

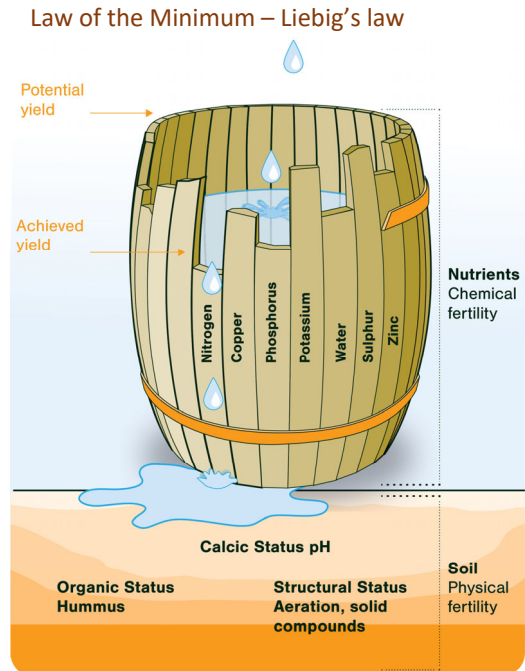
Plants' food

Element	Uptake form
Primary Nutrients	
Nitrogen	NO_3^- , NH_4^+
Phosphorus	H_2PO_4^- , HPO_4^{2-} , PO_4^{3-}
Potassium	K^+
Secondary Nutrients	
Calcium	Ca^{2+}
Magnesium	Mg^{2+}
Sulphur	SO_4^{2-}
Micronutrients	
Boron	BO_3^{3-}
Chlorine	Cl^-
Copper	Cu^+ , Cu^{2+}
Iron	Fe^{3+}
Manganese	Mn^{2+}
Molybdenum	MoO_4^{2-}
Nickel	Ni^{2+}
Zinc	Zn^{2+}

Source: https://ucanr.edu/sites/Nutrient_Management_Solutions/stateofscience/Meet_Crop_Nutrient_Requirements/

- Plants require essential elements for their growth and development. Essential elements are grouped into:
- Primary Nutrients (C, O, H, N, P, K)
 - Secondary Nutrients (Ca, Mg, S)
 - Micronutrients (B, Cl, Cu, Fe, Mn, Mo, Ni, Zn)
- All nutrients are equally important according to the law of the minimum. However, the uptake of these elements is governed by many factors such as the following:
- Plant species or cultivar
 - Stage of growth of the plant
 - Soil (or potting media) chemical and physical properties
 - Water quality and availability
 - Loss due to leaching and volatilization

The right balance of nutrients in space and time is very important to achieve positive yield outcomes, greater plant biomass, and improved tolerance to pests and diseases.



Source: <https://www.fertilizerseurope.com/fertilizers-in-europe/balanced-plant-nutrition/>

“Plant growth is not dictated by total resources available, but by the scarcest resource – Which serves as limiting factor”

UrVal Fertiliser composition

UrVal fertiliser's elemental analysis showed that it contains primary nutrients (N, P, and K), secondary nutrients (Ca, Mg, and S) and several micronutrients (Cu, Cl, Fe, Mo, Ni, and Zn).

Preliminary plant growth trials on the application of UrVal fertiliser have shown that it promotes biomass growth in tested species.



Element	Composition (g/L)
Total Nitrogen	38.9
As N- NO_3^-	18.8
As N- NH_4^+	20.1
Phosphorus As P- PO_4^{3-}	5.5
Potassium	26.3
Calcium	0.01
Magnesium	0.01
Sulphur	27
Copper	0.008
Boron	0
Chlorine	24.8
Iron	0.002
Manganese	0
Molybdenum	0.236
Nickel	0.038
Zinc	0.016

UrVal system: Collect-Recover-Fertigate (CRF)



For further information visit the ARC NiCE hub Website: www.nicehub.org

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