

Labor & Safety in the Workplace: Cultivation & Harvest

A Labor and Safety White Paper for Growers



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SOUTHWEST**SOLUTIONS**GROUP

SouthwestSolutions.com | 800-803-1083 | info@southwestsolutions.com



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Cannabis and hemp cultivation businesses that don't carefully control labor expenses can find themselves in financial trouble - even bankrupt. To help alleviate the many issues that arise with labor in crop production, Southwest Solutions Group offers machine lift systems that seamlessly integrate with both cultivation and harvest operations.

Systems are designed to relieve labor issues on key points related to moving grow lights and drying harvests. By eliminating hazardous and mundane tasks from the workflow of cultivation teams, our systems help businesses control labor expenses on a variety of fronts. Moreover, we give cultivation companies the ability to provide their employees a profitable, safe, and enjoyable place to work.

This paper explores how automation in moving grow lights and drying harvests protects ROI in human capital for cannabis and hemp cultivation businesses. The following key factors are explored in this work:

A) Labor & Moving Grow Lights

B) Labor & Drying Harvests

C) Workers' Comp Expenses

D) Injuries on the Job

E) OSHA Certifications & Ladder Training

F) Automating Cultivation & Harvest Operations

This paper concludes with the fact that, if cannabis and hemp cultivation companies utilize automation for routine and dangerous tasks, they protect their ROI in human capital as well as the wellbeing of their employees.



A. Labor & Moving Grow Lights

Indoor and greenhouse cultivators use human labor to move grow lights for several reasons. For starters, properly placing grow lights ensures vigorous plant growth as well as the efficient use of electricity. Secondly, lights must often be moved “out of the way” for intensive, daylong chores such as de-fanning, spraying, and transplanting.

LED lighting has grown prevalent in the cannabis industry - commercial producers are increasingly looking to these lights for both the vegetative and flowering growth. Yet, energy-efficient close proximity LEDs — like the extremely popular SPYDR by [Fluence Bioengineering](#) — must be spaced a mere 6-12 inches from a canopy. This notion presents a consistent, labor-intensive chore for certain indoor producers.

To move grow lights, entry-level employees such as Cultivation Technicians often climb on ladders to position individual lights. This chore requires them to bend in physically challenging ways, while working high above the ground. The job board [Glassdoor](#) reports that the average Cultivation Technician gets paid \$15.00 per hour without benefits for their work.

To better understand the value of automation in moving grow lights, let's look at a hypothetical 100 light garden. During the 30-day peak growth phase during flowering, Cultivation Technicians must raise the lights every 4 days to keep up with the demands of rapid plant growth. At this operation, the light moving chore takes the team 5 minutes per light - resulting in a total of 500 minutes (5 min x 100 lights) spent every 4 days on moving grow lights. In the end, this company spends 62.5 hours. (7.5 days x 500 min) per harvest on this menial task, resulting in a total labor expense of \$937.50 (62.5 hrs. per x \$15 per hr.).

Most indoor cultivation companies harvest 5 times per year. Therefore, our hypothetical business incurs annual labor costs of \$4,687.50 (\$937.50 x 5 harvests) by manually moving grow lights. Yet, this figure does not include the additional labor required to move lights during vegetative growth and for workplace chores - this additional work would likely raise the number by 50%. As a result, this hypothetical business spends \$7,031.25 (\$4,687.50 x 1.5) per year on the moving of grow lights.

By removing the need for manual labor in moving light fixtures, our systems give you the freedom to lessen labor costs and maximize your ROI in human capital. In like fashion, by utilizing machine power for these simple tasks, employers give team members the ability to focus on more rewarding work that furthers their skill sets.





B. Labor & Drying Harvests

Cannabis and hemp cultivators utilize excessive human labor in the harvest drying process. Of importance here is the fact that employees must work on ladders and scaffolding to properly fill drying rooms with plant material. According to Mat Rhoades, Director of Cultivation at Silver Leaf NV | BBMC NV, harvested cannabis and hemp stalks must be “hung one at a time and dried exactly right.” Otherwise, the harvest “molds and cannot go to processing.” Therefore, you must utilize all available square footage (both vertically and horizontally in barns and warehouses to ensure proper airflow between branches.

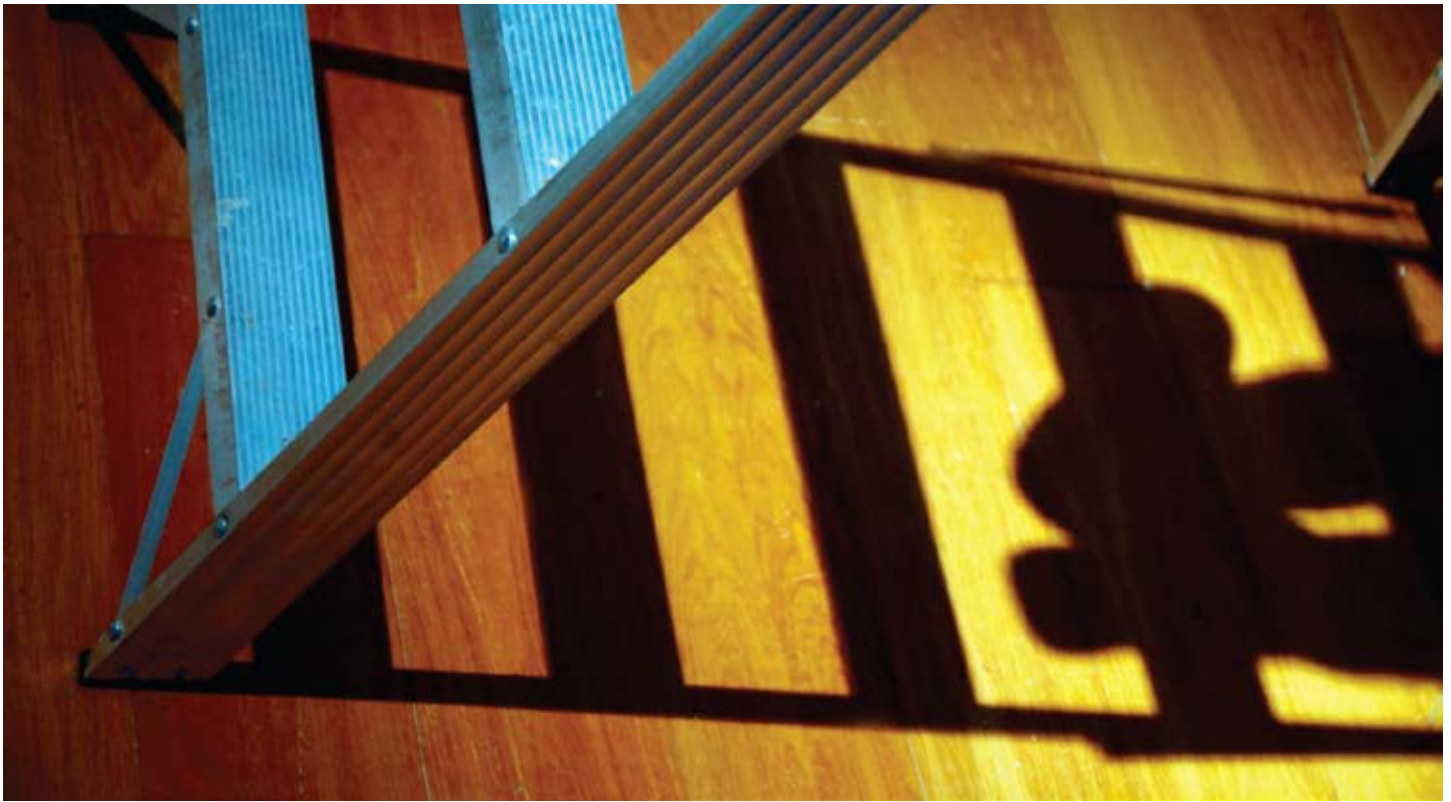
In the harvest drying process, large teams must work in unison to exploit every square inch of a drying room. Generally, this job necessitates a workflow of “ground teams” passing plant materials to “ladder teams” who then hang the drying stalks. When harvesting hundreds or thousands of pounds of plant material at a time, this process proves laborious, inefficient, and dangerous. In discussing the trials of drying plant material on a commercial scale, Rhoades emphasized labor challenges in the hemp industry.

According to Rhoades, you require about “20 employees to harvest 40 acres of hemp.” He also states that it would take this size team “about 2 weeks” to complete the entire harvest process. Of the 20 Cultivation Technicians making \$15 per hr. at the worksite, 10 will comprise the ladder team (who spend the entire 8 hr. workday off-the-ground hanging plant material). Resultantly, the average 40-acre hemp farm uses 80 hrs. (10 employees x 8 hrs.) of labor per day with their ladder team. At the end of a 14-day harvest operation, this adds up to an astounding 1,120 hrs. (14 days x 80 hrs.) and \$16,800.00 (1,120 hrs. x \$15 per hr.) of labor costs.

By eliminating the need to have employees work off-the-ground in harvesting cannabis and hemp, systems greatly decrease labor expenses for cultivators. We accomplish this with commercial drying racks that easily lower to any height with the push of a button.

Moreover, when machines raise the drying plant material back off the ground again, the process opens-up invaluable square footage in the workplace.





C. Workman's Comp Expenses

Cannabis and hemp cultivation teams incur some of the highest workers' comp insurance premiums in the industry. Jesse Parenti, Program Director and Partner at the cannabis risk management firm [9 Point Strategies](#), tells us that cultivation jobs are treated like traditional agriculture for insurance purposes. This is because, the physically demanding nature of cultivation work leads to more "ergonomic issues" and a "higher level of soft tissue claims" than seen with other verticals in the industry. Also, chores are often done off-the-ground, near hazardous equipment involving high-voltage power and standing water.

In discussing the overhead expenditures faced by cultivators for workers' comp, Parenti states "it's the highest expense most people have because it's based on their payrolls." He continues, if a cannabis cultivation company "has \$100,000 in payroll, it'll roughly cost them between \$8,000 and \$9,000 a year." In looking at Parenti's estimates, it's evident that workers' comp expenses for cultivation teams are equivalent to 8%-9% of salary expenditures.

To better assess how workers' comp expenses influence ROI in human capital, we can weigh Parenti's figures against labor costs in moving grow lights and drying harvests. To look again to previous labor examples, our hypothetical 100 light garden incurs \$7,031.25 per year in labor costs to move lights. Similarly, a 40-acre hemp farms spends \$16,800.00 on off-the-ground harvest labor each year.

By eliminating much of the human labor needed to move grow lights and dry harvests, you also minimize the workers' comp expenses tied to said salary expenditures. With our first example, you would save \$597.66 (8.5% of \$7,031.25 in labor expenses) annually in workers' comp expenses related to moving grow lights. In like fashion, you would save \$1,428.00 (8.5% of \$16,800 in labor expenses) in annual workers' comp expenditures on off-the-ground harvest work.

By automating simple workplace tasks in the cannabis or hemp garden, our systems increase labor ROI by freeing up money otherwise tied up in insurance. Even more, our machines also protect employees from dangers inherent in these jobs.





D. Injuries on the Job

Safety is a constant concern for cannabis and hemp cultivation teams. Moreover, industry experts report regular on-the-job injuries for tasks dealing with grow lights and drying harvests. Nicholas Cline, Director of Cultivation at GrowOhio, informs us that his cultivation team has worn “hard hats when working on tables” to avoid head injuries from low-hanging light fixtures. In like fashion, Mat Rhoades from Silver Leaf NV | BBMC NV feels that drying hemp at the commercial scale is both “dangerous and tough on the body.”

While your company’s workers’ comp premiums do not increase with each injury in the workplace, there are several additional expenses that you incur when an employee gets hurt on-the-job. Unfortunately for business owners, these additional expenses are not covered by workers’ comp insurance plans. For starters, businesses are responsible for [covering employee wages](#) during the period when the injured person is unable to work. In a like fashion, the [O2 Employment Services website](#) tells us that other less obvious expenses are incurred with a workplace injury, including overtime expenses, wages spent training new workers, administrative fees, and an overall pause in production.

In realizing how workplace injuries related to grow lights and drying harvests impact ROI in human capital, we can again turn to previous figures on Cultivation Technicians. If one of these individuals falls off a ladder while hanging branches, or gashes their head on low-hanging light fixture (that could have been moved out-of-the-way with machine power), they could be injured for a substantial amount of time. If this Cultivation Technician misses 6 months of full time work, it will cost a company \$15,600.00 (\$600 per week x 26 weeks) in extra labor expenses.

By implementing grow systems into your workflow when moving grow lights and drying harvests, you protect your employees from injury. Even more, in delegating dangerous chores to machine power, you can ensure a bountiful ROI on human capital by eliminating unnecessary expenses incurred with employee injuries.





E. OSHA Certifications & Ladder Training

The safety standards of the U.S. Department of Labor are increasingly being enforced in the burgeoning cannabis and hemp industry. Of importance to operators in this new industry are the regulatory guidelines of the Occupational Health and Safety Administration (OSHA). In regard to this study, cultivation companies that utilize ladders in the workplace must pay for OSHA ladder training for team members.

The [U.S. Department of Labor](#) website reports that “[f]alls from portable ladders ... are one of the leading causes of occupational fatalities and injuries.” Consequently, cultivation companies that regularly employ ladder work to move grow lights and dry harvests put employees in danger. Not to mention, these businesses must also pay to have their teams trained for OSHA ladder safety.

To comply with [United States labor law](#), cannabis and hemp businesses that use ladders must train employees on topics related to ladder positioning, stability, electrical hazards, weight loads, as well as proper fall and impact procedures. OSHA ladder training is offered both online and in-person, with different U.S. States having different requirements. Looking at online instruction, the workplace safety group [360 Training](#) offers online courses at \$79.00 per student and training takes 1 hr. per session.

To better analyze the cost of OSHA ladder training for commercial cannabis and hemp producers, we can again look to figures utilized in this paper. A modest-sized 40-acre hemp farm will need to put 20 Cultivation Technicians through OSHA ladder training. As such, this business will incur a cost of \$1580.00 (\$79.00 per class x 20 employees) in class fees for certifications. Also, they need to pay their employees during training, which will cost another \$300.00 (\$15.00 per hour x 20 hrs.). In the end, this hemp producer will spend \$1880.00 (\$1580.00 in class fees + \$300.00 wages) on OSHA ladder training. Not to mention, these figures do not include hidden expenses that arise with administrative costs and operations disruptions.

Finally, and it's worth saying, the end result of ladder training is that the only safe way to use a ladder is to maintain three points of contact with the ladder at all times. At the end of the day, it becomes difficult for employees to hang hemp or Cannabis with only one hand.

In using cutting-edge technology to move both grow lights and drying racks, grow systems insulate employee teams from the dangers of ladder work. In like fashion, our machines allow businesses to minimize some of the laborious and expensive training required to meet the standards of the U.S. Department of Labor.





F. Automating Cultivation and Harvest Operations

It takes more than a “green thumb” to find success in today’s highly competitive cannabis and hemp marketplace. In fact, leading cultivation companies go to extreme lengths to understand operational ROI down to the penny. Still, an over-dependence on human labor can cloud a clear picture of expenditures, budgeting, and forecasting as entry-level employees like Cultivation Technicians are often unreliable, with human error and unpredictability skewing our understanding of labor ROI. This notion only strengthens the argument for increased automation in cannabis and hemp cultivation.

According to the [OSHA Small Business Handbook](#), “addressing safety and health issues in the workplace saves the employer money and adds value to the business. Recent estimates place the business costs associated with occupational injuries at close to \$170 billion in expenditures that come straight out of company profits.” Because of these types of expenses, cannabis insurance expert Jesse Parenti stresses the fact that cultivation teams should “avoid working on ladders” at any cost. In like fashion, cannabis and hemp authority Mat Rhoades feels that grow room technology which “lowers the cost of goods sold and increases your abilities to lower operating cost” is always an asset in today’s courket.

Cannabis and hemp cultivators will protect their ROI in human capital by using grow systems for routine, dangerous tasks in moving grow lights and drying harvests. Also, by utilizing our systems in your garden workflow, you free yourself from many of the financial burdens that come with workers’ comp insurance, injured employees, and OSHA training. Finally, by letting Southwest Solutions Group “do the heavy lifting” with simple chores, we also give employees like Cultivation Technicians the freedom to pursue more rewarding work that furthers their careers.



White Paper:

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