



Essential Plant Nutrients

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There are **17 Essential Plant Nutrients** that a plant must have to complete its normal life cycle. These 17 essential plant nutrients fall into four categories:

Essential Nutrients that come from the Air and Water

Carbon (C)

Hydrogen (H)

Oxygen (O)

Macronutrients

Nitrogen (N)

Phosphorus (P)

Potassium (K)

Secondary Macronutrients

Sulfur (S)

Calcium (Ca)

Magnesium (Mg)

Micronutrients

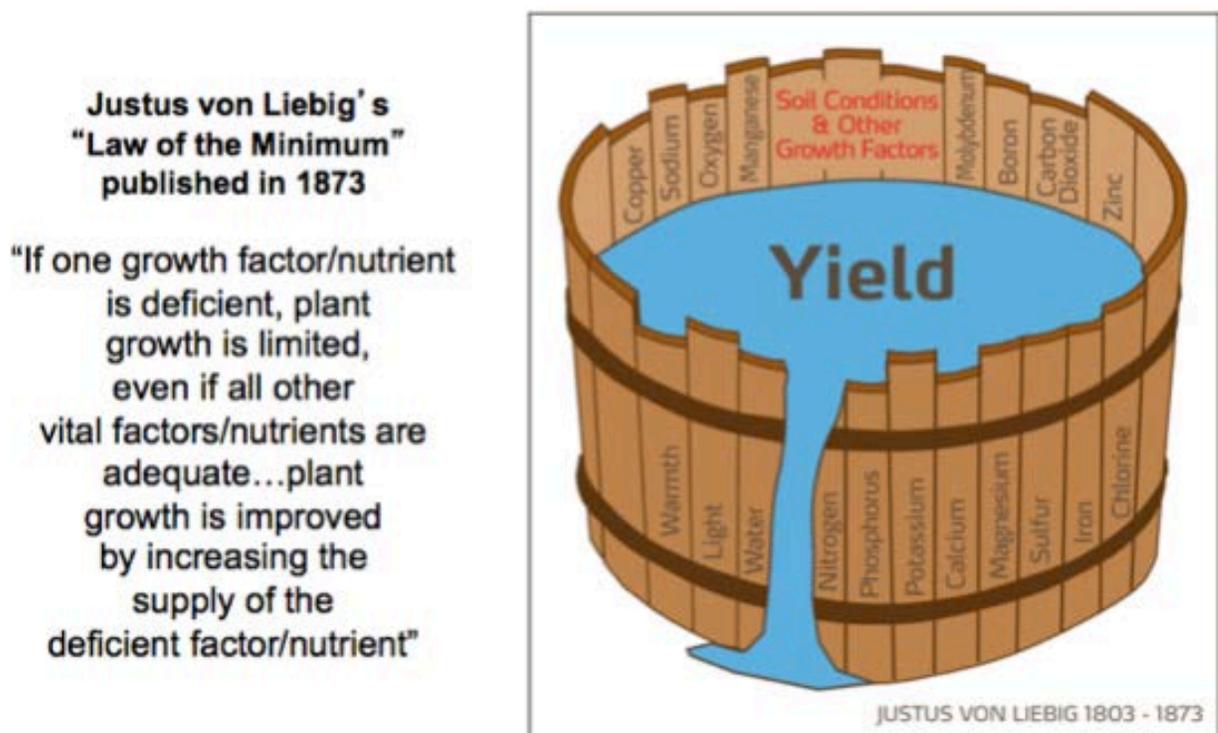
Boron (B)

Chlorine (Cl)

Copper (Cu)

Iron (Fe)
Manganese (Mn)
Molybdenum (Mo)
Nickel (Ni)
Zinc (Zn)

Each of the **17 Essential Nutrients** plays a different role in crop nutrition and production. And each is required at a different level. **Macronutrients** (*as their name implies*) are required in large quantities, while **Micronutrients** are required in minute doses. The key is “balance” and avoiding deficiencies. Justus von Liebig’s “Law of the Minimum” explains and illustrates the importance of this:



While carbon, hydrogen and oxygen can come from the air, the other **14 nutrients must be obtained from the soil**. Since not all soils or all crops require the exact same levels of each nutrient, we depend on soil or tissue testing to help us know which nutrients to add to the soil or plant or to make available through soil biological activity.

Your final crop yield depends on the **17 essential plant nutrients** along with several other variables, such as the weather. Nutrient levels are the barrel staves we can control. Your **AgriEnergy Resources** rep would love to help you build a fertility program with no leaks! Call us today. **815.872.1190**.