


A high-angle, perspective view of a multi-tiered cannabis cultivation facility. The facility consists of numerous white metal racks stacked vertically, each filled with green cannabis plants in white grow trays. A central aisle with a metal grate floor runs through the center of the racks, leading towards a bright light source at the far end. The overall atmosphere is clean and industrial.

**FINDING THE
BEST GROW TRAY
FOR YOUR CULTIVATION FACILITY**



Grow trays might be a second thought when selecting supplies and equipment for your cultivation space. But the wrong choice could result in broken equipment or pathogen-friendly growing environment. **Grow trays are vital to every cannabis grow** and in this article we'll review the different options and their pros and cons.

Cannabis grow trays are offered in various levels of quality and format. As with most things in life, investing in something that will last and provide a clean, safe environment for your plants pays off.



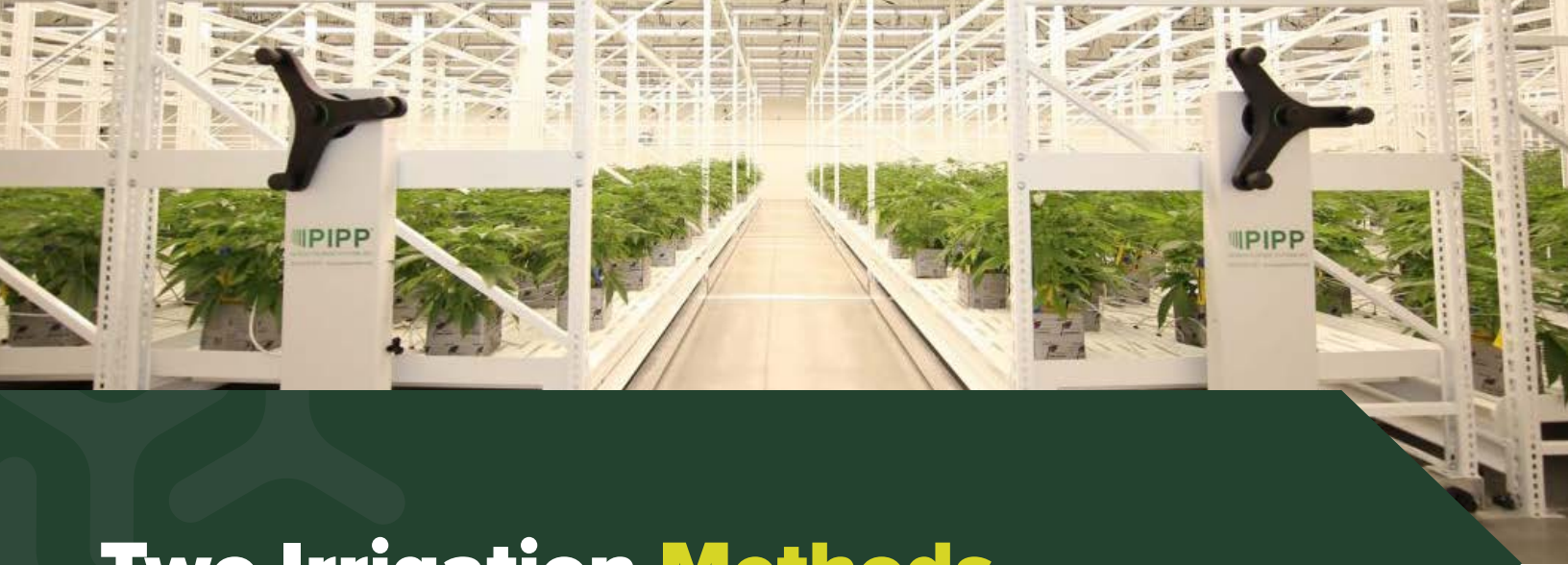
What is a **Grow Tray**?



Grow trays are molded containers that are designed to hold plants and enable easy and efficient irrigation. They are typically long, rectangular, and shallow. The most common dimensions for grow trays are 4' x 8'.

Grow trays were certainly not invented for the modern day cannabis industry. They have been used in greenhouse settings since the 18th century in North America. Some believe that Chinese farmers were cultivating cannabis in growing trays as far back as 500 BCE or even earlier.

While plant growing trays are a common item on every cultivation facility's supply list, it's worth reevaluating the quality and value of trays you might be purchasing at local stores. **The materials used in manufacturing the trays have a big impact on their performance and contribution to the growing environment.**



Two Irrigation **Methods**

Irrigation in outdoor gardens is different from the methods we describe below, which are ideal for greenhouse or indoor gardens. Here is an overview of the main **two ways grow trays are utilized** in cannabis cultivation facilities:



Drip-to-Drain

One of the most common indoor cultivation setups is called Drip-to-drain. The grow trays hold the pots or plant containers which connect to numerous irrigation lines. A reservoir pumps nutrient solution to the trays and the lines release it to the tops of the plants. The solution drips through the plant medium, feeding the roots, and flows out the bottom of the plant containers. This run-off is then drained from the trays to **ensure there's no standing water** in the trays that can be a host to many issues in the grow facility.

Fostering healthy root systems is vital to increasing yields.

Placing several drip lines onto each plant ensures that the nutrient solution drains through the plant's roots evenly and thoroughly. The entire surface area of the plant's grow medium should be moistened. The faster the grow media drains, the more emitters the drip system will need.

Ebb & Flow

A less commonly used approach in commercial indoor cultivation is the ebb and flow method. Similar to the ways the ocean ebbs and flows on the shore, this method periodically floods the grow tray. **The roots are fully flooded** each time from the bottom, while Drip-to-drain is a slow drip to the top of the grow medium. A drainage hole at the bottom of the trays brings water back to the reservoir where it can go through filtration and treatment to be used again.





Challenges with Low Quality Trays

Cutting costs when it comes to grow trays can mean increased costs down the road. **A healthy grow environment stems from multiple factors**, including the materials and equipment used in the setup. Below are some major challenges associated with growing plant trays:





Sagging

Low cost trays are often thinner to save on manufacturing costs. When they are loaded with cannabis plants, they often sag or bow, which causes water to pool. **Standing water is a grower's nightmare.** It can attract pests and encourage mold, bacteria or fungus to take hold.

Cracking

Over time, exposure to UV radiation can degrade plastic trays that were not made with special UV-stabilized plastic material. These trays have a shorter shelf life and can become brittle and crack. A chalky appearance and color shift on the surface are indicators of degradation.

Cracks lead to leaks and a host of added problems, like standing water on the floor and mold or microbial issues.

Sanitization Challenges

Between every round, cultivators sanitize their facility and the tables and trays in the grow rooms. With repeated scrubbing and cleaning, **cheap plastic grow trays will bend, warp, or crack.** Investing in grow trays manufactured of a more durable material affords long-term use and ability to withstand repeated vigorous cleanings.

Lack of Integration

Grow trays aren't made to fit all cannabis facility designs and growing spaces. This is especially true for vertical farming operations. Purchasing trays produced by the same vendor that manufactured the vertical racking systems will ensure a **proper fit and seamless integration** with other equipment like HVAC and lights.



Pipp's Top of the Line Grow Trays

Our cannabis industry product line is manufactured using the **highest quality** materials and manufacturing processes. With the expertise of industry maven, we've designed superior grow trays and vertical racking systems. Below are the different grow trays that we manufacture, right here in the USA.

ABS Grow Trays

ABS is a thermoplastic polymer typically used for injection molding. The benefits of ABS trays are that they provide UV-stability, make cleanup very easy, and are extremely durable.

Pipp's [ABS Grow Trays](#) provide the best balance of cost and performance, and can be used for drip-to-drain irrigation styles. These grow trays are designed with a 1/2" built-in slope and a network of sloped canals within the ABS Grow Trays ensures proper drainage.

Our ABS Trays have a proprietary coating with anti-microbial and anti-fungal properties. Investing in trays that have been treated in this specific way helps prevent issues that impact crop production and business profitability.





GHI Aluminum Grow Trays

Aluminum trays are a bigger investment, but they are corrosion resistant throughout the tray's life. They have a robust aluminum construction with great durability and a reflective white powder coat finish that absorbs or wastes very little light.

Pipp's [GHI \(Greenhaus Industries\) Aluminum Grow Trays](#) are one of the only aluminum grow trays a commercial cultivator will find suitable for a large-scale operation. The Combination Grow Trays and the Drip-to-Drain Grow Trays have been designed to easily integrate with other essential grow equipment like lighting, irrigation, drainage, and airflow systems. Built-in slopes allow run-off to move efficiently to drain fittings, while integral supports provide attachment points for lights and HVAC. The 1" pilot hole pattern allows simple attachment of any accessory.

GHI Aluminum Grow trays can be used for either drip to drain or ebb and flow irrigation styles and are also treated with our anti-microbial and anti-fungal coating.

Finding a **Quality** Grow Tray

At Pipp Horticulture, we know our business. Our innovative products have been designed in partnership with cannabis growers and engineered in-house. Only through first-hand cultivation experience and leading manufacturing practices were we able to develop and produce our grow tray offerings. Given the many vulnerabilities and challenges of lower quality grow trays, [Pipp's Grow Trays](#) stand out from the competition with exceptional craftsmanship and durability.



Elevate.
Cultivate.
Grow.TM

Pipp Horticulture has the **right grow tray for you!** Contact us today to take your first steps towards your vertical farming future!



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