

## Case Study: CO2 Foliar Spray Affects on Pepper Plant Growth

Indoor use of CO2 gassing has enhanced plant yields for over 60 years. However, over 50% of the CO2 gas is typically lost through ventilation. Current greenhouse CO2 gassing levels of up to 1500 PPM are also not ideal for worker health and safety. GRO's safer dissolved CO2 foliar spray can be used by indoor and outdoor plant growers with minimal CO2 gas lost and greater plant bioavailability resulting in higher yields as shown in this case study.

### Benefits:

- 20% value increase vs CO2 gassing
- 50% value increase vs no CO2
- Thicker, leafier plants
- More fruit
- More advanced root systems
- No undue stretching of the plant
- 50% gas saving

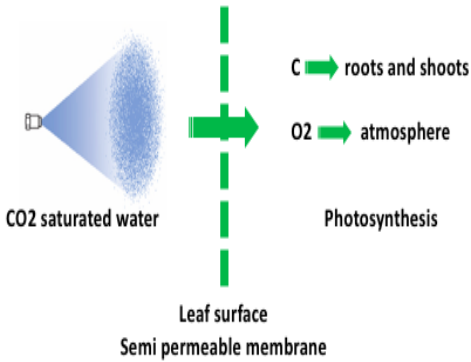
### Pepper Results:

CO2 foliar sprayed plants showed a 10% fruit yield increase over CO2 gassed plants and 30% fruit yield increase over plants that were not gassed. Additionally, 10% to 20% faster fruit ripening was shown versus the two control plant groups. Also, the CO2 foliar spray which displayed distinctly superior results, used 50% less CO2 gas versus CO2 gassing at 800 PPM.



## Additional Improvements

Chlorophyll A and CO2 transfer levels were also measured alongside the yield measurements. Chlorophyll A was extracted using acetone and put through a spectrophotometer. A 4 fold increase in chlorophyll A was shown while conductance (CO2 transfer) increased to 8 times the amount of the control plants. As chlorophyll levels are directly related to the potency of photosynthesis, an increase of this magnitude would correlate with the increase in growth rate.

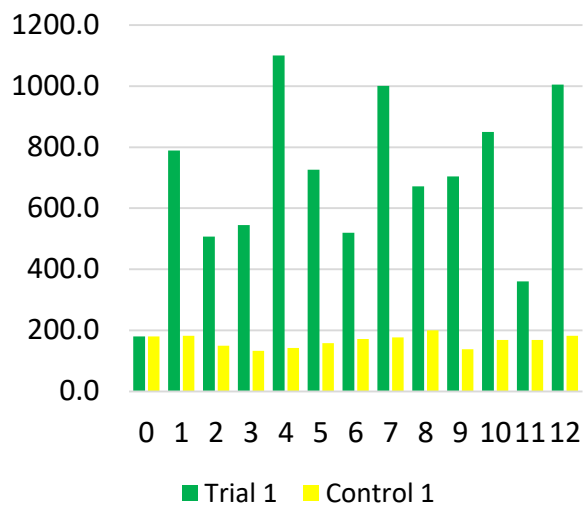


## About CO2 GRO

GRO's mission is to accelerate all indoor and outdoor value plant growth naturally, safely, and economically using its patented advanced CO2 foliar technologies. GRO's global target plant markets are retail food at \$8 trillion per year (Plunkett Mar 2017), retail non-food plants at an estimated \$1 trillion per year and legal retail cannabis that may reach \$50 billion per year by 2022 (Bay St Analyst estimates).

The CO2 technologies work by transferring CO2 gas into water and foliar spraying across the entire plant leaf surface area, which is a semi permeable membrane. The dissolved concentrated CO2 then penetrates a leaf's surface area naturally like nicotine naturally dissolves through human skin from a nicotine patch.

### Chlorophyll-A Increase w/ CO2 Foliar Spray



### CO2 Transfer Data On Leaf Surface

