



Fighting cannabis pathogens through dissolved CO2 spray

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Medical cannabis growers are terrified of pathogen outbreaks such as powdery mildew that can rapidly wipe out crop cycles once a few plants get infected. According to the team with CO2 GRO, there are not many reliable complete organic solutions for cannabis growers to fight pathogens like powdery mildew or E. coli. You might never guess - but they developed one: dissolved CO2 Foliar Spray.

Less tools than food and non-food growers

The high standards of the pharmaceutical industry and new Government Regulators of legalized cannabis are pushing medical cannabis growers to grow their plants with less tools than traditional food and non-food crop growers have. Traditional food and non-food crop growers can use 100's of approved chemical-based protection products. In Canada, there are only 23 allowed by the Office of Medical Cannabis to date that are less effective organic based solutions. This is due to the new legal cannabis industry being a combination of both agriculture and medicine.

Bioavailable and natural

The Canadian company CO2 GRO has come up with a patent-pending technology solution that is 100% bioavailable and 100% natural - dissolved CO2 Foliar Spray. According to the company, it strengthens cannabis plant resistance to pathogens as well as increases growth, speed to maturity and size and number of buds per plant with higher THC and CBD concentrations. In recent published pathogen trials using cannabis and pepper plants, CO2 GRO has also demonstrated dramatically lower E. coli and powdery mildew cell growth in both cannabis and pepper plants using its CO2 Foliar Spray technology (99% less).

Alternative to CO2 gassing

“Our technology helps cannabis growers achieve healthier crops that grow faster, larger, and safer, bringing greater profits,” says John Archibald, CO2 GRO’s CEO. “There are some indoor growers using CO2 gassing but most cannot due building porosity, the grow area being too warm, power costs being too high, value of crop too low etc. The ones that do CO2 gas waste a majority of the CO2 gas they buy through required venting before plants absorb it. We can bring CO2 gas via Foliar Spray to all of these less efficient greenhouses, shade houses and hoop houses whether they gas or not plus anywhere outdoors, without material CO2 gas loss, in dissolved format.”

“Our Foliar Spray is just water infused with CO2 without bubbles that works in an extremely efficient way,” John explains. “This dissolved CO2 water is 100% bio-available to plant leaves where almost all plant photosynthesis of CO2 into sugars to grow occurs.”



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But how does this spray kill pathogens in cannabis crops? John states “We observed that certain single cell pathogens cannot grow in the presence of sharp pH changes. Our acidic dissolved CO2 (carbonic acid) water is lightly sprayed on leaf surfaces at about 4.5-4.7 pH. That water then rapidly turns alkaline as leaves consume the dissolved acidic CO2. On cannabis and pepper plants, we scientifically measured and observed the near halt (two orders of magnitude or over 99% less) of the growth of unwanted single cell pathogens targeted.”

Post-sprayed water pH

"The post-sprayed water pH on the leaf surface snaps back to the low-to-mid 6 pH area in less than 90 seconds as measured at St. Cloud State University in Minnesota. This 2X pH volatility swing is not dangerous for cannabis."

John continues explaining: “We take CO2 gassing cannabis growers from 5 crop cycles per year of value to a net 6 by adding more bud volume, size of buds and speed to plant maturity but use only half the CO2 gas to do that. That ignores the higher THC and CBD bud concentrations we also get. For cannabis growers not CO2 gassing, our value add is closer to 50% without valuing higher THC and CBD. Our technology is “not a pesticide” as concluded by Health Canada’s Pesticide Management Regulatory Authority nor is it “an additive” as concluded by the Canadian Food Inspection Agency.”

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