

D-29:ALTERNATIVE SOURCES OF LOW COST NUTRIENTS FOR AZOLLA PRODUCTION

*S A Kulasooriya, G Seneviratne, H Jayaweera;
Dept. of Botany, University of Peradeniya.*

Phosphorus requirement is a frequent limitation for the widespread use of Azolla as a biofertilizer. It is also a limitation for the production of Azolla to be used as a N-fertilizer in organic farming. The experiments described in this paper were conducted to evaluate the potential of certain organic sources as suppliers of P for Azolla multiplication.

In a preliminary pot experiment conducted in the green house, the effect of poultry manure, cowdung, rock phosphate and peat on the growth and nutrient content of Azolla was evaluated in comparison to concentrated super phosphate (CSP) fertilizer. Peat and poultry manure produced higher dry weight of Azolla than the other fertilizers. However, the N and P content of Azolla grown on poultry manure were superior to that on peat.

Another experiment was carried out to assess the outdoor culture of Azolla on poultry manure in comparison to CSP fertilizer. Azolla grown on poultry manure produced the highest rate of growth which produced a final harvest of fresh biomass 1447% higher than that of unfertilized control, whereas CSP gave 451%. The N and P contents of Azolla grown on poultry manure were superior than that on CSP at harvest, 2.5 weeks after inoculation. Thus poultry manure is a cheap nutrient source for large scale Azolla production.