

## Andrea Visveshwara

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**From:** Michael Sautman <msautman@nutrawerx.com>  
**Sent:** Tuesday, February 28, 2017 2:46 PM  
**To:** Scott Donahue; John J. Bauters; Dianne Martinez; Ally Medina; Christian Robin Patz  
**Cc:** Charles S. Bryant; Miroo Desai; Michael Guina; Andrea Visveshwara; Chadrick Smalley  
**Subject:** Commercial Cannabis Cultivation  
**Attachments:** Bedrocan Medical Cannabis Facility.ppt

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Dear Mayor Donahue and Members of the City Council,

I am writing about the upcoming introduction of Emeryville's new proposed cannabis ordinance and the topic of commercial cannabis cultivation. Although I understand that City staff is near finalizing the ordinance, I would like to request the City Council to reconsider the prohibition of commercial cannabis cultivation.

This particular subject was not well-considered when the previous City Council decided this issue at the study session held on March 15, 2016. During this study session Mayor Donahue was not in attendance. Additionally, three of the other four Council Members, who voted that day to prohibit commercial cultivation, are no longer Members of the City Council. Given its new membership, the current City Council may reach a different conclusion on this matter when provided with more public input. As seen in the video, very few members of the public were present for the 2016 study session.

I would urge the current Members to review the video of the 3/15/2016 meeting here:

[http://emeryville.granicus.com/MediaPlayer.php?view\\_id=5&clip\\_id=1019](http://emeryville.granicus.com/MediaPlayer.php?view_id=5&clip_id=1019)

At minute 48:30, Ms. Visveshwara begins this topic by asking whether the commercial cultivation of medical cannabis should be allowed. The entire discussion lasted only about 2 minutes. Former Council Members Asher, Atkins and Davis argued against allowing commercial cultivation by stating that

- Emeryville is a small city of only one square mile (implying that “farming” is not an appropriate activity in Emeryville).
- The indoor cultivation of cannabis consumes a substantial amount of electricity.
- Commercial cannabis cultivation is not the “highest and best use” of available land resources.
- There may be greater revenue for the City from permitting other cannabis business activities.

**On point one:** The cannabis industry employs three cultivation modalities; open field, greenhouse and warehouse cultivation. While each of these cultivation strategies has its pros and cons, they are distinct by, respectively, being agricultural, horticultural or biotechnical activities. The resulting products vary in their quality characteristics and their market value. While it is understandable that Emeryville may not be well-suited for agricultural and horticultural activities, there are both heavy industrial and light industrial zones in Emeryville that are very well-suited for indoor cannabis cultivation.

In fact, most jurisdictions in the United States that permit commercial cannabis cultivation require that it be conducted indoors for public safety and visual impact reasons. That said, there is one very important reason to permit the commercial indoor cultivation of medical cannabis. **It is the only cultivation modality that can consistently result in the production of cannabis flowers with a standardized chemical content while being free from the use of pesticides and microbiological contamination from molds, viruses, bacteria and**

**fungi.** This is an extremely important requirement for patients who are immuno-compromised. This concern has been very recently highlighted in the press. Please see:

<http://www.nbclosangeles.com/investigations/I-Team-Marijuana-Pot-Pesticide-California-414536763.html> and

<http://www.ucdmc.ucdavis.edu/publish/news/newsroom/11791>

For several years I worked with the sole producer of pharmaceutical-grade medical cannabis flowers in the Netherlands, Bedrocan BV. For a look at the biotechnical nature of indoor cannabis cultivation that is conducted under license from the Dutch government's Ministry of Health, please see the attached slide presentation of Bedrocan's cultivation facility in the Netherlands. The cannabis flowers produced by Bedrocan are free from pesticides and microbiological contaminants. The Dutch government sells Bedrocan's medicinal cannabis flowers in pharmacies which is why it is considered a "pharmaceutical-grade" product. Similar quality standards are imposed on federally Licensed Producers in Canada (where I've worked) who cultivate cannabis under license from Health Canada (the Canadian Ministry of Health). The forthcoming medical cannabis regulations from Sacramento will require similar Good Manufacturing Practices (GMP). Furthermore, why shouldn't companies engaged in the manufacturing of downstream medical cannabis products in Emeryville have a source of local high-grade raw material for their businesses?

**The second point** concerning the high consumption of electricity is valid. While indoor cannabis cultivation is energy intensive, this activity must be seen in relation to the value-added nature of those products. The industries that consume the most electricity are chemicals, paper, steel, aluminum, copper and textiles. I was in the textile industry for 15 years and our factories were very energy intensive while producing relatively low value products. The indoor cultivation of cannabis produces very high value products that for many people are also life-saving or life-enhancing because of their therapeutic qualities. If a textile or chemical company wanted to operate in Emeryville, would they be rejected because they are energy intensive? Additionally, indoor cannabis cultivation businesses are making great strides in reducing their energy footprint by utilizing new LED lighting technologies and renewable energy sources. Cities such as Berkeley, Oakland and Richmond require indoor cultivation businesses to produce an energy consumption mitigation plan which can move towards a low carbon footprint.

**On point three** concerning "highest and best use", the majority of medical cannabis patients still consume the majority (>50%) of their medicine in the form cannabis flowers. Cannabis in its herbal form provides a patient with the most cost-effective form of administration. The price per milligram of cannabinoids in botanical cannabis is far lower than the price per milligram of pills, tinctures, patches, edibles or extracts. So from the standpoint of cost to the patient, and this is especially important for low-income patients, herbal cannabis holds the best value. From the patient's economic standpoint, herbal cannabis is the "highest and best use" of their resources.

**On the last point** concerning tax revenue, most of the manufacturers of downstream cannabis products are small companies that operate with just a few thousand square feet of manufacturing space. New state law allows large-scale cultivation of up to 22,000 square feet. Therefore, the tax revenue generated by a large-scale cultivation facility will exceed the tax revenue generated by most small-scale downstream manufacturing businesses and cannabis testing businesses.

During the past few days the federal government has indicated that it may not allow states to proceed with the regulation of cannabis for non-medical purposes. It has signaled that it is sympathetic towards allowing state licensed medical cannabis businesses to operate. The City of Emeryville, via its proposed new ordinance, seems prepared to permit every cannabis business activity except commercial cultivation. That decision was made without the informed consent of the current of the Members of the City Council. During the March, 2016 study session, then-Mayor Martinez stated that she was open to reconsidering this decision if there was input from the

public that is persuasive. By re-examining this issue at the City Council's upcoming meeting on March 21<sup>st</sup>, I believe that Members will conclude that there is no valid rationale to exclude commercial cannabis cultivation from the permitted cannabis manufacturing supply chain in Emeryville.

The City Council should direct staff to amend the proposed ordinance to include commercial cannabis cultivation. Permitting should be allowed in the same zone as other cannabis manufacturers utilizing the same process now proposed for the dispensary applicants; that being, first the issuance of a CUP followed later by the issuance of an Operator's Permit (giving staff time to prepare the regulations for this permit).

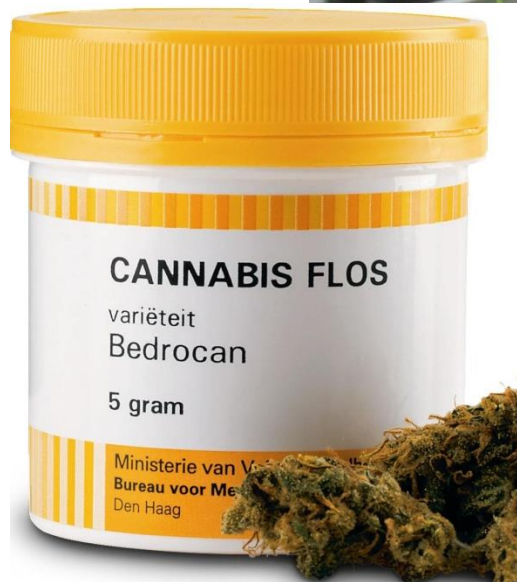
Many thanks to you and City staff for your good work on the ordinance and for your patient consideration of this request to reconsider the prohibition of commercial cannabis cultivation. Please feel free to contact me for any questions or comments concerning the above.

Kind regards,

Michael

Michael Sautman CEO  
Nutrawerx Inc.  
Tel 1-510-528-5070  
[msautman@nutrawerx.com](mailto:msautman@nutrawerx.com)

# BEDROCAN BV medicinal cannabis The Netherlands



Tjalling Erkelens, director

# Our history in short

**1984:** Started a nursery growing chichoree

**1991:** Introduction of more products

**1992:** Cannabis for seed production

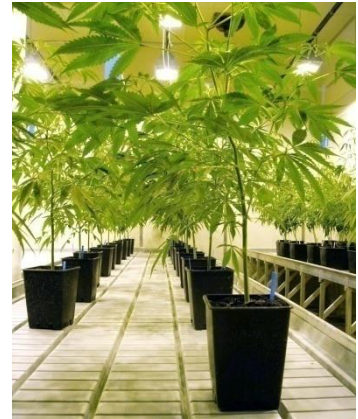
**2002:** Licensed and contracted by Dutch  
OMC

**2003:** Start of selling cannabis in Dutch  
pharmacies



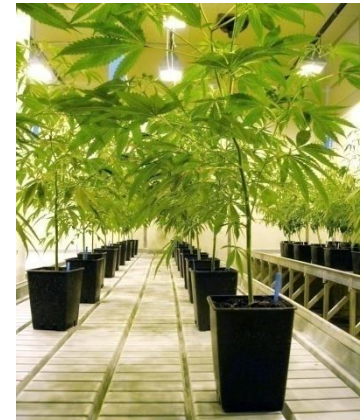
# Bedrocan philosophy

- Operating transparently
- In compliance with all regulations
- Balancing between patients needs and pharmaceutical demands
- Environmentally aware



# Bedrocan concept of growing indoors

- modular system
- standard operating procedures
- standardized plantmaterial
- No use of pesticides and fungicides
- Controlled use of conventional fertilizers
- Sustainable use of energy and resources
- Safe guarding products and staff



## Facts and figures (company and current capacity)

Number of staff Bedrocan BV :	5
Number of harvesting crew:	6
Total production 2004:	60 kg
Total production last year:	100 kg
Planned production this year:	120 kg
Capacity per year: 18 batches of 130 plants =	320 kg





# Starting plant production



Standardized cuttings



Potting plants

# Starting flower production



# In full production



after 40 days



after 54 days

## Harvest



Check, cut, and hand over 130 plants one by one

# Processing

- Weighing & registration
- Standardized drying
- start manicuring



## Processing 2

- Weighing & registration
- cutting of single branches



# Processing 3

- Removing bigger leaves



- Cutting flowers



# Packaging

- Bulk product before packaging
- Pouches of 250 grams





# Delivering to the OMC



Sampling



Sealed



Signed



& delivered

## The Bedrocan varieties:



### Bedrocan

**THC ca 18 % CBD/CBG < 1,0 %**

### Bedrobinol

**THC ca.11 % CBD/CBG <1,0 %**

### Bediol (milled buds < 5 mm)

**THC ca 6 % CBD ca 7 %**

### Varieties on demand

Different cannabinoid profiles

# Current developments:

- New variety: only Cannabidiol (non psycho-active)
- Standardizing program new varieties
- Extended shelf life by deepfreeze
- Anti-mold program

# Cooperating in research:

## \* University Leiden (medical plant research; prof. Rob Verpoorte)

- \* cannabinoids and metabolics
- \* administration forms
- \* extraction of THC with supercritical CO<sub>2</sub>
- \* analyses of smoked and vaporized cannabis

## \* Wageningen University and Researchcenter

- \* optimizing growth conditions (2009/2010)
- \* lectures

## \* University of Groningen (pharmacie; Prof. Oliver Kayser)

- \* cannabinoids and genetic

## \* Humboldt University Berlin

- \* optimizing growth conditions (2008/2009)

# From plant to product: safe and reliable

