

# **PACIFIC NORTH WEST GARDEN SUPPLY**

## **Weekly Tip #1**

### **Co2 and Your Garden**

Plants can use up to five times more CO<sub>2</sub> than what naturally occurs in the air. CO<sub>2</sub>, which is essential, is often the most overlooked element limiting plant growth. Fertilizing the air with CO<sub>2</sub> can shorten growing time and double your harvest.

Carbon dioxide is an odorless, colourless gas found in small amounts in the air. It is actively absorbed by plants during photosynthesis and is an essential element in plant growth. CO<sub>2</sub> is present in normal air at about 350 parts per million and is one of the primary gases involved in photosynthesis. Photosynthesis is a process in which plants use light to produce chlorophyll (green colour) and starches. The starches are initially carbohydrates. The carbon in carbohydrates is derived from carbon dioxide. Without CO<sub>2</sub> plants will not grow. During photosynthesis CO<sub>2</sub> is split into separate elements carbon and oxygen. The oxygen gets used quite quickly with much of it returning to the atmosphere. The carbon atom combines with H<sub>2</sub>O or water to form a sugar molecule. The plant then converts the sugars into carbohydrates. Plant nutrients such as nitrogen absorbed by the plant roots, combine with these starches to form new tissue. If you measure the dry weight of a plant you will notice that it is comprised of 45% carbon and 45% oxygen. By understanding that a plant is made up largely of two elements carbon and oxygen-CO<sub>2</sub>, it would seem obvious that CO<sub>2</sub> enrichment is the answer to maximum yields.