

CARBON DIOXIDE (CO₂) ENRICHMENT

Plants intake CO₂ during photosynthesis and emit oxygen as a byproduct. By increasing the amount of CO₂ in the grow room, plants will be stronger, yield more, and grow up to 30% faster. Normal CO₂ levels in the environment are between 350-500 parts per million (PPM). Plants directly benefit from increased levels up to 1500-2000 PPM. At 3000 PPM, CO₂ becomes toxic to plants, and at 5000 PPM, it becomes toxic to humans. There are two ways to introduce CO₂ into an environment, a tank and regulator, or a CO₂ generator, each with advantages and disadvantages.

REGULATOR AND TANK

Using a standard 20lb CO₂ tank and regulator is the simplest way to achieve higher CO₂. The regulator is set according to room size and plugged into a timer. The CO₂ travels through a plastic tube that is either placed into the back of an oscillating fan, or connected to a drip ring that is installed above the plant canopy. The CO₂, being room temperature, sinks on to the plants.

CO₂ GENERATOR

Propane generators have been used for CO₂ production in the gardening industry for a long time, specifically in greenhouse environments. These generators burn propane or natural gas, releasing CO₂ as a byproduct. This is the most efficient way to create CO₂. The CO₂ that comes out of the generator is hot, so it will first rise then sink as it nears room temperature. Generators will accommodate large rooms better than tanks, especially rooms 400 square feet and larger. They do produce heat, so we do not always recommend them for smaller rooms.



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