

## SECTION B

B-3

### EFFECT OF ADDITION OF PHOSPHORUS ON THE GROWTH OF AZOLLA

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The growth of Azolla and its nitrogen fixing ability are largely dependent on the quantity of phosphorus in the growing medium. A field experiment was conducted at Gannoruwa, to determine the effect of addition of different levels of concentrated superphosphate on the growth of two strains of *Azolla pinnata*.

Two hundred grams of fresh weight of Azolla were introduced to a banded 2m x 2m plot where 15 cm standing water was maintained throughout. Phosphorus rates ranging from 0 to 16.66 kg  $P_2O_5$ /ha/week were added at the commencement of the experiment and at weekly intervals thereafter. The experiment was carried out for 6 weeks and at the end of every 2 weeks Azolla was harvested. Thus, 3 harvests were taken.

The effect of addition of phosphorus on fresh weight of Azolla showed a quadratic relationship, with the highest yields obtained for the addition of about 12.50 kg  $P_2O_5$ /ha/week, for both strains and at all 3 growth periods. The nitrogen content of Azolla showed a linear relationship to added phosphorus. Only about 20% of the phosphorus added was taken up by the Azolla. The fate of the balance phosphorus needs to be ascertained with a view to its use by an accompanying or following rice crop.