

Infection Protection through COVID-19 and Beyond

By Troy Henderson



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Human pathogens are usually not top of mind for cannabis producers. This is understandable – in your day-to-day lives, you're probably much more concerned about powdery mildew or Fusarium, which can threaten the health of your plants, and by extension, your business. However, there's a new pathogen that is getting all the press in every industry across the world: the newly-identified coronavirus responsible for the ongoing COVID-19 pandemic.

The COVID-19 coronavirus emerged from China in late 2019 and has been slowly making its way across the globe ever since. In a relatively short window of time, governments have been taking drastic measures in an attempt to stamp out this threat, ordering the closure of non-essential businesses and enforcing the need for social distancing as much as possible. Although this situation may seem overwhelming, it's important not to lose sight of some basic steps we can all take to minimize the impact of COVID-19 on your business.

Selecting the Right Disinfectant

There are a lot of misconceptions that arise whenever a new virus, or any new pathogen, is discovered. Many people assume there's something special about this new disease, when in fact, the new coronavirus is a slightly different version of a virus that causes the common cold. There are several strains of coronavirus, but prior to COVID-19, only two have been associated with more serious disease: Severe Acute Respiratory Syndrome (SARS) in 2002-2004

and Middle East Respiratory Syndrome (MERS), first reported in 2012.

When new viruses emerge, the assumption is often that a heavy-duty disinfectant is required to eliminate the pathogen on surfaces. And with this comes the assumption that the disinfectant could be toxic, as this would make it more potent against microbes. This couldn't be farther from the truth. All coronaviruses are enveloped viruses, which are actually quite fragile. This means they will be easily inactivated by disinfectants that have been tested against a broad spectrum of pathogens. While some disinfectants do kill tough pathogens at the expense of safety, newer technologies can provide the same, or an even better level of, effectiveness with formulations that are safe for the user, plants and the environment. One example of such technology is Accelerated Hydrogen Peroxide®, formulated specifically for the cannabis industry in Shyield™ Disinfectants.

When selecting a disinfectant to use during this COVID-19 pandemic, you should try to find a product that you would want to use year-round. This comes down to a balance of factors, including finding the product that is the best fit for the unique needs of your facility. The ideal disinfectant should be approved by Health Canada for use against a broad spectrum of pathogens, but should also be non-toxic and non-irritating at in-use solutions. Although this sounds like common sense, many of the disinfectant chemistries used to this day in cannabis facilities rely on high concentrations of chlorine-releasing agents, quaternary ammonium compounds and alcohols, which have been associated with occupational health concerns.^{1,2}



Additional factors to consider might be cleaning capabilities (e.g. whether the product is a one-step cleaner/disinfectant), contact time (how long the disinfectant must remain wet on the surface) as well as ease of application. But the disinfectant you choose is just one piece of the infection prevention puzzle: keeping disease out of your facility is about how disinfection, along with a variety of other factors, fit together into an overall protocol.

Designing Protocols for Infection Prevention

The COVID-19 pandemic caught everyone off guard, including the majority of businesses, which may not have had plans in place for events such as this. The first step in responding to an infectious disease outbreak is to form a company-wide plan, and ensure that every member of your team is involved. This might include making special arrangements for staffing, making sure that your supplies of hand sanitizer, personal protective equipment and disinfectants are sufficient, and implementing a more rigorous cleaning and disinfection process for high-touch non-production surfaces throughout your facility. You may want to also have a plan for communication with your customers, to let them know how your facility is tackling this challenge.

In terms of the concrete measures that can be implemented to reduce the risk of infection throughout your facility, the best strategies are often the most obvious ones. This includes encouraging hand hygiene, including frequent hand washing and the use of alcohol-based hand sanitizers if hand washing is not possible.³ High-touch surfaces throughout your facility can serve as fomites, which are inanimate objects that can harbour infectious microbes. These

include doorknobs, light switches, phones, computer keyboards, work surfaces, and surfaces are cleaned and disinfected regularly.³ But perhaps the most important measure in reducing the spread of COVID-19 is limiting unnecessary contact between members of your team, and mandating that workers stay home if they feel ill. Also, limiting the entry suppliers and other visitors into your facility is highly recommended.

Maintaining Supplies in a Crisis

COVID-19 has launched us into uncharted territory, poking holes in our supply chains of essential materials. Prime examples of this include Personal Protective Equipment (PPE) as well as cleaning and disinfection products, for which demand has exploded in light of the ongoing crisis. In times like this, the unfortunate truth is that we are competing with frontline healthcare workers and other essential service providers for PPE and disinfectant products. The good news is that there are a few strategies that can be implemented to safeguard your supplies. For instance, cold and flu season is an annual occurrence between late fall and early spring. This also happens to correspond with the time of both the 2003 SARS outbreak and of course the current COVID-19 pandemic. Knowing there is a cyclical pattern to some outbreaks, we can plan our supplies accordingly. If you order supplies based on your estimated weekly or monthly needs, consider implementing a process in early fall to increase your stock on hand so that if supplies are in short demand and take longer to arrive, you will not run out in the meantime.

Another example would be sourcing materials from Canada whenever possible, to avoid issues caused by interruptions to

the international supply chain. We have seen the consequences of this in a major way, as China is a major producer of PPE and other vital supplies. In addition to this, sourcing materials from supply chains specific to the cannabis industry could potentially help avoid relying on products needed in other industries. For instance, isopropyl alcohol is ubiquitous in healthcare, and the demand for this disinfectant chemical has skyrocketed. On the other hand, products branded for the cannabis market would be much less likely to migrate to other industries, compared to their generic counterparts. Using concentrated chemicals, rather than ready-to-use solutions, is another way to help reduce the volume of orders being placed, and ensuring that supply of essential solutions remains uninterrupted. In the coming weeks, it may be prudent to ensure that one- or two-months' worth of supplies are on hand, to minimize the potential impact of shortages.

These times have presented challenges unlike anything we've experienced, within our communities, our healthcare systems and our businesses. As we all work together to reduce the devastating impact of COVID-19, it's important to take stock of the concrete measures we can implement within the cannabis industry to protect the health of our teams and our businesses.

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