



# Information Sheet: Cannabis Plant Nutrient Disorders

## Iron Deficiency

*Starts at top of plant with new growth.*



Iron deficiency (Fe) early stage



Iron deficiency (Fe) progression



Iron deficiency (Fe) late stage

Possible treatments:

- Spray leaves with chelated iron
- Adjust the pH to the correct level
- Flush the system with clean, non-reverse-osmosis water that has the correct pH level
- Add a calcium-magnesium supplement
- Avoid over-watering

## Magnesium Deficiency

*Starts at bottom and progresses up the plant.*



Magnesium deficiency (Mg) early stage



Magnesium deficiency (Mg) progression



Magnesium deficiency (Mg) late stage

Possible treatments:

- If using coco coir or reverse osmosis water in a hydro system, keep roots between 6.0 and 6.5 pH
- If pH levels are good, supplement with CalMag
- Add worm castings or dolomite lime to media to raise pH
- Consider flushing system with clean water of correct pH mixed with magnesium supplement

## Nitrogen Deficiency

*Starts at bottom and progresses up the plant.*



Nitrogen deficiency (N) early stage



Nitrogen deficiency (N) progression



Nitrogen abundance (N) early stage

Possible treatments:

- Add fertilizer with high nitrogen level
- Add ammonium nitrate to soil
- Add bat guano to soil
- Add seaweed, kelp, or other organic nitrogen supplement to soil
- Add beneficial microbes and soil amendments with nitrogen-cycling bacteria to soil

## Zinc Deficiency

*Starts at top of plant with new growth.*



Zinc deficiency (Zn) early stage



Zinc deficiency (Zn) progression



Zinc deficiency (Zn) late stage

Possible treatments:

- Ensure that pH is within acceptable levels
- Add a Fe-Zn-Mn micronutrient mix
- Add Zinc sulfate ( $ZnSO_4$ ), chelated zinc, or zinc oxide ( $ZnO$ )