

## Greenhouse Production of Cannabis: Are Existing Growers a Good Fit?



*Peter Konjoian is president of Konjoian's Horticulture Education Services Inc. His career spans four decades as a commercial grower, researcher and consultant. Mike Marquez is seminar director for the Indo Expo Cannabis Trade Show. Konjoian can be reached at peterkfes@comcast.net.*

Joining us is Mike Marquez, seminar director for the Indo Expo Cannabis Trade Show. His responsibilities include finding, vetting and booking speakers for multi-track education programs for annual shows in California, Oregon and Colorado that attract more than 10,000 attendees. His 10 years of experience in the cannabis industry includes hydroponic sales, retail sales, large scale cultivation, extraction and business development. Mike is currently working on his “Battlefield” MBA.

**Peter:** Mike, welcome to the commercial horticulture world. We’re excited to learn from a cannabis industry professional with experience in conference education. As you are no doubt aware, there is an interested group of traditional greenhouse growers eager to learn more about cannabis. This group sees the crop as similar, production wise, to poinsettia or tomato. As greenhouse cannabis production gains traction, my advice to fellow growers is “Why not us?” Please frame the big picture in terms of the differences between the medical and recreational sectors.

**Mike:** For medical and recreational cannabis the differences are literally all over the map. Some states require vertical integration (internal supply chain); others don’t. There are states like Texas that have very limited programs that only include one medical

condition, intractable epilepsy. To your question, the differences are based more on where you’re producing cannabis, not whether it’s med or rec. Most of the time medical cannabis is grown right next to recreational cannabis.

Regarding production, the only difference between medical and recreational is purely regulatory. The “Seed to Sale” tracking systems follow each plant through its life cycle and up to sale. This tag designates whether it’s medical or recreational. In some states medical is attached to a patient base that controls how many plants you can grow. For recreational, some states limit the number of plants that can be grown and others base it on canopy or building size.

**Peter:** You weren’t kidding, that really is all over the map. We’ll get to federal law in a bit; for now we’re safe saying it’s the source of much of the confusion growers must decipher. It does appear, however, that states recently legalizing either medical or recreational, or considering to legalize, have learned a lot from early adopter states like Colorado and Oregon.

I have several years of experience serving the medical side of the industry and have been quite impressed with the professionalism I have encountered, particularly the willingness of those I deal with to seek crop production and plant science advice from professional horticulturists. My impression of the recreational side of the industry is different; it appears more casual and loose. Is my impression typical?

**Mike:** That’s an easy impression to make, Peter, but I’ve seen recreational cannabis grown under pristine conditions and I’ve seen medical operations that have no business calling their product medicine. Residual pesticides and fungicides from the “pre-ban” days still pop up occasionally in product tests, usually in concentrates. 25(b) products have been an issue in the past for non-labeled ingredients like pyrethrum and abamectin. Non-labelled ingredients have caused products to fail testing and recalls.

**Peter:** That’s interesting regarding your medical versus recreational observation. My father had a saying that with his first step into someone’s greenhouse he could tell what kind of operation he was visiting. My assumption has been that medical has more regulatory pressure and, hence, more effort expended in attention to detail. Your opening comment did reference that it’s more about where production is located than which product category it is.

Explain more about the testing and regulatory side; this is new to horticulture. We have ornamental growers whose quality standards focus on plant size, shape, appearance, etc. Some of these growers have expanded into food crop production and have learned that food safety standards require a significantly higher level of attention. As these commercial growers diversify further into cannabis production they need to climb several rungs higher on the diligence ladder.

**Mike:** Testing is such an important part of the production but it faces issues with consistency, availability, cost and accuracy. A lab in California recently admitted to falsifying tests for growers. I hear of labs passing product they shouldn’t and others not cleaning or calibrating equipment properly leading to unreliable test results.

There are companies whose primary focus is to produce medicine, although most of those companies are focusing on alternative delivery methods rather than smoking. Examples include topicals, patches, nasal spray, suppositories, capsules, inhalers, tinctures, gummies, etc. Some alternate methods of delivery — like suppositories, nasal sprays and inhalers — have faced criticism and outright bans over safety concerns.

Each state is its own microcosm of regulation created from scratch or based on other frameworks. Some states like Washington and Oregon use the existing liquor control structure for regulating cannabis. Oklahoma is regulated by the department of health and Texas the



Department of Public Safety. Canada is legal nationwide recreationally and allows import and export. Columbia is using cannabis and hemp as a replacement crop for coca and is allowing export of cannabis and CBD oil. Multiple countries are working on implementing their own medical cannabis programs as I type.

**Peter:** As more states legalize cannabis for medical and recreational use while federal law continues to prohibit it, can you as an industry insider help greenhouse growers who may have interest in the crop understand where we're heading?

**Mike:** So, you can see how each country or state, based simply on its governing body, would have its own differing opinion on regulation resulting in a lack of uniformity and consistency. Not to mention the special interest groups chiming in on regulations they want in place to make sure their investments are secure. Raising the barrier to entry through high licensing fees, capital requirements, moratoriums and limited licensing structures prevents many who'd like to from entering the industry. This ultimately limits access for medical cannabis users and inhibits industry growth.

Example: Texas only has three licenses for one condition that effects 0.5 percent of 28.4 million residents. It requires a \$488,520 licensing fee and \$318,512 for renewal. For comparison it is around \$20,500 for a medical retail and cultivation license in Colorado and \$7,500 for renewal. I'm curious Peter, do traditional greenhouse operators face such fees?

**Peter:** The answer is short, NO. We don't have nearly that level of politics hanging over ornamental and food crop production. Let's shift gears and discuss how cannabis industry leaders like yourself are addressing the frenetic pace of change as it relates to education, training and business management. You and I first met two years ago at AmericanHort's Cultivate conference in Columbus, Ohio. What was it about our traditional greenhouse conference that attracted you?

**Mike:** As the seminar director for Indo Expo, a B2B cannabis trade show, I attended about 10 cannabis conferences last year. I also try and make time to attend one or more general horticulture shows to keep up on the greenhouse sector. There are now weekly cannabis events including a large show about every two to three weeks. Cannabis trade shows consist of equipment, consulting, ancillary services and consumables. It's a weird mix of agriculture, pharma and a federally illegal plant.

Seminars range from how scientists are mapping the cannabis genome to section 280E of the tax code. Educating an industry that is

evolving, expanding, and in legal limbo requires involving a community to share knowledge and experience to stay current. We like to say cannabis is judged in dog years because of the speed at which things are changing.

**Peter:** One positive to the rapid change you see, Mike, is job security. The need for continuing education is so strong that you will have seminar topics to update for years. Involving the community in knowledge sharing is something we have done in the greenhouse industry for generations. Those of us who have contributed to conference program planning believe, to a person, that together we accomplish more. I often say that it's not the growers who attend conferences that I worry about; it's those who don't make the effort to keep up.

**Mike:** Education is a sticky subject. Since the industry is so new, best practices and methods for commercial cannabis cultivation are only now being established. The education that exists is limited to proprietary growing techniques, antiquated information, repurposed college curriculums, equipment vendors, "the guy at the grow store," or case studies from industry professionals.

What is missing is an independent educational program to validate commercially viable growing, extraction, breeding and harvesting methods. Findings could then be published to help the industry grow and make a safe, sustainable product. Universities have a hard time putting together a cannabis program due to the federal state of legalization, but some are starting to dip a toe in by taking existing programs and including cannabis. Progress is being made.

**Peter:** The independent research and publishing that you correctly cite as necessary to advance an industry are precisely where we plant scientists spend our careers. A low hanging fruit for objective research in cannabis production is the too-many-to-count fertilizer products in the hydroponic supply chain. We have proven through unbiased research on countless horticultural crops that a fraction of those offerings is more than enough to assure quality production.

It's wise of you to look at existing horticulture shows; we've walked the path you are walking, albeit with less regulation. The breadth of knowledge categories is really quite similar to our shows having education category tracts that span production, marketing, business management, pest control and so on.

Mike, many thanks for spending time with us today. I enjoy finding leaders like you to interact with, learn from, and share experience with. Your dog years yard stick sets a perfect stage, let's get together soon to continue updating growers on cannabis industry advancement. [gpn](#)

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