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virginia home food production



FACT SHEET

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NUTRIENT DEFICIENCY SYMPTOMS BLACKSBURG, VIRGINIA

Inorganic Elements	Deficiency Symptoms	Comments
Nitrogen (N)	Stunted, yellowing from bottom up and leaf tip back to petiole. Reduced size. Slow, stunted growth.	Heavy application may cause leaf tip burn; excess causes the plant to grow all leaf and stem, no flower and fruit.
Phosphorus (P)	Stunted, short internodes, purple or dark green foliage; old leaves die back; flowers and fruit poor. Slow growth, delayed maturity.	Phosphorus is poorly available in acidic and alkaline soils and in cold, dry, or organic soils.
Potassium (K)	Older leaves scorched on margin; weak stem; fruit shrivelled, uneven ripening.	Most plants require large amounts of potash.
<u>Minor Inorganic Elements</u>		
Boron (B)	Tip of growing plant dies; bud becomes light green; roots are brown in center; fruit is corky; flowers do not form.	Amount needed is critical, excess will kill plant quickly.
Calcium (Ca)	Young leaves turn yellow then brown; growing tip bends; weak stem; short dark roots. Blossom-end rot of tomato.	Properly limed soils usually supply adequate calcium.

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Inorganic Elements	Deficiency Symptoms	Comments
Copper (Cu)	Leaves appear bleached, elongated; new growth dies back.	Liquified seaweed and manures contain minute quantities, enough for home gardens.
Iron (Fe)	Young leaves are yellow between veins first, top to bottom; veins, margins, and tips stay green.	Read label carefully. Use a complete fertilizer.
Magnesium (Mg)	Leaves are thin, lose green color from between veins from bottom of plant up; tend to curve upward.	Available in dolomitic limestone. Read Label carefully. Use a complete fertilizer.
Manganese (Mn)	Tissue between veins turns white; leaves have dead spots; plant is dwarfed.	Read label carefully. Use a complete fertilizer.
Molybdenum (Mo)	Plant is very stunted, pale and distorted leaves.	Same
Sulphur (S)	Lower leaves yellow; stem and root small in diameter; stems hard and brittle.	Same
Zinc (Zn)	Terminal leaves are small; bud formation is poor; leaves have dead areas.	Read label carefully. Use a complete fertilizer.

Adapted from: Pierce, J.H., GREENHOUSE GROWHOW, Plants Alive, WASHINGTON, D.C., 1977

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