

# Nutrient Deficiency Key

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- Symptoms at the **base** of the plant (Mobile elements – N, P, K, Mg)
  - Chlorosis (N, P, or Mg)
    - Uniform (N or P)
      - Early flowering and/or leaf abscission (N)
      - Deeper green foliage and/or fewer longer roots (P)
    - Interveinal (Mg)
  - Necrosis (K)
- Symptoms across the **whole (mid)** plant (Partially mobile elements – S or Mo)
  - Uniform chlorosis/faded flowers (S)
  - Chlorotic around leaf margin followed by rapid necrosis (Mo)
- Symptoms at the **top** of the plant (Immobile elements – Ca, Fe, Mn, Zn, Cu, B)
  - Chlorosis (Mn, Fe)
    - Interveinal chlorosis with tan flecks (Mn)
    - Interveinal chlorosis turning to yellow (Fe)
  - Youngest leaves affected with necrosis and distortion (Ca or B)
    - Abortion of growing tip, short internodes, thick leaves (B)
    - Distortion turning necrotic (Ca)
  - Youngest and mature leaves affected by leaf curling and necrosis
    - Smaller lighter flowers (Cu)
    - Smaller leaves and short internodes (Zn)