

DRYING & CURING SOLUTIONS


Reducing labor and trichome degradation

Elevate. Cultivate. Grow.



PIPP[®]
HORTICULTURE

Cannabis production strategies may differ from one facility to another, but most facilities share a common goal: to produce the highest quality product at the lowest cost. One area of the cultivation cycle that is often overlooked but has great potential for optimization is the drying and curing process.



Many cultivators use bins or totes to harvest, weigh and transfer cannabis plants to the drying room. The plants are then manually hung one by one on wire, pipe, hangers, hooks and/or racking.

Once the product has been dried it is then manually unhung plant by plant and placed back into the bins or totes. These are then transferred to trimmers to process into the finished product. These transfer events have significant labor costs and more importantly can reduce quality by degrading trichomes and associated cannabinoid and terpene content.

In LEAN farming and manufacturing, we refer to these actions as non-value adding touch points. The process outlined above is not only cost-intensive for the producer, but also one that reduces quality and value to the end consumer, who should be at the center of every decision a cannabis producer makes.



FIRST THING'S FIRST: DITCH THE BINS

Many growers use plastic bins or totes to help them harvest. A cheap and simple solution, binning plants has been a common method amongst growers.

Unfortunately, this method greatly increases labor requirements due to the many staff and non-value adding touch points with the plants. These touch points also negatively impact the final quality of the product as the terpenes and trichomes are disturbed each time.

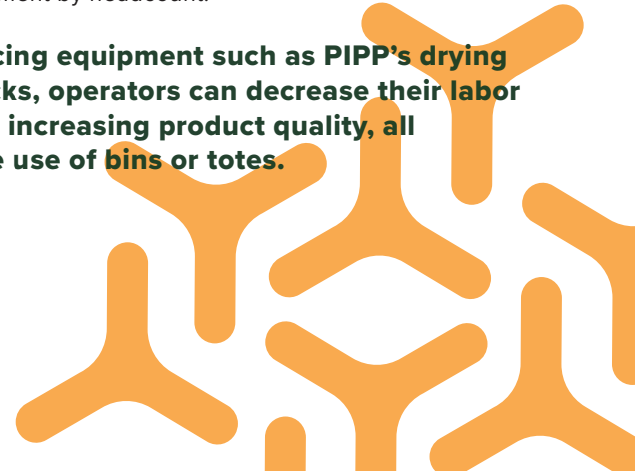
Bins or totes also present additional and unnecessary cross contamination, workflow and labor challenges. They need to be cleaned and sanitized after each batch or during daily use. Many facilities are not set-up or staffed appropriately to properly clean and sanitize bins and totes regularly.

In addition, bins and totes take up a tremendous amount of space, which is often not taken into consideration during the facility design process. They are often stacked or nested one

on top of another. If these bins are not cleaned and have been dragged on the floor, operators risk contaminating their cannabis plants and dried flowers that come in contact with the inside of the bins.

Labor is the biggest cost for a cultivation operation. And as it so happens, the harvest and post-harvest team is often the largest department by headcount.

By introducing equipment such as PIPP's drying carts or racks, operators can decrease their labor costs while increasing product quality, all without the use of bins or totes.





The first step in optimizing your drying process is to evaluate the space in your facility. PIPP Horticulture offers two unique solutions to meet cultivators' drying needs: **mobile drying carts** and **mobile drying storage racks**.

OPTIMIZE YOUR DRYING PROCESS

An easy way to tell them apart is to remember this: **dying carts bring work to the workers while drying racks bring workers to the work.**

DRYING CARTS ARE MOBILE BY DESIGN. Staff roll the drying carts without the need for hangers or hooks.

The drying carts are then transferred to the drying room.

Once the plants have dried, the carts are then rolled into the trimming room. The product moves efficiently around the facility with little to no touching of the actual plants.

DRYING RACKS differ in that staff must still bring plants to the racks where they manually hang from the rack. A mobile drying cart can still be used for the transfer to eliminate the use of bins or totes.

However, what sets these drying racks apart from common drying setups is that the racks can span the full height of the room, taking advantage of not only total available square feet but cubic feet as well.

There are pros and cons to both options. Ultimately, your operation's capacity, efficiency and labor demands will be the deciding factor.



SPACE REQUIREMENTS

If space is not an issue, the ideal choice is drying carts for the points mentioned above: lower labor costs and higher quality product.

The carts must be stored when not in use, and you'll also need adequate space in your flower room for the carts to roll through the aisles. **We recommend a minimum of 28" width aisles.**

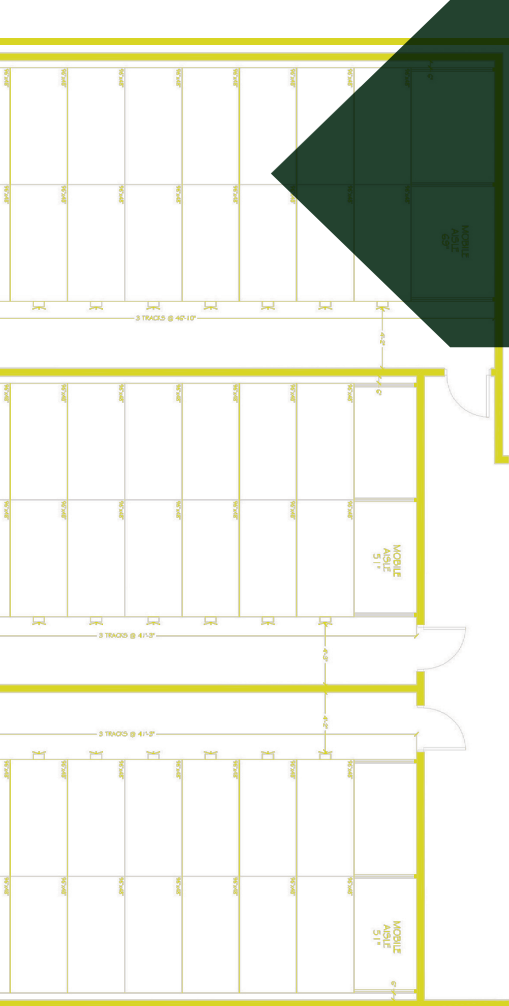
If you're already tight on space in the drying rooms and are using trellis or cable wire, installing mobile drying racks will greatly optimize your room's plant-drying capacity. Drying racks can help transform a tight, restricted space into an efficient one that supports your scaling business.

To get an idea of how much space is required for either racks or carts, we crunched some numbers for you. Here, you can see how much square footage of drying space is required for each equipment option.

For this example, let's consider 1,000 harvested cannabis plants. The following space is required in your drying area for each solution (the range accounts for plant size and density):

- **PIPP 2-tier drying carts: 300-600 sq. ft.**
- **PIPP 3-tier drying carts: 200-400 sq. ft.**
- **PIPP mobile drying racks (4-tiers): 200-400 sq. ft.**

You can see that the available space in the facility is the main consideration here. Let's take a deeper dive into the pros and cons of drying racks vs drying carts.



DRYING CARTS

THE PROS:

- ▶ Ideal for purpose-built cultivation facilities that can dictate the size of the drying rooms.
- ▶ No ladders or lifts required.
- ▶ Our drying carts have options for two or three levels of cantilever-style finger hooks, which eliminate the need to use hooks, zip ties, coat hangers.
- ▶ Improves trichome and terpene preservation by eliminating non-value adding touch points.
- ▶ Eliminated the use of bins/totes.
- ▶ Brings the work to the workers.
- ▶ Plants can be defoliated on drying carts if desired.
- ▶ Less expensive than investing in drying racks.
- ▶ Anti-fungal/bacterial coating option.
- ▶ Options for up to 8' cart height, which would require door frames of same height.
- ▶ Easy to clean and sanitize.
- ▶ Reduces labor to clean and sanitize drying rooms as room can be cleared of carts and equipment.



THE CONS:

- ▶ Drying carts do not maximize cubic or square feet when compared to mobile drying racks. Standard cart height is 5'5", with 2 tiers and 8' high with 3 tiers compared to up to 16' and up to 6 tiers for drying racks.
- ▶ Drying carts over 6'6" require custom sized doors in the flower rooms and post-harvest processing rooms.
- ▶ While they do not nest, they do break down easily with minimal tools.
- ▶ Can be challenging to create linear queues in drying rooms.
- ▶ Increased risk for finger and hand injuries.

DRYING RACKS

THE PROS:

- ▶ Drying racks are ideal for:
 - ▶ Existing cultivation facilities with suboptimal sized drying rooms looking to retrofit.
 - ▶ New facilities that undersized their drying room and need to maximize every cubic foot.
 - ▶ Pre-operational facilities that are in the design phase and need to free up space for other areas of the design.
- ▶ Racking height up to 16' with 6 tiers.
- ▶ Racking width options: 24", 36", 48".
- ▶ Drying racks support multiple hanging options from hang bars that allow for use of hooks and coat/plant hangers, wire grid, and finger hooks (only available for 24")
- ▶ Most efficient solution to maximize square *and* cubic feet.
- ▶ Ability to scale by adding tiers based on phases or increased yields.
- ▶ Anti-fungal/bacterial coating option.



THE CONS:

- ▶ Requires lift or ladder to hang as well as take down.
- ▶ More touch points, which leads to degradation of THC and terpenes.
- ▶ Higher labor cost.
- ▶ Racks bring workers to the work which involves the use of bins and totes and increased non-value adding plant touches.
- ▶ Less efficient to clean and sanitize, compared to drying carts.

Now that you've made it this far, you're probably getting a good idea of which option (drying racks or carts) might work best for your grow space. For assistance in selecting and implementing the best drying solution for your operation, **contact the team at PIPP Horticulture today!**



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