

The background of the entire page is a dark, almost black, color. It is filled with numerous cannabis leaves of various sizes and orientations. The leaves are rendered in a vibrant, lime-green color with black outlines, giving them a stylized, graphic appearance. They are scattered across the page, with some large leaves in the foreground and smaller ones in the background, creating a sense of depth and texture.

CANNABIS
BUSINESS TIMES

STATE OF THE
CANNABIS CULTIVATION
INDUSTRY REPORT

2021

Cannabis market growth continues despite
persistent challenges.

IN PARTNERSHIP WITH

PRCSPIANT

'STEADY AS SHE GOES'



As we move into the second half of 2021, the future looks cautiously bright, but “steady as she goes” seems to be the theme of the post-pandemic cannabis industry.

Prospiant—the new agtech brand of Gibraltar Industries, including Nexus Greenhouse Systems—has partnered with *Cannabis Business Times* for the past six years to bring you critical insights into the state of the industry. Our new brand anchors off the word “prosperity,” embodying long-term stability, financial strength, and end-to-end expertise in all that we do for our customers. The “ant” suffix on the word represents the people who make things happen—the makers of prosperity for your success!

Prospiant is the industry’s leading provider of turnkey growing ecosystems for cannabis cultivation and processing, including design, engineering, manufacturing, construction, integration and startup. We stand firm on the foundation of six industry-leading heritage brands to not only serve the cultivation industry, but also to provide complete soil-to-oil capabilities, including cannabinoid extraction, refinement, and distillation technologies.

We are pleased to support *CBT* in its effort to inform the industry through the collection of essential cultivation data and publishing the sixth annual 2021 “State of the Cannabis Cultivation Industry Report.”

Despite the economic challenges of 2020 due to the COVID-19 pandemic, most cannabis cultivators who participated in the research reported rising or fixed revenues in their most recently completed fiscal year compared to one year prior. Key findings from the report include:

- 31% of research participants reported increased revenues for 2020.
- 73% of research participants who currently cultivate indicated they planned to add either indoor, greenhouse or outdoor cultivation space within the next two years.
- 41% of research participants whose operation currently processes/extracts plants (or plans to do so in the next 18 months) indicated they currently use or plan to use CO₂ extraction equipment compared to 40% for solventless solutions and 39% for ethanol.

Prospiant’s direct experience aligns with the research findings, as many of our customers are in the planning stages for new growing and processing facilities, facility expansions, lab expansions and broadening their extraction technology portfolio. As we move into the second half of 2021, the future looks cautiously bright, but “steady as she goes” seems to be the theme of the post-pandemic cannabis industry. Resilience, adaptability, and accessing the latest data to enable informed decision-making are more critical than ever.

Finally, we appreciate your participation in this year’s research!

Stay healthy and safe, and here’s to a much brighter future for us all.

— **Tom Vezdos (top), General Manager, Cannabis Growing, Prospiant**
 — **Rodolfo Martinez (bottom), General Manager, Cannabis Processing, Prospiant**

EXPANDED FOCUS FOR AN EXPANDING INDUSTRY

EVERY YEAR, CANNABIS BUSINESS TIMES ASKS READERS to share business and cultivation data to gain a better understanding of how the cultivation market is navigating the creation of a new industry. And every year, readers offer fresh insights that the *CBT* team delivers in its annual “State of the Cannabis Cultivation Industry Report.”

Now in its sixth iteration, this year’s “State of the Cannabis Cultivation Industry Report” grew its focus as the industry continues to morph into its next phase. Extraction capabilities are an expanded focus in this year’s research as more cultivators bring extraction and processing equipment in-house, perhaps to streamline operations and create value-added products.

More than a quarter (28%) of this year’s research participants who currently cultivate also indicated they process and/or extract cannabis. Additionally, nearly 1 in 10 (8%) of current cultivators indicated having plans to add extraction/processing capabilities within the next 18 months. How they are extracting and at what volume are more deeply explored in the report.

This year’s research report also is filled with updated business health and cultivation trends. Overall, the data presented in these pages indicates the cannabis industry continued its growth in 2020: 44% of cannabis cultivators are newcomers who indicated they cannot compare growth as they have not been in operation for two years. Those who have been in operation for two years or more generally fared well despite an economy that struggled. During the most recently completed fiscal year, 31% of research participants indicated

an increase in revenue, with only 5% noting a drop in revenue. More details about revenue and profit changes during the past six years can be found starting on page S4.

Notably, the portion of growers who indicated cultivating indoors ballooned to levels not seen since the first year of the report. While data pointed to a steady decline in indoor cultivation facilities from 2016 to 2020, 80% of 2021 research participants indicated cultivating indoors, a 20-percentage-point jump compared to last year’s report. Meanwhile, 35% reported they cultivated outdoors, and 30% noted they grow in covered or semi-covered greenhouses. Where these growers plan to expand in the coming years also is included in this report.

Participants in this year’s research also noted smaller canopy sizes: the average canopy size in 2021 was 33,900 square feet, down from 36,300 square feet in last year’s report. The gap between very large cultivators (80,000 square feet or more of canopy) and small cultivators (less than 5,000 square feet of canopy) also is widening: 18% of this year’s respondents indicated cultivating more than 80,000 square feet of canopy (up from 7% in 2016), while 39% indicated growing less than 5,000 square feet of canopy (up 5% from 2016).

This report, made possible with the support of Prospiant and based on a study conducted by third-party researcher Readex Research, contains industry cultivation trends to help cultivators make more informed decisions about their businesses. *CBT* looks forward to continuing to serve the industry by offering data-backed, actionable information.

28%

MORE THAN A QUARTER OF THIS YEAR’S RESEARCH PARTICIPANTS

WHO CURRENTLY CULTIVATE ALSO INDICATED THEY PROCESS AND/OR EXTRACT CANNABIS.

ABOUT THE RESEARCH:

The data on the following pages was collected by Readex Research via an online survey, which was sent to all emailable, active, qualified subscribers to *Cannabis Business Times* magazine and/or e-newsletter located in the U.S. or Canada, from April 15 to April 28, 2021. The survey was closed for tabulation with 462 responses. To best represent the audience of interest, most of the results in this report were based on the 127 respondents who indicated they currently own or work for an organization that grows cannabis exclusively or in combination with processing/extraction. Unless otherwise noted, this is the base for the data presented in this report. Another 91 respondents indicated they do not currently own or work for an operation that grows cannabis, but plan to in the next 18 months. The margin of error for percentages based on the 127 respondents who currently own or work for an operation that grows cannabis is approximately +/- 8.6 percentage points at the 95% confidence level.

REVENUE & PROFITS: REVENUES CONTINUE TO CLIMB

THE MAJORITY OF CANNABIS CULTIVATORS

who participated in the sixth annual 2021 “State of the Cannabis Cultivation Industry Report” research noted increased, or at least stable, revenues in their most recently completed fiscal year, compared to one year prior. Despite the turmoil of 2020 from the COVID-19 pandemic, 31% of this year’s research participants reported increased revenues for 2020. This represents the largest portion of participants reporting increased revenues since the 2018 “State of the Cannabis Cultivation Industry Report,” and up 2 percentage points from the 2020 study. Meanwhile, 17% of participants reported no change in revenue, and 5% reported a decrease in revenue. One notable finding from this year’s study is that there are more million-dollar companies than in years past—35% of participants reported revenues of more than \$1 million in 2021, with 17% of participants reporting revenues of \$5 million or more.

These findings are in line with the cannabis industry’s relative success during a pandemic year, attributed to many factors, including the noteworthy move of most state leaders to deem cannabis businesses essential during shutdowns.

What was your operation’s **revenue** from its cannabis cultivation operations in its most recently completed fiscal year?

	2016	2017	2018	2019	2020	2021	Overall % pt. change 2016 vs. 2021
▶ \$5 million or more	6%	8%	11%	14%	11%	17%	⬆️ 11%
▶ \$2 million - \$4.9 million	10%	9%	12%	7%	13%	6%	⬆️ 4%
▶ \$1 million - \$1.9 million	8%	11%	10%	11%	10%	13%	⬆️ 5%
\$500,000 - \$999,999	5%	13%	8%	8%	8%	6%	⬆️ 1%
\$250,000 - \$499,999	9%	12%	7%	9%	7%	5%	⬆️ 4%
\$100,000 - \$249,999	17%	13%	14%	14%	12%	14%	⬆️ 3%
\$50,000 - \$99,999	30% ^{or}	6%	8%	9%	6%	6%	0% ^{**}
\$25,000 - \$49,999	–	5%	3%	4%	4%	8%	⬆️ 3% ^{**}
less than \$25,000	–	19%	21%	18%	26%	21%	⬆️ 2% ^{**}
no answer	16%	5%	5%	7%	3%	4%	⬆️ 12%

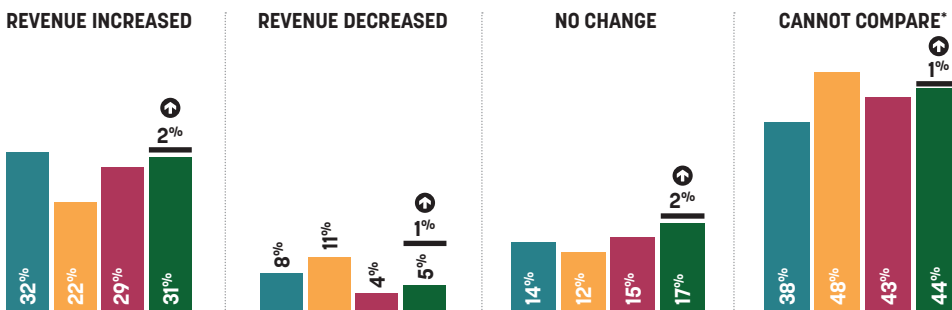
*The 2016 report showed that 30% of research participants reported revenue less than \$100,000; the research did not break down revenue ranges less than \$100,000. **Compared to 2017 data. Base: 127 study participants who indicated their operation currently cultivates cannabis unless otherwise noted.



\$237,000 MEDIAN REPORTED REVENUE

Compared with one year prior, how did your operation’s **revenue** from its cannabis cultivation change in its most recently completed fiscal year?

● 2018 ● 2019 ● 2020 ● 2021 ● Overall change (% points 2020 vs. 2021)



*Have not been in business for two years. No answer: 2018: n/a; 2019: 8%; 2020: 9%; 2021: 4%; overall change (% points 2020 vs. 2021) ↓5%

2021 Revenue increased:	Percentage
by 100% or more	4%
by 50% - 99%	6%
by 25% - 49%	11%
by less than 25%	8%
not specified	2%

2021 Revenue decreased:	Percentage
by less than 25%	1%
by 25% - 49%	2%
by 50% or more	2%
not specified	0%



24%

PORTION OF RESEARCH PARTICIPANTS WHO INDICATED THEIR PROFITS GREW IN THEIR LATEST COMPLETED FISCAL YEAR

PROFITABILITY GAINS MOSTLY MODEST

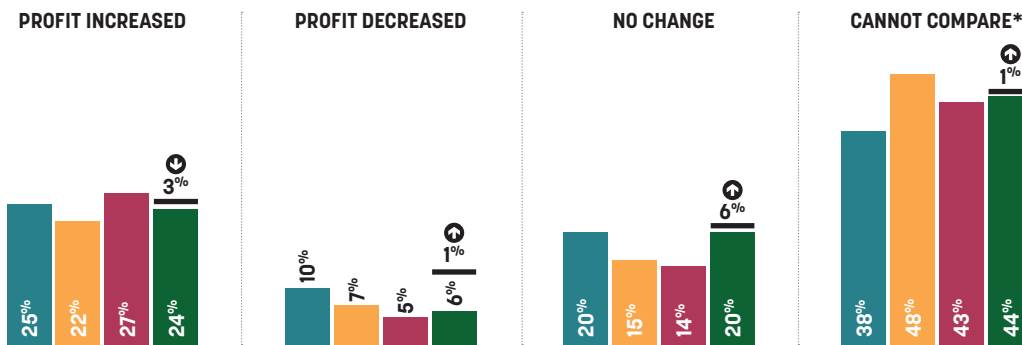
NEARLY HALF OF RESEARCH PARTICIPANTS IN THE 2021 “State of the Cannabis Cultivation Industry Report” whose operation has been in business for at least two years also noted steady or increasing profits.

Overall, 24% noted an increase in profitability compared to one year prior, while 20% of participants reported no change and 6% stated a decrease in profit.

The cannabis cultivation market remains in its start-up phase, as 44% of research participants could not report a change in profitability or revenues, as they have not been in operation for two years.

Compared with one year prior, how did your operation’s **profit** from its cannabis cultivation change in its most recently completed fiscal year?

● 2018 ● 2019 ● 2020 ● 2021 ● Overall change (% points 2020 vs. 2021)



No answer: 2018: 6%; 2019: 7%; 2020: 10%; 2021: 5%; overall change (% points 2020 vs. 2021) ↓5%

2021 Profit increased:

	2018	2019	2020	2021
by 100% or more	7%	6%	3%	3%
by 50% - 99%	4%	6%	4%	6%
by 25% - 49%	6%	4%	10%	2%
by less than 25%	7%	5%	8%	11%

2021 Profit decreased:

	2018	2019	2020	2021
by less than 25%	5%	1%	1%	2%
by 25% - 49%	2%	3%	0%	2%
by 50% or more	4%	4%	2%	3%

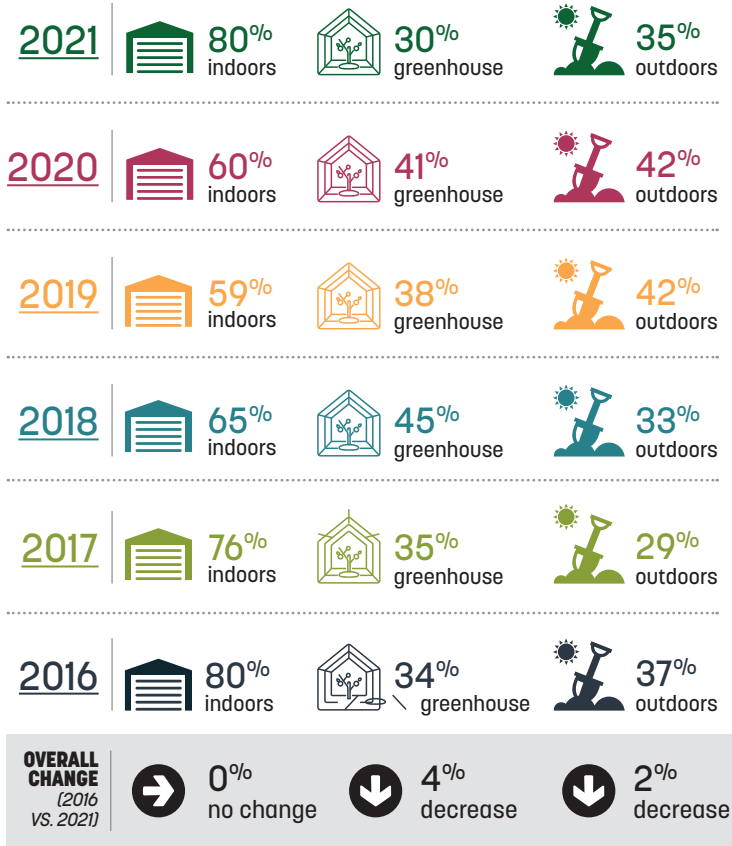


WHERE DO CULTIVATORS GROW?

INDOOR GARDENS WERE THE DOMINANT OPERATING FACILITIES reported by this year's research participants. The vast majority (80%) of participants reported cultivation operations taking place in an indoor environment (whether purpose-built or a retrofitted structure), up 20 percentage points from 2020. Fewer than one-third (30%) of participants reported cultivating cannabis in a greenhouse (either sealed, semi-sealed, hoop house, evaporative pad and fan, or passive), while 35% reported cultivating outdoors. This reverses the increasing greenhouse-use trend seen in previous years. For example, in 2020, 60% of participants reported growing indoors, while 41% said they cultivated in greenhouses. More research is needed to determine if this is an outlier or a market reshuffle.

Additionally, 54% of research participants reported cultivating in indoor environments *only*, up 12 percentage points from 2020 and 10 from 2016. Cultivators operating only in greenhouses made up 4% of this year's research participants, returning to 2016 levels and down 8 percentage points from 2020. Farmers operating only outdoors has remained stable throughout the six years of research, with 11% of research participants reporting only outdoor cultivation activities.

Indoors, Greenhouse or Outdoors In what environment does your operation grow cannabis?



Total exceeds 100% because participants could select all that apply.

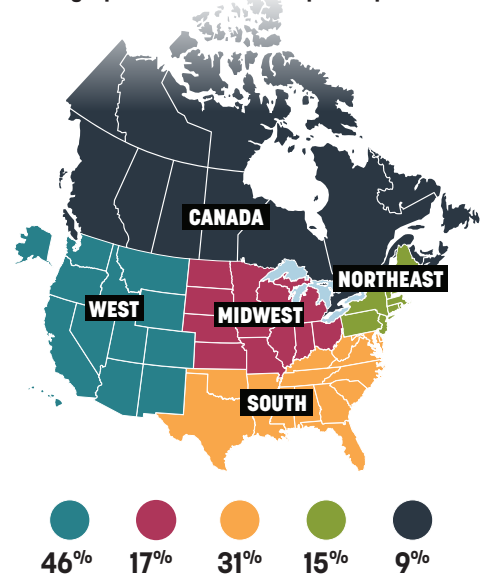
80%

PERCENTAGE OF 2021 RESEARCH PARTICIPANTS WHO GROW CANNABIS INDOORS

Indoors, Greenhouse or Outdoors: A Closer Look Where does your operation grow cannabis?

	2016	2017	2018	2019	2020	2021	Overall Change (2016 vs. 2021)
indoors only	44%	51%	43%	41%	42%	54%	⬆️ 10%
greenhouse only	4%	9%	16%	12%	12%	4%	⬆️ 0%
outdoors only	10%	8%	9%	14%	12%	11%	⬆️ 1%
greenhouse + outdoors (no indoor)	3%	3%	9%	14%	16%	6%	⬆️ 3%
greenhouse + indoors (no outdoor)	13%	6%	8%	5%	4%	7%	⬆️ 6%
indoors + outdoors (no greenhouse)	10%	3%	3%	6%	5%	6%	⬆️ 4%
all three	14%	4%	11%	7%	9%	13%	⬆️ 1%

Geographic distribution of participants:



Note: Base includes 156 respondents whose operation currently grows and/or processes/extracts cannabis. Total exceeds 100% because participants could select all that apply.



LARGE CANOPIES INCREASE, BULK OF INDUSTRY REMAINS SMALL

WHILE MANY MAINSTREAM MEDIA OUTLETS focus attention on large multistate operators (MSOs) with huge canopies, the majority (63%) of cultivators and owners participating in the 2021 study reported growing in one facility, and the plurality (39%) noted having canopies of 5,000 square feet or less.

That said, the second-most common facility size reported by participants (18%) was 80,000 square feet or more—up 11% from 2020. Just 6% of participants reported growing in five or more grow sites, down 5 percentage points from 2020.

The average facility size in 2021's research was 33,900 square feet, down from 36,300 square feet in 2020 and 34,700 square feet in 2019. Also of note: The median facility size was just over 9,000 square feet in 2021.

Grow Size

What is the square footage of your operation's cannabis production area?

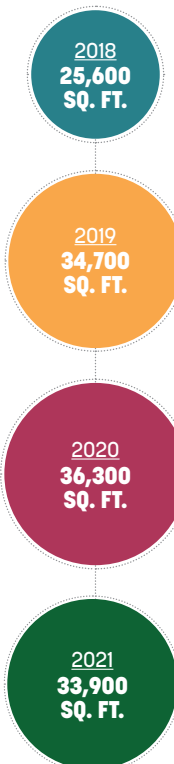
SIZE	2016	2021	OVERALL CHANGE
▶ 80,000 sq. ft. or more	7%	18%	⬆️ 11%
▶ 50,000-79,999 sq. ft.	3%	7%	⬆️ 4%
▶ 25,000-49,999 sq. ft.	12%	11%	⬇️ 1%
▶ 10,000-24,999 sq. ft.	15%	11%	⬇️ 4%
▶ 5,000-9,999 sq. ft.	24%	13%	⬇️ 11%
▶ Less than 5,000 sq. ft.	34%	39%	⬆️ 5%



24%

PORTION OF PARTICIPANTS
WHO REPORTED OPERATING
FACILITIES IN OKLAHOMA'S
MEDICAL-ONLY MARKET

THE AVERAGE SQUARE FOOTAGE OF PARTICIPANTS' CANNABIS PRODUCTION AREAS



Grow Sites: Single vs. Multi-Facility

How many cannabis facilities/grow sites does your operation have?

FIVE OR MORE



2016: 6%
2021: 6%

overall change ▶ ➡️ 0%

FOUR



2016: 4%
2021: 6%

overall change ▶ ⬆️ 2%

THREE



2016: 7%
2021: 8%

overall change ▶ ⬆️ 1%

TWO



2016: 15%
2021: 17%

overall change ▶ ⬆️ 2%

ONE



2016: 66%
2021: 63%

overall change ▶ ⬇️ 3%

PLANNING FOR GROWTH

IN ADDITION TO SEEING AN INCREASE IN INDOOR OPERATORS, a near-majority of this year's participants who cultivate cannabis (50%) indicated they also planned to add additional indoor space within the next two years. This is a 14 percentage point increase from 2020, and a 7 percentage point increase from 2016. In contrast, just 32% of participants who currently cultivate indicated they are planning to add greenhouse space (down 13 percentage points from 2020 and 12 from 2016), and 21% indicated having plans to add outdoor space, a relatively stable finding compared with past years. A quarter (25%) of participants who currently cultivate indicated having no plans to add cultivation space.

Projecting Growth Ahead

Which of the following does your operation plan to add for cannabis cultivation in the next two years?

	2016	2017	2018	2019	2020	2021
indoor cultivation space	43%	47%	53%	39%	36%	50%
greenhouse	44%	46%	43%	43%	45%	32%
outdoor cultivation space	22%	20%	25%	23%	22%	21%
none of these	21%	16%	18%	21%	21%	25%
all three	-	-	-	-	5%	6%

Base: 127 study participants who indicated their operation currently cultivates cannabis. Total exceeds 100% because participants could select all that apply.

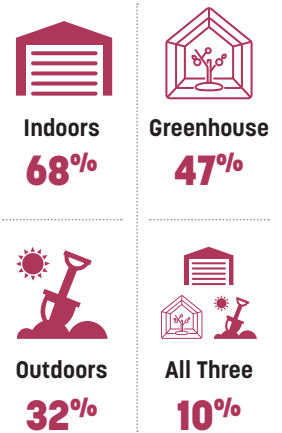
73%

NUMBER OF RESEARCH PARTICIPANTS WHO CURRENTLY CULTIVATE AND INDICATED THEY PLANNED TO ADD EITHER INDOOR, GREENHOUSE OR OUTDOOR CULTIVATION SPACE WITHIN THE NEXT TWO YEARS

NEW ENTRANTS

IN ADDITION TO SURVEYING CULTIVATORS, *Cannabis Business Times* asked those with intentions to enter the cannabis cultivation market in the next 18 months what their plans were. Of the 91 research participants who do not currently own or work for an operation that grows cannabis but plan to in the next 18 months, more than two-thirds (68%) aim to grow indoors. Nearly half (47%) are targeting greenhouse structures for their future operations, while close to a third (32%) noted plans to grow outdoors. A bold few (10%) intend to grow in all three facility types within the next 18 months, a sign of some future operators' confidence in their ability to scale and operate effectively in multiple grow settings.

If you **DO NOT** currently own or work for an operation that grows cannabis, but plan to in the next 18 months*, which of the following does your operation plan to add for cannabis cultivation in the next two years?



*Base: 91 (20%) research participants identified themselves as not currently owning or working for an operation that grows cannabis, but plan to in the next 18 months. Total exceeds 100% because participants could select all that apply.



1 in 2
RESEARCH PARTICIPANTS WHO CURRENTLY CULTIVATE INDICATED THEY PLANNED TO ADD INDOOR CULTIVATION SPACE WITHIN THE NEXT TWO YEARS.



CANNABIS PRODUCTION COSTS RISE COMPARED TO PAST YEAR

IT'S NO SECRET that cannabis production costs vary greatly depending on the growing environment used. Indoor cultivators generally have the highest production costs, as energy-consuming (and thus cost-driving) mechanical systems are used to mimic the natural environment that outdoor cultivators leverage for free, with greenhouses filling in the gaps.

In 2021, median production costs reflected this reality, as those costs were higher in all operation categories compared to 2020 costs.

Outdoor production costs per pound of dried flower changed dramatically, with median costs more than double those reported in 2020's "State of the Cannabis Cultivation Industry Report" (\$214 in 2021 vs. \$100 in 2020). Median greenhouse production costs increased moderately in 2021 to \$256 per pound (\$233 per pound in 2020), and indoor production costs jumped from \$396 per pound in 2020 to \$472 in 2021.

Furthermore, 16% of indoor cultivators

reported average production costs per pound of \$1,000 or more, while only 7% of outdoor cultivators and 3% of greenhouse growers reported that level of production costs.

At the lower end, 29% of outdoor cultivators reported average production costs per pound of less than \$100 (making it impossible to calculate a meaningful average), while 13% of greenhouse operators and 7% of indoor growers managed to keep similarly low production costs.

Dried Flower: Production Costs

What is your operation's average production cost per pound (\$/lb.) of dried flower produced?

	Greenhouse	Outdoor	Indoor
\$1,000 or more	3%	7%	16%
\$900 - \$999	3%	0%	3%
\$800 - \$899	0%	0%	1%
\$700 - \$799	3%	0%	8%
\$600 - \$699	3%	7%	6%
\$500 - \$599	8%	4%	7%
\$400 - \$499	8%	4%	10%
\$300 - \$399	5%	9%	11%
\$200 - \$299	24%	18%	10%
\$100 - \$199	16%	13%	9%
less than \$100	13%	29%	7%
mean (average)	\$334	N/A*	\$527

*Meaningful average could not be calculated.

What is the **MEDIAN** cost to grow a pound of dried flower produced?

2019



\$130
Outdoors

2020



\$100
Outdoors

2021



\$214
Outdoors



\$261
Greenhouse



\$233
Greenhouse



\$256
Greenhouse



\$400
Indoors



\$396
Indoors



\$472
Indoors

CHALLENGES REMAIN CONSISTENT

CULTIVATORS STILL GRAPPLE WITH THE SAME ISSUES

as reported in the six years *Cannabis Business Times* has conducted this study, whether those challenges are cultivation-related or business-related.

In 2021, the top three most cited *cultivation-related* challenges were insect pest/disease prevention/control (31%), increasing yields (30%) and achieving desired terpene/cannabinoid content (28%), the same order as in 2020.

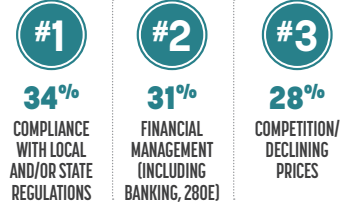
The order of the most commonly cited *business-related* challenges shuffled compared to 2020, but the top 3 remain the same: Compliance with local and/or state regulations is the top business challenge (34%, No. 2 last year), followed by financial management (31%, No. 3 last year) and competition/declining prices (28%, No. 1 last year).

What do you consider to be your operation's three* biggest *cultivation-related* challenges as a cultivator of cannabis?



*Research participants could choose between multiple answer options. These were the top three most-cited responses.

What do you consider to be your operation's three* biggest *business-related* challenges as a cultivator of cannabis?*



*Research participants could choose between multiple answer options. These were the top three most cited responses. **Base: 156 study participants who indicated their operation currently cultivates and/or processes/extracts (156).

WHAT ARE YOU AUTOMATING?

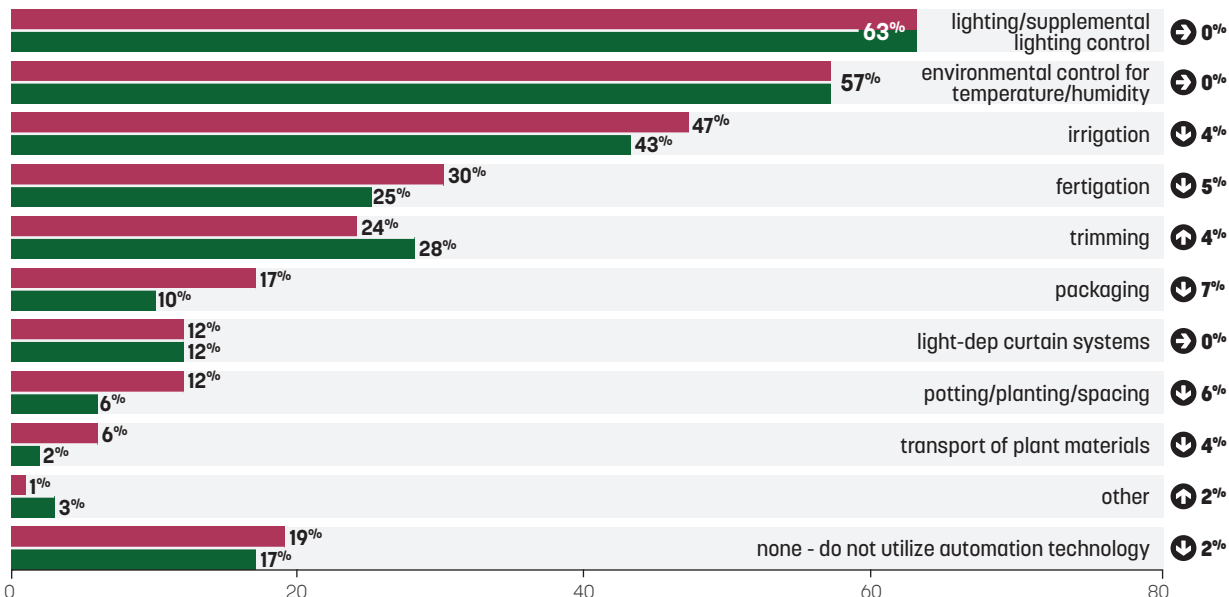
FOR MANY CULTIVATORS, automation is a tool that can be used to address top challenges either directly or indirectly. Any technology that can reduce time spent on tasks such as irrigation, fertigation, environmental control and more will free up employee time to focus on other areas such as compliance, pest control or enhancing secondary metabolite production.

The top three most-used automation technologies cited in 2021's report did not change compared to last year's totals. This year, cultivators reported using automation technology to control lighting and/or supplemental lighting (63%), humidity and temperature control (57%) and irrigation (43%). Automated trimmers saw the biggest increase in use, as 28% of research participants noted using such technologies, up 4 percentage points from 2020.

Interestingly, 17% of research participants indicated they do not use any automation technology in their cannabis cultivation operations—a sign that not everyone can or will turn to technology to find efficiencies.

For which systems does your operation utilize automation technology in its cannabis cultivation?*

● 2020 ● 2021 ● Overall change (% points 2020 vs. 2021)



*Note: Total exceeds 100% because participants could select multiple answers.



MOST COMMON AUTOMATION TECHNOLOGIES USED

63%
Lighting/supplemental lighting control

57%
Environmental control for temperature/humidity

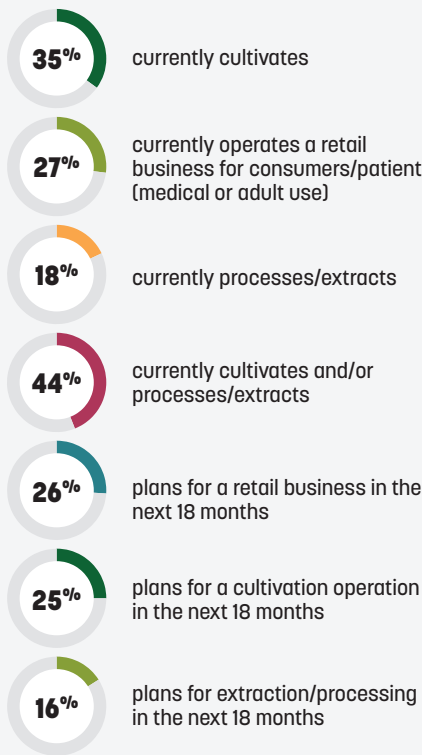
43%
Irrigation

GROWING WITHIN THE VERTICAL

VERTICAL INTEGRATION can be a useful tool to control product quality, processes and, ultimately, profit margins. Controlling dispensaries, for example, can help cultivators set their own retail price points and guarantees an outlet for their products. Likewise, maintaining an extraction or processing lab can allow growers to tailor their products to their patients', customers' and retail partners' needs.

One quarter (25%) of research participants who currently cultivate also operate a retail business (either medical or adult-use). A slightly larger portion (28%) indicated also operating an extraction/processing laboratory. In addition, 17% of current cultivators who participated in the study indicated they had plans to add extraction capabilities to their operations, demonstrating the interest certain groups have in controlling their vertical.

What is your licensed operation's current involvement (or plans for involvement in the next 18 months) with cannabis?*



*Base: 358 participants who indicated they are currently cultivating, operating a retail business, processing/extracting and/or those with plans to do so in the next 18 months. Note: Totals exceed 100% because respondents could select multiple answers.

EXTRACTION: AN EXTENSION OF CULTIVATION

OPERATORS WITH EXTRACTION AND PROCESSING OPERATIONS

(and those with plans to process and/or extract in the next 18 months) are turning to a gamut of technologies and systems to create their refined products.

CO₂ extraction systems enjoy a slight popularity edge over solventless separation technologies, according to CBT's 2021 research: 41% of research participants whose operation currently processes/extracts or plants to in the next 18 months indicated they currently use or plan to use CO₂ extraction equipment compared to 40% for solventless solutions. Ethanol extraction equipment also came just behind solventless technologies, with 39% of participants who use or plan to use extraction indicating ethanol was their choice.

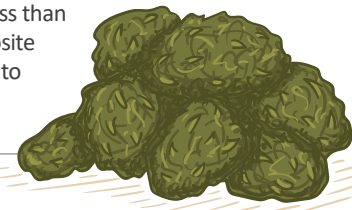
While extracted products are increasingly popular in most markets, the volume extractors are processing daily remains relatively low. Nearly half (42%) of operations who currently extract/process cannabis process less than 50 pounds of dried cannabis per day, while only 9% process 1,000 pounds or more per day.

For added context, cultivators generally allocate a small portion of their crop for extraction—61% of research participants noted earmarking less than 30% of their biomass to extraction/processing. On the opposite end, only 9% indicated allocating 80% or more of their crop to extraction/processing.

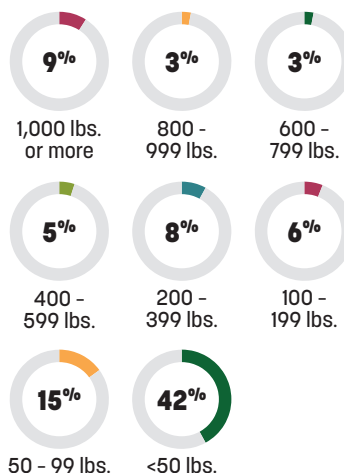
What portion of your crop do you extract/manufacture?

	2020	2021*	Overall Change (% points 2020 vs. 2021)
100%	9%	6%	↓ 3%
80-99%	7%	4%	↓ 3%
60-79%	8%	9%	↑ 1%
40-59%	14%	9%	↓ 5%
20-39%	28%	24%	↓ 4%
10%-19%	29%	23%	↓ 5%
Less than 10%	4%	23%	↑ 19%

*Base: 127 study participants who indicated their operation currently cultivates cannabis.



How much cannabis biomass did your operation process per day on average in 2020?*



* Base: 65 participants who indicated they are currently processing/extracting cannabis

If your operation is processing cannabis, or has plans to in the next 18 months, what equipment/technology is used or planning to be used?*

CO ₂ extraction equipment	41%
solventless separation technology	40%
ethanol extraction equipment	39%
hydrocarbon extraction equipment	23%
refinement equipment	23%
remediation technology equipment	15%
other	13%

Note: Totals exceed 100% because respondents could select multiple answers. *Base: 124 participants whose operation currently processes/extracts or plans to in the next 18 months.



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