

THE PLANTER



FLIP THE CONVENTIONAL ON END AND THINK VERTICAL

By Cole Ehmke and Becky Davis

Food may travel 1,500 miles to get from fields to the typical dinner table.

In colder weather, that number can rise drastically when stores have to fly in produce, such as blueberries and tomatoes, from tropical locales like Mexico and Peru.

However, when trying to increase more locally grown food in cold climates, growers often have to use supplemental heat. Growers are looking for ways to produce the most food possible in these heated spaces. Sometimes this mean growing up!

Growing Vertically

“You can do more with your square footage,” says Nate Storey, one of three partners at Bright AgroTech, a group in Laramie that produces greens in special vertical hydroponic growing towers. Nate’s company grows herbs and greens in the systems developed for commercial growers and home users. Growing vegetables vertically in the towers, which his company sells across the country, allows more to be grown in less space. Ag producers who grow on a commercial scale save money by making use of valuable greenhouse or high tunnel space, he says, but home growers can also set them up in their kitchens and grow greens for their tables.

His most popular system is a 5-foot tower filled with seedlings and placed in a 20-inch by 20-inch by 14-inch box of nutrient-rich water. Plant roots grow in a medium of air-spun fibers made from recycled plastic

bottles that resembles a very loosely woven scouring pad – no soil is needed. The plants get nutrients from the water, which is continuously circulated from the water reservoir. Some food stores even have an in-house Bright AgroTech system for customers to cut their own greens.

The greens Bright AgroTech grows in its high tunnels are sold through its community supported agriculture (CSA) option. Customers in Laramie purchase a CSA share and then pick up a fresh selection of herbs and greens every week from July to December.

Creating it Yourself

With necessity as the mother of invention, Jolene Conner of Worland found that growing up was also a way to solve her space dilemma. Jolene moved to a small apartment before buying her first home in Worland. Space was limited, and there was no room for a garden, so Jolene discovered pallet gardening as a way to provide space to grow vegetables upward instead of outward.

Jolene starts with a clean, fresh pallet. If fresh pallets are not available in your area, recycled pallets work as long as they are kiln dried and not chemically treated. Look for an HT stamp on the side of the pallet for “Heat Treated.” If reworking a used pallet, kill any bacteria that may be lurking inside by scrubbing down the wood with a bleach solution and then soapy water and let it dry before planting.

What makes pallet gardening so interesting is that the beds can be used horizontally or vertically, like a

GROWS UP

stair step. The latter is the method Jolene prefers to get the most from her limited space.

Jolene staples landscape fabric to the back and bottom of the pallet and reinforces any weak areas with scrap lumber to prevent the soil from spilling out. She then flips over the pallet and pours in potting mix through the slats and presses it firmly. A broom can be used to sweep off the excess soil.

She plants while the pallet is still on the ground and adds more soil around the plants if necessary. She then waters the plants thoroughly and lets it remain on the ground one to two weeks to let the young plants take root before she stands it upright. When watering, start at the top and water each subsequent section a little less – your water will naturally seep through to the bottom-most plants. It is best for walls behind these planters to be impervious to water.

Many people use this pallet method for small flowerbeds. They look great on porches and balconies to add color and texture to dull spaces. Jolene uses hers for vegetables such as peppers, strawberries, eggplant, tomatoes and lettuce - anything that would grow with limited soil in a traditional pot. The pallets are heavy when full, so she needed help moving them to her brand new home, but she's excited she didn't have to leave her gardening behind!

Vertical gardens can be created out of a variety of other materials. A fun way to explore the options is to click the "Images" tab on the Google homepage and search "vertical garden." You'll find answers for all of the



Jolene Conner of Worland uses pallets for her vertical garden.

primary questions, and you'll be impressed with the creativity, practicality, and ambition of vertical gardeners.

Final Thoughts

Vertical gardens provide walls of greenery and color that help gardeners make use of valuable growing space. To the typical user, they evoke an oasis – something soothing in its

tranquility and providing color, sustenance, and can even be arranged artistically into a visual art piece. However, they will require thoughtful planning since gardens are intended to be horizontal, and water tends to flow down and not sideways. But there are a number of fun resources available for getting started.

THINKING BROADLY

While vertical gardening is an idea that is becoming more widespread among gardeners, the idea can be extended to a much larger scale. Entire farms have moved indoors to multi-level facilities that make use of the vertical space to create efficient growing systems.

Vertical farms can bring food production right into the heart of cities. The world's first commercial vertical farm opened in Singapore and is expected to produce a ton of vegetables every other day. The planned 12-story, conical Plantagon in Linköping, Sweden, will grow plants on conveyor belts.

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