

B.Sc. II Semester

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Unit II

Lecture II Classification and function of Plant Mineral
Nutrients

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Classification of Plant Mineral Nutrients

- **On the basis of quantity required by plants**
- **According to biochemical function**

Classification based on the quantity required by plants

(i) Macro/Major elements (1-10mg/g dry wt.)

Include C, O, H, N, P, S, K, Ca, Mg

(ii) Micro/Minor elements (0.1mg/g dry wt)

Include: Fe, Mn, B, Zn, Cu, Cl, Ni, Mn

Classification based on the biochemical function

Mengel and Kirkby (2001) have proposed that elements be classified according to their biochemical role and physiological function and divided the plants nutrients in four basic groups:

Group I : Nutrients that are part of carbon compounds
N and S

Group II : Nutrients that are important in energy storage & Structural integrity
P, Si and B

Group III : Nutrients that remain in ionic form
K, Ca, Mg, Cl, Mn, Na

Group IV : Nutrients that are involved in redox reactions
Fe, Zn, Cu, Ni, Mo

Lecture III
Nutrient Deficiency