

On the cover



A laboratory is not a common site in agriculture. But some cannabis producers also work with pharmaceuticals.

Growing cannabis — health and safety in the industry

By Jackie Wong

Sharp shears, carbon dioxide, and bright, hot lights: These are just some of the health and safety concerns that could be present in a greenhouse. Growing cannabis is no exception. From staff orientation, to safe work procedures, to ergonomics and beyond, employers in this emerging B.C. industry have a lot to think about when it comes to making sure their workers are protected.

Today, there are approximately 125 licensed producers of cannabis in operation across the country, with 30 located in British Columbia. Cannabis producers are part of an expanding agriculture subsector that may intensify since its legalization on October 17, 2018.

“Up until now, the general public’s exposure to the cannabis industry has been to illegal operations in somebody’s basement,” says Dawn lanson, an occupational safety officer with WorkSafeBC who inspects agricultural operations on Vancouver Island. lanson is one of several Prevention Field Services officers at WorkSafeBC whose job includes inspecting cannabis facilities. She has a background in scientific research and development in the biotechnology sector, which is helpful for exploring the issues of health and safety surrounding cannabis production and processing.

lanson notes that pop-culture representations of illicit drug operations fuel the perception of cannabis facilities as unhygienic, potentially unsafe environments that carry a high risk of drug exposure and worker impairment. Prevalent as these stereotypical images may be, cannabis producers — just like all employers in B.C. — need to adhere to occupational health and safety regulations in order to keep their workers safe from occupational injury and disease.

When it comes to the growing side of cannabis production, there are many things that employers need to address when it comes to creating a healthy and safe workplace. Some of the risks include:

- The general conditions of a workplace, which include workplace structures, ergonomics, and indoor air quality
- How to work safely with potentially hazardous substances, such as the carbon dioxide used to foster cannabis plant growth

- Correct use of personal protective equipment, such as protective eyewear and protective suits
- Safe use of equipment, from plant shears to sodium lights
- The need for adequate training and supervision

Addressing these risks requires a commitment from employers to properly assess the risks at the workplace and control them.

From ergonomics to supervision

Over in Nanaimo, Tilray Canada Ltd. has been producing pharmaceutical cannabis and cannabinoids since 2014. In the past four years, Tilray has developed an in-depth risk-assessment process and a comprehensive safety management system. A site safety coordinator works there full time and the company also makes good use of its joint health and safety committee for recognizing and addressing new hazards.

But protecting workers requires more attention than just high-level compliance with occupational health and safety regulations. For example, Tilray realized early on that ergonomics would be a factor for the health and safety of its workers when it came to harvesting the plants. To reduce the risk of repetitive strain injuries arising from the manual labour of de-stemming and trimming, the company has implemented engineering controls with a focus on equipment automation.

“From early 2014 until now, we’ve actually successfully eliminated all our manual de-stemming and trimming processes around the primary processing of the finished flower,” says Scott Krompocker, general manager of Tilray.

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—Dawn lanson, WorkSafeBC occupational safety officer



Tilray general manager Scott Krompocker and occupational health and safety coordinator Allison McKenzie give WorkSafeBC occupational safety officer Dawn Ianson a tour of their facility.

The company also requires stricter cleaning processes than one might find in other agricultural settings. Equipment needs to not only be cleaned, but also be sanitized. To make sure that their cleaning processes are effective and safe, staff members have developed a cleaning and sanitization master file and validation program.

“We work with a chemical engineer and several different suppliers to ensure that our cleaners and sanitizers are effective, but also compatible and safe for workers,” Krompocker says.

“We have strict adherence to standard operating procedures, and we focus a lot of our resources towards worker training,” Krompocker adds.

Teaching the next generation

WorkSafeBC’s Dawn Ianson notes that there are many young people working in cannabis production. “You have an opportunity as an employer to lay the foundation for young workers. To build trust and to let them know that you take health and safety very, very seriously,” she says. “And it lays the foundation for that young worker’s career.”

Krompocker emphasizes the importance of bringing new staff on board in a way that places health and safety in the driver’s seat. When Tilray first opened, they needed to get their new staff oriented to a highly structured environment, recalls Krompocker. Rather than let bad practices build up, the company wanted to address company culture “right out the gate,” he says.

“Staff needs to work collectively and collaboratively. You can’t have individuals just doing what they think is best; it has to be worked at from a systematic standpoint.”

Dealing with CO₂ and bright lights

Not far from Tilray’s headquarters in Nanaimo, Graeme Holfeld works as the general manager at Broken Coast Cannabis Limited in Duncan. He approaches health and safety at Broken Coast with a background from two different industries.

“We’re building our program in alignment with a lot of the other things I’ve seen before,” he says. “I was in biotechnology for ten years. I was in food for five years. And really, one of the big things for me when I came here was thinking, ‘I’ve been involved in health

and safety programs for the better part of 20 years now. How do we then go and apply it to the cannabis industry?”

For example, some cannabis growers pump carbon dioxide (CO₂) into grow rooms to facilitate plant growth. This is similar to what one may find in a tomato or cucumber greenhouse and precautions need to be taken. While CO₂ is harmless at low levels, at high levels it can have toxic effects on pulmonary function or can asphyxiate workers by displacing oxygen in the workspace. To make sure that the levels don't rise, the facilities use CO₂ monitors to make sure they're alerted immediately if there is a change in air quality.

Bright, hot lights are also used to nurture cannabis plants during their flowering cycle. These high-pressure sodium, metal halide, and wide-spectrum LED lights can cause cataracts, macular degeneration, and damage to the cornea. To protect themselves, workers use eye protection with a UV filter and colour-correction lenses when working near the plants.

Changing perspectives

Both Graeme Holfeld and Scott Krompocker also field

frequent questions from the public about the potential for worker impairment due to cannabis exposure.

“We get a million questions from outsiders as well as new employers like, ‘Are people going to feel the effects of THC when working in a cannabis facility? Do people have to worry about getting intoxicated or stoned, so to speak?’” Krompocker says. “And the answer to that is no.”

Cannabis can be a controversial product, notes Graeme Holfeld of Broken Coast, “but we're not really producing it in a way that's that much different than any other regulated setting,” he says.

For more information

WorkSafeBC has a number of resources for agriculture, greenhouses, nurseries, and floriculture on worksafebc.com. Additional concerns for these industries include confined spaces, falls from elevation, safe driving, heat stress, tractors, and many more. To find more information on implementing an effective agricultural safety program, visit agsafebc.ca. ☺



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