



(GROW.TSXV, BLONF.OTC, 4021.Frankfurt)  
First Quarter 2021

## CO2 GRO Inc. (GROW) - CORPORATE OVERVIEW

**GROW's mission is to accelerate the growth of all value plants safely, economically and naturally using our patented advanced CO2 Delivery Solutions™.** Our systems dissolve CO<sub>2</sub> gas into water creating a CO<sub>2</sub> saturated solution. This CO<sub>2</sub> rich liquid is then misted on plant leaves creating a thin film around the leaf, which isolates the leaf from the atmosphere. The dissolved CO<sub>2</sub> molecules move from the solution into the plant leaves providing surplus carbon for photosynthesis. **This maximizes plant yields, maturation rate, and plant health and customer profitability.**

**Worldwide there are 50 billion square feet of mostly glass walled greenhouses however, 85% cannot gas with CO<sub>2</sub> due to required heat venting and/or building porosity. This is GROW's main target market.** Announced commercial feasibility systems have been installed or announced at greenhouses in the US, Canada, Colombia, El Salvador, Malaysia, France, the Netherlands and the UAE to date in 2021. In addition, the 15% of greenhouses that do CO<sub>2</sub> gas typically have to vent heat and therefore CO<sub>2</sub> gas during warm days in spring, summer and fall. These CO<sub>2</sub> gassing greenhouses are missing out on collectively, **months of optimal plant yields.** Employing CO<sub>2</sub> Delivery Solutions™ systems will allow these CO<sub>2</sub> gassing greenhouses to capture the peak yields they are currently missing. **Our first Leamington Ontario feasibility with Prism Farms in their tomato greenhouse will measure the additional yield realized.**

**Results.** GROW has demonstrated up to **30% value increases** in plant biomass using its CO<sub>2</sub> Delivery Solutions™ on *Cannabis*, hemp, lettuce, peppers, kale, orchids and other flowers in scientific and commercial settings. **This matches plant yields observed in greenhouses capable of atmospheric CO<sub>2</sub> gas supplementation, however we achieve these results more efficiently using up to 95% less CO<sub>2</sub> in our process.** The combination of enhanced growth, plant pathogen protection™, CO<sub>2</sub> usage savings makes CO<sub>2</sub> Delivery Solutions™ the best economical CO<sub>2</sub> option **for all greenhouse growers.** In addition, greenhouses located in countries which have implemented carbon taxes could realize significant tax cost savings by employing CO<sub>2</sub> Delivery Solutions™.

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**Perimeter Protection™.** Applying our CO<sub>2</sub> saturated solution for a few seconds several times per hour dramatically slows the spread of micro pathogens such as *E. coli* and powdery mildew. This is a result of rapidly fluctuating pH in the CO<sub>2</sub> saturated solution as gas is dissolved into the liquid and then removed by the plant for photosynthesis. This environmental instability on the leaf surface creates an unfavorable environment for micro pathogens limiting their spread. Demonstrations on peppers and *Cannabis* showed 99% less *E. coli* and powdery mildew spread versus controls and three times longer plant survival of plants infected with powdery mildew versus controls. **CO<sub>2</sub> supplementation via the atmosphere does not provide this plant pathogen protection benefit as pH fluctuation does not occur with this technique.**

**Optimize CO<sub>2</sub> Usage / Minimize CO<sub>2</sub> Loss.** Greenhouses supplementing atmospheric CO<sub>2</sub> lose approximately an average 60% of the gas to the atmosphere according to an Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) study. CO<sub>2</sub> Delivery Solutions™ has been demonstrated to use up to 95% less CO<sub>2</sub> gas than atmospheric enrichment by CO<sub>2</sub> gassing while achieving the same growth benefits.

**Health & Safety. CO<sub>2</sub> Delivery Solutions™ safety versus gassing.** Atmospheric enrichment of CO<sub>2</sub> in greenhouses to levels ≥1,500 ppm is unhealthy for humans to breathe. Therefore, greenhouses typically restrict worker hours while these levels are maintained during plant light grow cycles. Aqueous CO<sub>2</sub> misting is applied directly to the plant leaves and is therefore not breathed in through the air. The CO<sub>2</sub> misting solution is also potable so anyone that decides to take a drink will be safe.

## **CO<sub>2</sub> GRO Inc. ENVIRONMENTAL, SOCIAL and GOVERNANCE (ESG)**

CO<sub>2</sub> GROs Inc. ESG is a Sustainability Platform with a Planet, People and Profits focus. CO<sub>2</sub> GRO addresses ESG as a strategic element of value creation and sustainability in our Corporate Value Proposition, now and in the future. We are also committed to promoting and maintaining diversity, equality and inclusiveness in our workplace as well as a safe and healthy workplace.

CO<sub>2</sub> GRO is committed to ensuring our CO<sub>2</sub> Delivery Solutions™ technology enhances global food produced in greenhouses and protected agriculture facilities by up to 30%. We believe we can also help reduce GHG emissions from the 7.5 billion square feet of greenhouses that inject CO<sub>2</sub> gas by up to 95%.

CO<sub>2</sub> GRO is also committed to transparency and prudent management of the corporation as the Company grows. Purposeful companies, with better environmental, social and governance (ESG) profiles have outperformed their peers.

## **Companies with strong ESG practices outperform their peers**

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**Our 2020 Management team:**

- 1) John Archibald, President and CEO. He founded gas infusion companies Canzone and inVentures in 2000 as well as CO2 GRO Inc.'s predecessor Carbon2Algae in late 2007.
- 2) Aaron Archibald, VP Sales and Strategic Alliances. Aaron was VP Operations for inVentures from 2005-2017, commercializing a number of gas infusion business verticals such as groundwater remediation, wellness and aquaculture. He leads Sales through internal representatives, commissioned independents and Ag Industrial Partners.
- 3) Dr. Matt Julius, Chief Science Officer. He is a Biology Professor at St. Cloud State University (SCSU) who is working during his Sabbatical year with us. He designs all of CO2 GRO's scientific grow trials supporting our now six PCT patent filings, commercial feasibilities with potential customers and oversees all Communications and Funding submissions to ensure scientific accuracy.
- 4) Sam Kanés, VP Market Research & Analytics. He co-founded Carbon2Algae in late 2007 with John and has been a foundational Director of the Board of CO2 GRO Inc. and its predecessor companies Solutions4CO2 and Carbon2Algae.

John and Aaron sold both gas infusion patent owner Canzone and gas infusion equipment manufacturing company inVentures (a Canzone licensee) in July 2017. They then joined CO2 GRO Inc. to commercialize a dormant (since 2014) perpetual royalty free CO2 gas infusion license for dissolving CO2 to enhance plant growth. John and his partners assigned this perpetual license from Canzone to CO2 GRO Inc. in its 2012 IPO (then called Solutions4CO2 Inc.).

**Strategy.** John Archibald executes the Board approved 2021 Business Strategy and Budget via his VP Sales & Strategic Alliances, Chief Science Officer, Chief Financial Officer, VP Market Research & Analytics and other valuable partners and alliances.

**Operations.** CO2 Delivery Solutions™ commercial installations and commercial feasibilities are led by Aaron Archibald with support from Dil Vashi, Manager of Corporate Development. CO2 Delivery Solutions™ marketing, sales, project design, implementation and customer management are the responsibility of the VP Sales & Strategic Alliances and the CEO.

**Communications and Investor Relations.** **Michael O'Connor** is the primary liaison for investors and other interested investor parties enquiring about GROW. Sam Kanés is responsible for most other forms of GROW communications that include interfacing with public relations and media

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representatives, press releases, follow-on investor and shareholder inquiries, as well as incoming business development inquiries which are then vetted before handing to the VP Sales and Strategic Alliances.

## **PATENT PENDING CO<sub>2</sub> DELIVERY SOLUTIONS™ TECHNOLOGY**

GROW filed an additional five (5) related patents under the Patent Convention Treaty (PCT) in 2019 for 1) plant micro-pathogen growth resistance, 2) plant metabolite maximization 3-4) two for outside drone applications of aqueous CO<sub>2</sub> and ammonia (NH<sub>3</sub>) and 5) for a retail hand held CO<sub>2</sub> Delivery Solutions™ device for very small commercial or home use. A sixth PCT patent was recently filed related to aqueous CO<sub>2</sub> benefits for plants.

Our global PCT patent for CO<sub>2</sub> Delivery Solutions™ went pending in August 2018 after a year of both filed scientific and commercial plant growth trials success. We continuously add our plant growth enhancement and micro-pathogen resistance results to our PCT filings to strengthen our patent pending status.

Our first core patent pending global PCT is for “plant growth acceleration systems and methods” to accelerate plant growth using any misting, spraying or atomizing methods of delivering dissolved CO<sub>2</sub> onto plants from any dissolving CO<sub>2</sub> technology.

## **OUR CO<sub>2</sub> DELIVERY SOLUTIONS™ TRIALS, FEASIBILITIES AND INSTALLATIONS**

In February 2018, manual misting of aqueous CO<sub>2</sub> trials began on microgreens, followed by *Cannabis*, lettuce, flowers and peppers. In September 2019, our first Commercial Feasibility installation of a generation two automated system was done at a large Ontario flower greenhouse. In December 2019, our first Canadian *Cannabis* Commercial Feasibility installation was announced and a second at a Canadian *Cannabis* micro-cultivation facility in May 2020. In March 2020, we installed a Commercial Feasibility system in each of fifteen Missouri U.S. hemp greenhouses that bought these systems in Q3 2020 after one full grow cycle.

Commercial Feasibilities typically range from 1 to 4 grow cycles depending on the crop and the client’s requirement for robust data collection in order to make a decision to purchase a commercial installation.

To date we have sold four commercial CO<sub>2</sub> Delivery Solutions™ systems without feasibilities, all to Canadian licensed *Cannabis* producers

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## CO2 DELIVERY SOLUTIONS™ MARKET OPPORTUNITY

**Approximately 85% of the world's 50 billion square feet of mostly glass walled greenhouses are not economically able to use CO<sub>2</sub> gassing.** They are typically located in hotter regions such as the Middle East, Southern Europe, Asia, South and Central America, South Africa and the Southern U.S. where excess heat has to be constantly vented. This venting process also removes the CO<sub>2</sub> gassed into the greenhouse atmosphere, making it uneconomic. These greenhouses are our primary target, but we see semi-enclosed shade houses, hoop houses and other indoor horizontal and vertical grow facilities that cannot gas with CO<sub>2</sub> also as potential customers. For 2021, we are focused on greenhouse growers in North America and with our Marketing Partners in the UAE with Gulf Cryo, Israel with Dotz Nano, the UK, the Netherlands and Belgium with Rika Biofuels, South Africa with PharmaCrop and Malaysia with CF Green.

**Aside from atmospheric enrichment by CO<sub>2</sub> gassing, which is limited to about 15% of the world's greenhouses, there is no other alternative we are aware of for growers to economically supplement their plants with CO<sub>2</sub>.** Even those greenhouses that use CO<sub>2</sub> gassing could seasonally benefit from our systems when they have to vent the heat from their greenhouses.

## CO2 DELIVERY SOLUTIONS™ BUSINESS MODEL

**We target greenhouse customers who can get a payback in two years or less if they buy a system from us while providing a high gross margin for us.** Nearly ALL greenhouse grown crops fall into this category as they get higher production and revenue per square foot versus outdoor growers. We help maximize their production and therefore revenue and profits indoors.

**Customers can choose to buy or lease-to-own our CO<sub>2</sub> Delivery Solutions™.** Regardless of the sale structure, a CO<sub>2</sub> Delivery Solutions™ sale includes project design, engineering, equipment (from CO<sub>2</sub> Dissolution System to misting nozzles), installation, commissioning, Technology Site License and training. CO<sub>2</sub> gas supply is not included as this is sourced from local industrial CO<sub>2</sub> gas suppliers.

All our CO<sub>2</sub> Delivery Solutions™ require some customization and engineering based on facility size, plants grown, CO<sub>2</sub> gas needs, irrigation modifications to CO<sub>2</sub> misting required, greenhouse layout etc. Final Commercial Installation pricing is based on the final design after scoping and accounting for all these unique factors for each customer.

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## ONGOING COLLABORATIONS WITH AG INDUSTRIAL PARTNERS

We are in discussions with established regional or global companies involved in industrial CO<sub>2</sub>, indoor and misting and irrigation, greenhouse construction and other related industries as our business opportunity is global. We have regional Ag Industrial Partners covering the EU, Middle East, South Africa and Southeast Asia and a global CO<sub>2</sub> supplier collaborating with us in South America.

## WHY CO<sub>2</sub> DELIVERY SOLUTIONS™ WORKS WHERE ATMOSPHERIC CO<sub>2</sub> GASSING DOES NOT

Most plant growth enhancers have by now, been optimized in greenhouses, such as light intensity and spectrum, nutrients, moisture, heat, pesticides, bio-actives etc. The last missing growth enhancer to maximize plant yields has been **the most efficient delivery of CO<sub>2</sub> to plants** so they can absorb enough CO<sub>2</sub> gas to achieve maximum biological photosynthetic rates supporting an optimal plant metabolism.

**Our CO<sub>2</sub> Delivery Solutions™ technology maximizes CO<sub>2</sub> delivery efficiency.** Applying an aqueous CO<sub>2</sub> mist to leaves creates a CO<sub>2</sub> gas pressure that is greater on the outside of a leaf surface (either top or bottom) than the CO<sub>2</sub> gas pressure inside a leaf. Nature then balances the CO<sub>2</sub> gas pressure difference by forcing the dissolved CO<sub>2</sub> through the entire plant leaf surface area. It takes only a few minutes for leaves to fill with the dissolved CO<sub>2</sub> molecules they are capable of holding in their spongy sub-surface mesophyll cells – the time it takes to fill a car gas tank.

**The bottom line is CO<sub>2</sub> Delivery Solutions™ enables ALL greenhouse and covered cultivation regardless if they are unsealed and open venting to supplement their plants with CO<sub>2</sub> for enhanced growth and plant protection.**

## CO<sub>2</sub> DELIVERY SOLUTIONS™ MARKET FOCUS

Dry, warm climate areas in the U.S. like California, the Middle East, El Salvador, Columbia, Mexico, Malaysia, South Africa and Spain are ideal to grow plants in low-cost open-air greenhouses called shade houses. They have studs for walls, so it is impossible for them to use CO<sub>2</sub> gassing as the CO<sub>2</sub> gassed immediately dissipates. Below is a picture of a shade house:

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This shade house has 150 moving overhead irrigation booms that are ideal for us to connect our CO2 Delivery Solutions™ systems. Below is a sealed greenhouse with 28 installed booms for irrigation that are also ideal:



Pictured is an arugula crop that typically matures in two weeks. We achieved 35% more arugula biomass yield versus control plants using a connected CO2 Delivery Solutions™ system to one of the moving irrigation booms at this greenhouse.

Some greenhouses use root feeder irrigation drip lines only, such as most large *Cannabis* operations. In their case, we need to add misting booms or install overhead misters to reach their *Cannabis* plant canopy. The added capital cost for misting infrastructure can vary but is generally \$1-\$1.50 per square foot. The capital cost of buying our CO2 Delivery Solutions™ system ranges based on facility size and canopy serviced. The more volume and scale the more economical it is to purchase.

**The vast majority of greenhouse growers regardless of crop will see a payback of 2 years or less with *Cannabis* and hemp being well under a year.** We believe the added revenue and value of larger *Cannabis* bud weight grown faster using a CO2 Delivery Solutions™ system with Plant Perimeter Protection™ far exceeds the cost of additional capital required.

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**GROW's market focus is all the greenhouses that are similar to the ones above, i.e. unsealed with open sides and roofs for heat venting and air flow. These greenhouses cannot use CO<sub>2</sub> gassing. Their only option is CO<sub>2</sub> misting with CO<sub>2</sub> Delivery Solutions™.**

## **MISSOURI HEMP GREENHOUSE INSTALLATIONS**

In March-April 2020, we installed thirteen CO<sub>2</sub> Delivery Solutions™ systems at Missouri based Linn County Seed & Flower and two at nearby Sacred Seeds Hemp Farm. They have our smallest commercial CO<sub>2</sub> Delivery Solutions™ model that can each cover up to 10,000 square feet of plant growth. The Missouri hoop houses are each approximately 2,250 square feet each.

These hemp greenhouse owners are connected to a U.S. hemp network of over 250 hemp greenhouses that sell hemp seeds and other hemp-based products to American Hemp Ventures (AMHV.OTC). Now that the systems have been sold, the increased yield and micro-pathogen protection results from the first fifteen are attracting others to our technology.

Linn County and Sacred Seeds greenhouse owners have expressed their satisfaction with CO<sub>2</sub> Delivery Solutions™. Hunter Marriott, owner of three greenhouses at Linn County commented, "The faster and bigger growth during the vegetative stage was visible in just one week after implementing. It has certainly had an impressive effect on my plants." Robert Allen, owner of two greenhouses at Sacred Seeds commented, "I am using CO<sub>2</sub> Delivery Solutions™ primarily to help prevent the growth of mold and powdery mildew, but let's face it, faster growth and larger plants were huge selling points as well. As of April 2020, I have been using the system in two large greenhouses for about a month and I am already seeing improved growth with no signs of stress, mold or mildew."

To see a video testimonial of our CO<sub>2</sub> Delivery Solutions™ set up at Sacred Seeds, please [click here](#).

## **Key CO<sub>2</sub> GRO 2019-2021 Awards and Recognition**

1. **CO<sub>2</sub> GRO was selected as one of Life Science Ontario's 2019 Success Stories with other major pharma companies like Merck Canada and Glaxo Smith Kline.** Life Sciences Ontario now oversees the business interests of Ontario's medical cannabis industry. They recognized the importance of the plant pathogen protection provided by our 100% natural CO<sub>2</sub> Delivery Solutions™ for growing plants safer that go into medical cannabis human health products.

2. **GROW** was selected as a top Ag Tech Canadian company by Canada's California Trade Commissioners who hosted us December 3-6, 2019 in Sacramento, San Francisco and Salinas.
3. **CO2 GRO** was selected in February 2020 to speak as one of four finalists in the World Ag Expo's Hemp Innovation Challenge in California. There were 65 hemp innovation entries from fourteen countries. This selection was instrumental to us getting the fifteen commercial U.S. hemp installations going in March.
4. **GROW** was selected by Canada's Mexico Trade Commissioners to participate in their Ag Tech Program that runs from February 2021 to mid-April 2021. We will be assigned a mentor to interact with large potential Mexican greenhouse customers, Marketing Partners and Distributors selected for us to interface with.