they were kept in the refrigerator for 24 h. They were then crushed and 5, 10, 15 and 20 % aqueous solutions (w/w) were made. Rhizome pieces (2 cm long) of *P. repens* were immersed in each solution separately for 2 h and they were then buried in sand pots (20 pieces / pot). After 2 weeks, the germination of rhizome pieces was counted. The germination % of rhizome and dry weight of *P. repens* were significantly reduced by all crude extraction of sweet potato when compared to the untreated control. However the germination of the rhizomes was not affected significantly by concentrations of each solution. The germination percentage of rhizomes immersed in aqueous solution of stems was significantly lower ($p< 0.05$) than that of the solutions of leaves and stems. The germination of rhizomes and the seedling growth were significantly inhibited by aqueous solutions of all parts of sweet potato (Var. Wariyapola red) and stem has more potential for the inhibition of growth and germination of rhizomes of *P. repens.*