General purpose plant foods are great for keeping gardens healthy, but you can correct specific problems by identifying symptoms and feeding a single ingredient nutrient to target and address deficiencies.

FEED YOUR PLANTS WHAT THEY NEED!

Nineteen elements are considered essential for plant growth. Carbon, hydrogen, and oxygen are primarily supplied by air and water. The remaining 16 elements are absorbed by plant roots from the surrounding soil.

These elements are divided into three groups based on their relative abundance in plants:

Primary Nutrients (or Major Nutrients)
Secondary Nutrients (or Minor Nutrients),
Trace Nutrients (or Micronutrients).

Although the Major Nutrients are needed in the greatest quantities, a deficiency of any one nutrient can prevent plant growth, or reduce it to unsatisfactory levels. Even though some soils may already contain these nutrients, they may not be in a form available for plant growth. The best way to ensure that all of the nutrients are available in the soil is through regular applications of plant foods.

Use the table below to identify symptoms and find the correct plant foods to cure the deficiencies.

PRIMARY NUTRIENTS	FUNCTION	DEFICIENCY SYMPTOMS	*SOLUTIONS
Nitrogen	Vigorous growth & dark green color	**Light green leaves; stunted growth**	Blood Meal, Garden Manure, Alfalfa Meal, Cottonseed Meal
Phosporus	Root development & flowering	**Smaller yields of seeds & fruit; purplish leaves, stems & branches;**	Rock Phosphate, Bone Meal, Alfalfa Meal
Potassium	Overall hardiness & disease resistance	**Reduced yields; Spotted or curled leaves; Weak root system**	Greensand
SECONDARY NUTRIENTS	**FUNCTION**	**DEFICIENCY SYMPTOMS**	***SOLUTIONS**
Calcium	Plant vigor; Aids in uptake of nutrients	**Deformed terminal leaves; Poor root growth**	Garden Lime, Garden Gypsum
Magnesium	Essential part of chlorophyll Dark green color; Seed production	**Yellowing of older leaves; Yellow leaves in general; Stunted, spindly plants**	Garden Lime Garden Sulfur, Garden Gypsum
TRACE NUTRIENTS	**FUNCTION**	**DEFICIENCY SYMPTOMS**	***SOLUTIONS**
Boron	Increases flowering & fruit development	**Terminal buds die; Fewer flowers & fruit develop**	Garden Manure, Bone Meal
Chlorine	Helps control water loss & moisture stress	**Plants wilt; yellow leaves**	Garden Manure, Greensand
Cobalt	Improves growth & transpiration	**Reduced growth and yellowing of foliage**	Greensand, Kelp Meal, Cottonseed Meal
Copper	Helps produce chlorophyll	**Yellow, wilted leaves; Lack of flowering**	Garden Manure, Greensand
Iron	Promotes dark green leaves	**Yellow leaves** Cottonseed Meal	Greensand, Garden Manure,
Manganese	Helps produce chlorophyll	**Intervenous chlorosis in younger leaves**	Garden Manure, Greensand
Molybdenum	Essential in some enzyme systems	**Pale green, rolled or cupped leaves**	Greensand, Lime (makes it more available)
Nickel	Enzyme Producton	**Yellow Leaves**	Greensand
Sodium	Aids water regulation & photosynthesis	**Plants wilt**	Kelp Meal, Garden Manure, Bone Meal, Greensand
Zinc	Enzyme & growth hormone production	**Yellow leaves, Rosetted (clustered) leaves**	Garden Manure, Greensand, Cottonseed Meal