

Feeding Your Garden Soil

Nutrient	Sign	Functions & Effects	Deficiency Symptoms	Source
Nitrogen	N	chlorophyll synthesis: leaves	chlorosis, stunted growth	organic matter, urea, ammonia
Phosphorous	P	energy storage and transfer: roots, flowers, seeds	stunted growth, purple color	organic matter, sludge, rock phosphate
Potassium	K	production and activity of enzymes: water flow, stomata, photosynthesis	weak stalks, marginal chlorosis and necrosis	organic matter, potash, sylvinitite, langenbite
Calcium	Ca	cell elongation and division: stems, fruits	stunted growth, blossom end rot on tomatoes	organic matter, lime, limestone, gypsum
Magnesium	Mg	component of chlorophyll	interveinal chlorosis and necrosis	organic matter, dolomite, epsom salt
Sulfur	S	makes amino acids	stunted growth, uniform chlorosis	organic matter, sulfur
Iron	Fe	chlorophyll synthesis	interveinal chlorosis, stunted	organic matter, chelates, nails
Manganese	Mn	enzyme formation	interveinal chlorosis, stunted	organic matter, chelates
Zinc	Zn	enzyme activity	yellow foliage, reduced growth	organic matter, chelates
Copper	Cu	chlorophyll synthesis	chlorosis, weak stems	organic matter, chelates
Boron	B	cell development, energy transfer	stunted growth	organic matter
Chlorine	Cl	water flow and pressure	chlorosis, wilting	organic matter, rainfall, potash
Nickel	Ni	component of protein	chlorosis	organic matter
Molybdenum	Mo	affects intake of N and P	chlorosis, stunted growth	organic matter
Carbon	C	structural	—	air
Oxygen	O	structural	—	air
Hydrogen	H	structural	—	air