## Determining Canopy

## Determining Canopy: Mass Planting



Canopy Determination: Rows






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## Canopy Determination: Identifiable Boundaries

This Cultivation is situated in rows. Each row has canopy that is clearly defined by trellis netting depicted in red. Tposts are installed based on the width of the trellis netting chosen to demarcate the row for expected canopy. The netting is used to support the developing flower. This canopy should therefore be calculated by measuring the area of each row length $x$ width and then multiply by the number of rows for canopy


## Canopy Determination: Individual Plants

For a planting area that has individual larger plants situated sporadically throughout a landscape this canopy should be measured by evaluating each plant individually. If the plants are uniform in size then the canopy measurement could be taken for the average plant and then multiplied by the number of plants of that size. For this measurement we use the area of a circle to determine canopy

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A=\pi r^{2}
$$



SONOMA COUNTY CANNABIS

## Canopy Determination: Individual Plants



## Canopy Determination: Raised Beds/plots

Another way that growers delineate canopy is by using raised beds or garden boxes. This system of cultivation may be used to create plantable areas over native soils that are of lower quality or fertility and the grower prefers to use a custom soil mix. These garden beds, plots, or boxes provide an identifiable boundary that can be used to demarcate the canopy of each plant. Posts and trellis may be added to support developing flower as you can see depicted in each of these three images to the right.


## Canopy Determination: Indoor

For determining canopy or cultivation area at indoor cannabis cultivation sites there are three main ingredients to this recipe.

1. The room or rooms where plants will be grown.
2. The Trays and/or tables upon which the plants will be grown.
3. And finally an identifiable boundary in the form of trellising, trays, shelves, etc. that will serve to demarcate the canopy of the cultivation area.


## Determining Canopy: Indoor

When you mix these three ingredients together you end up with a well-delineated canopy within your cultivation area.


## Determining Canopy: Indoor Schematic



When we begin to determine cultivation area for indoor Cannabis operations we must start by defining the capacity to reach a certain cultivation area canopy. For indoor this is determined by measuring the floor space area of each of the rooms that will be dedicated to the cultivation of both flowering and non flowering (veg) plant material. This is easily done by measuring length $x$ width of each room. Within this room plants could be arranged several different ways.


The first of which is by filling the room with plants grown in pots on the floor.

## Determining Canopy: Indoor Tables

Another method utilized by indoor growers is the use of benches or tables above the floor for cultivating plants. With this system growers situate tables within a room area. The benches provide an identifiable boundary to demarcate the canopy within the context of the cultivation area (the room). This can be further delineated with the use of trellis.


Walkway Workspace


Determining Canopy: Indoor with tables and trellising


In a cultivation system like the one depicted in the previous slide the
 tables provide an identifiable boundary atop which canopy can be demarcated. When you add trellising to this system to support developing flower you further delineate the canopy within the cultivation area making it easy to measure canopy for the purposes of compliance with county permits and state licenses, as well as for county tax assessments.

# Determining Canopy: Indoor with Shelving 

The future of indoor cultivation is the utilization of shelving to grow vertically and use space more efficiently. When measuring cultivation area and canopy in these systems we must first measure the floor space to determine the cultivation area of the room. Then we will add the additional shelf space above the floor to determine canopy for the purposes of compliance and taxation


Say for instance that we have a room that is $32^{\prime} x$ $20^{\prime}=640 \mathrm{ft}^{2}$. Inside that room there are 6 $8^{\prime} \times 4^{\prime} 2$-tiered shelving units.

That would be $8^{\prime} \times 4^{\prime}=32 \mathrm{ft}^{2}$ (per shelf)
$32 \mathrm{ft}^{2} \times 6$ shelves at floor level $=192 \mathrm{ft}^{2}$ of Canopy. Since the floor space is $768 \mathrm{ft}^{2}$, we must subtract canopy from open floor space.
$640 \mathrm{ft}^{2}-192 \mathrm{ft}^{2}=448 \mathrm{ft}^{2}$ of walkway/workspace surrounding the shelving units. Workspace is necessary for moving around and maintaining plants in the cultivation area.

Now we add the second tier of canopy to this area by adding the 6 additional shelves at $192 \mathrm{ft}^{2}$ $192 \mathrm{ft}^{2}$ (bottom tier) $+192 \mathrm{ft}^{2}$ (top tier) $=384 \mathrm{ft}^{2}$ of canopy within this cultivation area (room).

This is depicted in the image on the next slide


## Determining Canopy: Mixed Light

Mixed light canopy is measured by measuring the square footage of the green house/hoop house. If there are clearly demarcated walkways (benches, netting, etc. that prevent plant material from encroaching into the walkway) they are not counted in the total square footage


## Determining Canopy: Mixed Light

If there is no clear demarcation of walkways (benches, netting, etc. that prevent plant material from encroaching into the walkway) then the square footage of the green house/hoop house is measured.


