CalCannabis Light Use Survey

Introduction

The Medical Cannabis Regulation and Safety Act and the Adult Use of Marijuana Act direct the California Department of Food and Agriculture (Department) to develop regulations to establish a commercial cannabis cultivation licensing program. California Business and Professions Code 19332 (g) requires the Department to determine a maximum threshold for the combination of natural and artificial lighting for mixed light cultivation license types. The Department distributed a survey to collect data on the amount of artificial light common cultivation methods utilize.

Methods

The Department used the online survey platform SurveyMonkey to collect data. The electronic survey was distributed to the Department's CalCannabis Cultivation Licensing Program email list and was available December 9 through 23, 2016. The Department also collected data in person via a written survey at the Department's informational booth at the Emerald Cup cannabis event held in Santa Rosa, California on December 10 and 11, 2016. Incomplete written survey responses were excluded from this report. Data was analyzed using Microsoft Excel. Survey questions are available in Appendix A.

Results

Reported Cultivation Method

Survey participants identified current cultivation methods as Greenhouse, Indoor, Outdoor, or as a combination of methods. In sum, 303 survey participants indicated the distribution of cultivation methods in Figure 1.

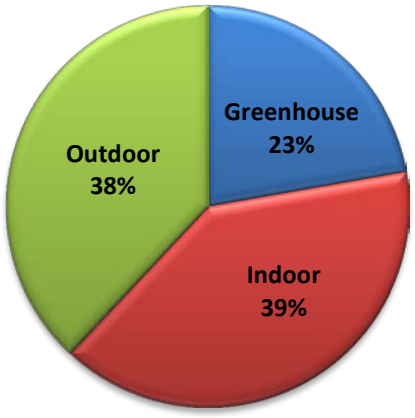

Figure 1. Survey participants indicated cultivation methods by percent.

Supplemental Lighting

152 survey participants reported using supplemental lighting (Figure 2). Of the 152 participants utilizing supplemental light, 103 (68%) utilize less than 20 watts per square foot (W/ft^2).

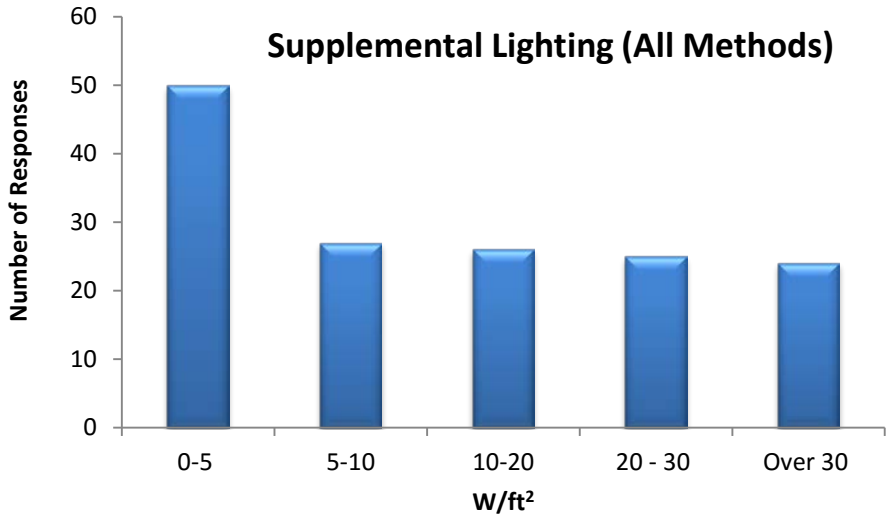

Figure 2. Wattage per square foot of supplemental light utilized by all cultivation methods.

Of the 79 greenhouse cultivators, 52 reported using supplemental light (Figure 3). Of the 52 greenhouse cultivators utilizing supplemental light, 40 (77%) utilize less than 20 W/ft^2.

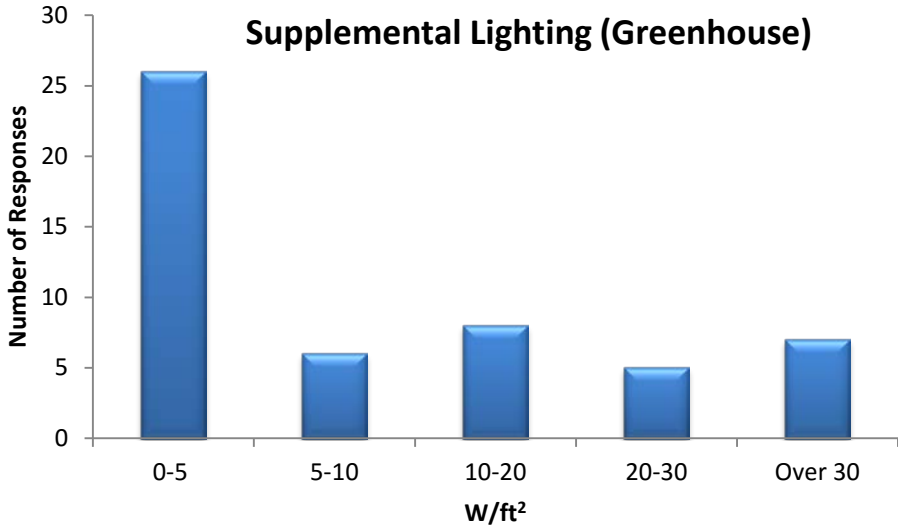

Figure 3. Wattage per square foot of supplemental light utilized by greenhouse cultivators.

Flowering Lighting

Survey participants identified their flowering lighting method as sunlight or artificial light (Figure 4). Sunlight is utilized to flower cannabis by 152 (50%) of survey participants. The remaining 151 (50%) survey participants utilize artificial light to flower cannabis.

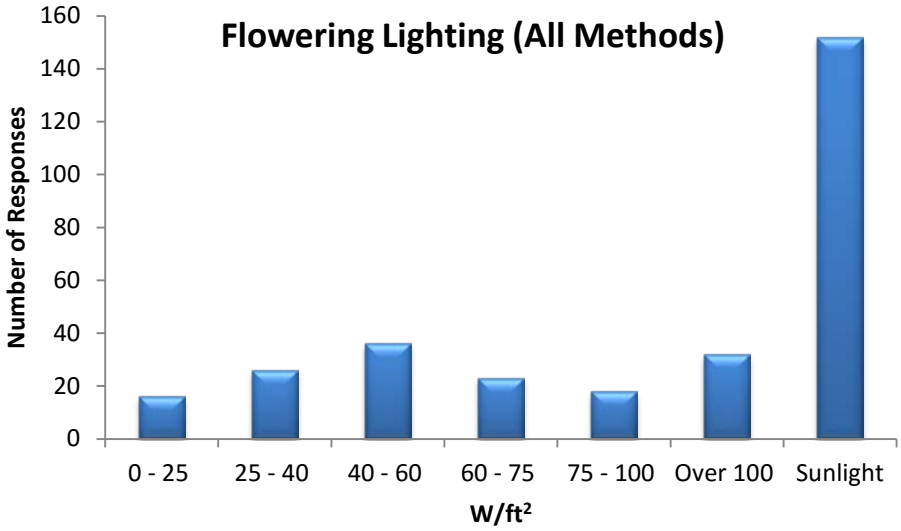

Figure 4. Wattage per square foot of light utilized to flower by all cultivation methods. Sunlight is included as its own field.

132 survey participants utilize indoor cultivation methods and artificial light to flower cannabis. Of the 132 indoor cultivators utilizing artificial light to flower cannabis, 125 (95%) utilize more than 25 W/ft^2 (Figure 5).

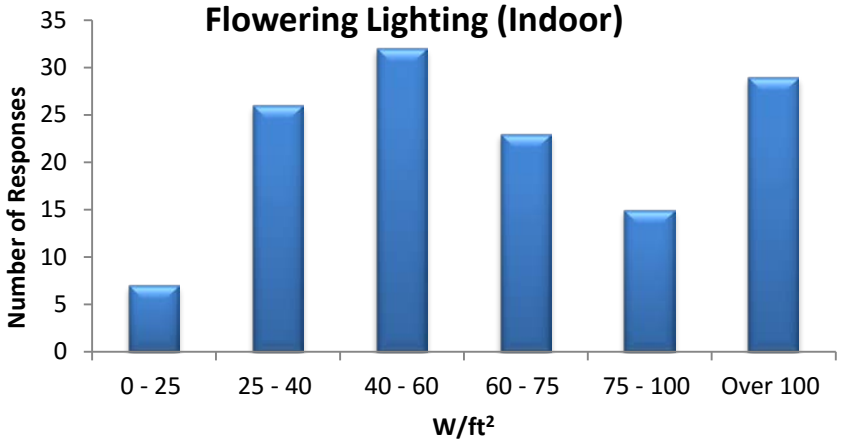

Figure 5. Wattage per square foot of artificial light utilized to flower cannabis by indoor cultivators.

Summary

Our data indicates a significant amount of indoor cultivators (95%) use more than 25 W/ft^2 to flower cannabis. Our data indicates a reasonable amount of greenhouse cultivators (77%) use less than 20 W/ft^2 of supplemental light. From this data, the Department determined to draw the line between indoor cultivation and mixed light greenhouse cultivation at 25 W/ft^2.

Appendix A

Survey questions

1.) Current cultivation method?

2.) Harvests per year?

3.) Flowering light type?

4.) Flowering wattage/square foot?

5.) Flowering area total square feet?

6.) Supplemental light type?

7.) Supplemental wattage/square foot?

8.) Common pest problems at your cultivation site?