# St. Cloud University Measures Eight-Fold Increase in CO2 Transfer To Plants Using CO2 GRO's CO2 Foliar Spray Technology

written by Raj Shah | July 9, 2018

July 9, 2018 (Source) – CO2 GRO Inc. ("**GROW**" or the "**Company**") (TSX-V:GROW) is pleased to announce further scientific proof validating its dissolved CO2 foliar spray technology accelerating plant growth. The second set of scientific trial results at St Cloud State University ("St. Cloud") measured over an eight-fold efficiency increase in the conductance (transfer availability) of CO2 from the dissolved CO2 enriched water sprayed on Romaine lettuce leaves over both unenriched water spray and no spray control plant treatments.

Conductance in plant leaf stomata (pores) is an estimate of the rate of CO2 gas entering and/or water vapor exiting a plant leaf. This further evidence was measured in three separate experiments using an SC-1 leaf porometer. With a series of previously announced scientific trials showing a fourfold sustained increase in Romaine leaf chlorophyll, GROW now has scientific proof why its dissolved CO2 Foliar Spray works better than indoor growers that gas with CO2 and outdoor growers that have no alternative to add CO2 outdoors to their plants.

According to Tridge Intelligence, the worldwide lettuce market of 26.8M tonnes/y is worth $30B/y wholesale with the US producing 15.2% or 4M tonnes/y, mostly in California. GROW believes that St Cloud's scientific CO2 gas transfer and

chlorophyll experiments are confirming the potential of 1-2 more lettuce crops/year in California or $1-2B/y more wholesale California lettuce revenue with less water use per unit of lettuce yield.

St. Cloud's second plant science report for GROW excerpts: "This data continues to be encouraging and consistent with the hypothesis of significant plant growth enhancement with CO2 delivered via foliar spray" and that "NO significant difference existed between unenriched foliar spray and no spray plant treatments, strongly suggesting that CO2 availability was the factor increasing both chlorophyll A and CO2 gas conductance"

St Cloud State is now measuring: 1) CO2 foliar spraying plants versus gassing a control plant group at 1200 PPM, 2) a variety of bug, mould and mildew experiments to measure whether CO2 foliar spray has positive plant resistance impacts reducing the needs of herbicides, insecticides, pesticides and fungicides, 3) improved leaf stomata water vapor efficiency using dissolved CO2 reducing water needs per unit of plant yield and 4) completing ongoing grow trials started from lettuce and pepper seeds.

All patentable results from scientific discoveries at St Cloud are 100%-owned by GROW.

**About CO2 GRO (GROW.TSXV) or "GROW"**

GROW's mission is to accelerate all indoor and outdoor value plant growth naturally, safely, and economically using its patented advanced CO2 foliar technologies. GROW'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). GROW's sole focus is working with its plant grower and Agri-industrial partners in proving and adopting its CO2 technologies for specific growers'

plant yield needs.

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.

Foliar spraying natural nutrients and chemicals on plant leaves has been used for over 60 years by millions of indoor and outdoor plant growers. To date, outdoor growers have not had any way to enhance plant CO2-gas uptake for faster 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. GROW’s safer dissolved CO2 foliar spray can be used by indoor and outdoor plant growers with minimal CO2 gas lost.

GROW’s CO2 technologies are commercially proven, scalable and easily adopted into existing irrigation systems. GROW’s proven crop yield enhancements and revenue model is compelling for growers and Agri-industrial partners.

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