Is the ‘Grass’ Greener?
Work and Well-Being in the Cannabis Industry

Kevin M. Walters, B.S.
Gwenith G. Fisher, Ph.D.
Colorado State University
Puns, puns, puns

This industry is....

- GROWING
- BUDDING
- FLOWERING
The Cannabis Industry

- Medical – Nov. 2000
- Recreational – Nov. 2012

How else is the industry GREEN?
So, what?

“Bald Guy #3”

Fall 2013 OSEH Evaluation
Ain’t nobody got time for that

NO OSEH HISTORY

ONE place...

...out of over 800
Our Project

Online survey (n=215)

Who works here?
Stressors, hazards, supports, outcomes?

Online =/= easy
Who are they?

57% male

2/3 below age 30
Who are they?

Over 75% were:
- Caucasian
- With some college or degree
- Paid hourly wages
- Working day shift

40% < $25k/year

40% $25-$35k/year
Where do they work?

**ORGANIZATIONS**
- 4.7 yrs in operation
- # of employees
  - Mean = 39
  - Median = 20
  - SD = 69
  - Range: 1-500

**TYPE OF CANNABIS**
- BOTH, 79%
- MED ONLY
- REC ONLY
- BOTH
Where do they work?

**TYPE OF OPERATION**

- **GROW - INDOOR, 77%**
- **DISPENSARY, 71%**
- **GROW - OUTDOOR**
- **GROW - GREENHOUSE**
- **EXTRACTIONS**
- **MANUFACTURING**
- **DISPENSARY**
- **NONE OF THE ABOVE**
Mean Self-Reported Hazard Ratings

Bars = SDs

Occupational Hazards

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Safety</td>
<td>2.32</td>
</tr>
<tr>
<td>Air Quality</td>
<td>2.49</td>
</tr>
<tr>
<td>Respiratory Issues</td>
<td>2.27</td>
</tr>
<tr>
<td>Absorbing Chemicals Through Skin</td>
<td>2.03</td>
</tr>
<tr>
<td>Ergonomic Issues</td>
<td>2.81</td>
</tr>
<tr>
<td>Slips/Trips/Falls</td>
<td>2.24</td>
</tr>
<tr>
<td>Temperature From Lighting</td>
<td>2.06</td>
</tr>
<tr>
<td>Exposure to Pesticides</td>
<td>2.17</td>
</tr>
</tbody>
</table>
# SYMPTOMS AFTER PESTICIDES

<table>
<thead>
<tr>
<th>SYMPTOM</th>
<th># SAID “YES”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin irritation</td>
<td>33</td>
</tr>
<tr>
<td>Headache/Dizzy</td>
<td>27</td>
</tr>
<tr>
<td>Eye irritation</td>
<td>25</td>
</tr>
<tr>
<td>Difficulty breathing</td>
<td>13</td>
</tr>
<tr>
<td>Chest discomfort</td>
<td>11</td>
</tr>
<tr>
<td>Excessively tired</td>
<td>8</td>
</tr>
<tr>
<td>Nausea/vomiting</td>
<td>8</td>
</tr>
<tr>
<td>Blurred vision</td>
<td>6</td>
</tr>
<tr>
<td>Excessive sweating</td>
<td>4</td>
</tr>
<tr>
<td>Muscle twitches</td>
<td>2</td>
</tr>
<tr>
<td>Nose bleed</td>
<td>1</td>
</tr>
<tr>
<td>Never had symptoms</td>
<td>124</td>
</tr>
</tbody>
</table>
## Open-Ended Hazards

<table>
<thead>
<tr>
<th>HAZARD</th>
<th># OF TIMES MENTIONED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robbery</td>
<td>14</td>
</tr>
<tr>
<td>Ergonomic Issues</td>
<td>8</td>
</tr>
<tr>
<td>Cannabis dust / powder / mold</td>
<td>6</td>
</tr>
<tr>
<td>None</td>
<td>8</td>
</tr>
</tbody>
</table>
Others???

Some fun ones...

“Running out of *snacks* in the break room”

“*NEANDERTHAL MANAGEMENT*”
Stressors – and – Outcomes

**Stressors**
- Role Overload
- Role Conflict
- Stress
- Job Insecurity
- Role Ambiguity

**Outcomes**
- Job/Life Sat.
- Org. Commitment
- Burnout
- Health
- Turnover Intentions

RED is cause for concern

MODERATE
LOW

HIGH
MODERATE
LOW
Supports

🌿 Good news!
🌿 Still work to do...

- Org/Social Support
- Employability
- Meaningful Work
- Job Control
- Safety Climate
- Work-Life Balance

RED is cause for concern
More insight

Role Overload
- Org. Support
- Safety Climate
- Work-Life Balance

Org. Support
- Employability
- Job Control

Role Conflict
- Stress

Health

Stressors | Supports | Outcomes

Burnout
Training Variability

“A piece of paper”

“5-day training”

“Daily”

“NO TRAINING”: 49 TIMES

“A handbook”

“A month’s training”

“Monthly”

“Two weeks paid”
Conclusions and Future Directions

Generally - 😊
Some - 😞
Lots - 🤔🤔🤔

“...we have literally no idea what the occupational harms may be... we can only do our best to protect ourselves.”
- Anonymous respondent
Conclusions and Future Directions

- Training recommendations, report
- Future research
- MORE WORK TO BE DONE

Contact Info:
Kevin M. Walters
kevin.m.walters@colostate.edu
http://ohplab.colostate.edu

Acknowledgements:
- NIOSH MAP ERC
- Research team:
  - Gwen Fisher, PhD
  - Lili Tenney, MPH
  - Kurt Kraiger, PhD
  - Bryan Dik, PhD
  - Lee Newman, MD
  - CSU OHP Research Team & RAs

This project was supported by Grant Number T42OH009229-08 from CDC NIOSH Mountain and Plains Education and Research Center. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the CDC NIOSH and MAP ERC.