

(b) Plants require inorganic ions for growth.

The photograph shows a leaf with magnesium ion deficiency.



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In an investigation, groups of plants were watered with the same volume of a nutrient solution.

The solution contained all the required inorganic ions, but with different concentrations of magnesium ions.

The table shows the results of this investigation.

Concentration of magnesium ions in nutrient solution / mmol dm^{-3}	Mean dry mass of root / g	Mean dry mass of shoot / g	Mean total dry mass / g
0.01	2.38 ± 0.15	15.56 ± 1.22	17.94 ± 1.38
0.10	5.42 ± 0.43	33.36 ± 1.21	38.78 ± 1.63
0.40	7.08 ± 0.50	46.06 ± 0.59	53.14 ± 0.50