

POWDERY MILDEW FEASIBILITY

Atmospheric enrichment of CO₂ by gassing in protected horticulture operations has enhanced plant yields for decades. However, even sealed greenhouses must vent during warmer months resulting in the CO₂ gas escaping outside. This makes maintaining CO₂ gas levels of >800 ppm very difficult. Non-sealed structures such as hoop houses, tunnels, shade and net houses have open ends, roofs or are porous, making CO₂ gassing virtually impossible.

This means the vast majority of the 600 billion square feet of protected growers worldwide are not able to take advantage of CO₂ enrichment which is proven to result in up to 30% more yield as plants are able to enhance photosynthesis. [CO₂ GRO](#)'s patented revolutionary [CO₂ Delivery Solutions](#)[™] enables ALL protected grows to consistently deliver optimal amounts of CO₂ to their plants via misting a saturated CO₂ solution, resulting in **higher yields, faster growth, safely and profitably**.

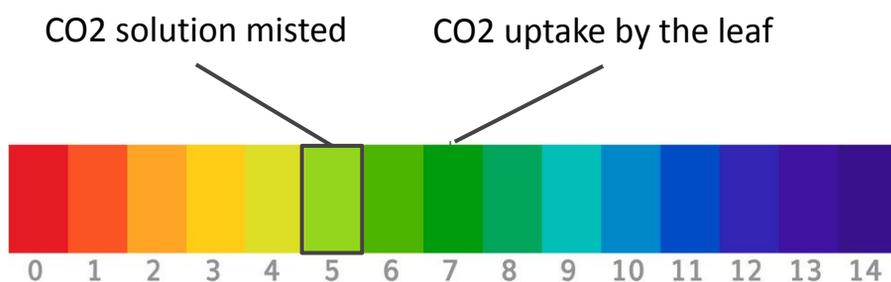
Results:

- **No powdery mildew** was visible in the CO₂ misted plants versus powdery mildew was visible in all six control plants.
- **No powdery mildew** has been reported in any of the other feasibilities that have been conducted and are currently being conducted with cannabis and hemp growers in Canada and US.

Cannabis Feasibility:

Commercial Feasibility was performed on Sativa strains in a commercial US greenhouse. Six plants misted with saturated CO₂ solution showed no visible sign of powdery mildew. All six plants in the control group showed visible signs of powdery mildew.

The suppression of epiphytic microbial pathogens such as powdery mildew is due to the pH fluctuation as saturated CO₂ solution is misted on the plants. The CO₂ solution typically has a pH of around 5. When the solution is misted, the pH on the leaf surface drops. CO₂ is diffused into the leaf within 30-60 seconds, at which point the pH rises back to normal. Misting is done two to four times an hour creating a continual fluctuation of drop and rise in pH several times an hour during the light cycle. This fluctuation makes for an uncomfortable environment where microbial pathogens cannot replicate and spread quickly.



- **pH fluctuation on the leaf surface significantly slows the spread of micro pathogens.**
- **CO₂ gassing alone does not provide this protection.**

All results shown were observed in demonstrations of CO₂ Delivery Solutions. Results may vary according to crop and growing conditions. CO₂ Delivery Solutions is not intended for use as a pesticide or herbicide. CO₂ Delivery Solutions is sold as a novel method for delivery of CO₂ to plants.

Delivering CO₂ to Growers Everywhere.

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