

Pallet Gardens

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What is pallet gardening?

Discarded shipping pallets are being 'up-cycled' and used in new ways. This trend has caught on with home gardeners interested in urban agriculture, who use pallets as a framework for growing vegetables, herbs or ornamental annuals. Pallet gardens are efficient ways to grow food and add visual appeal and character to small spaces.

Where space is not an issue, pallet gardens can be laid flat on the ground. In small spaces such as patios or balconies, pallet gardens can be hung on a wall or leaned against a vertical surface. With proper structural supports, pallet gardens can even be free-standing.

Choosing a pallet

Pallets come in a variety of shapes and sizes: some are new or barely used while others are old and weathered. Pallets are often available at a low cost or even free of charge. Check your local on-line want ads or a food distribution warehouse for sources.

If you are growing food in a pallet garden, look for "HT" stamped on the pallet. This means the pallet was "Heat Treated" as opposed to chemically treated. HT pallets are suitable for growing produce, and chemically treated pallets are not safe for food production. The chemicals may leach into soil and from there into the produce.

Sometimes pallet wood is heated in a kiln but does not have the "HT" symbol stamp. If the pallet wood is tinted green, stained or painted then it is very likely chemically treated. These are fine for growing ornamental plants, but to be safe, do not use unmarked or suspicious pallets for food production. Do not use pallets that are stamped "MB" as they have been treated with methyl bromide and are not suitable for food production.



Choosing location for your pallet garden

Build your pallet garden close to its final location, since it may be too heavy to move once it has been filled with media and watered. You will need a sturdy wall, shed or fence to lean, mount or hang your pallet garden when it is done.

Choose a spot with lots of sunlight – eight hours a day is ideal, although not all plants need that much sun. Consider whether your site is open or sheltered. Open sites with a lot of wind will result in high evaporation, causing your pallet garden to dry out quickly and may damage your plants. Overly sheltered areas with poor air circulation may increase the chances of diseases such as powdery mildew, or inhibit pollination in plants like cucumbers.

Make sure there is a water source nearby and consider how you plan to water your pallet garden. You can use a watering can or hose, but the most efficient and effective way to water your pallet garden is by installing a drip irrigation system when you build the garden.



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■ Constructing a Pallet Garden

Step 1: Assess and prepare the pallet

Assess the condition of your pallet. Sand rough spots if needed or desired. Reinforce loose boards with screws or nails. Old wood may split when hammering nails or installing screws. Prevent splitting by pre-drilling holes that are slightly smaller than the diameter of the nail or the shank of the screw.



Step Two: Install landscape fabric or burlap

Cover the back and bottom of the pallet garden with landscape fabric or burlap. This covering will stabilize the soil-less potting mix and plants in your pallet garden.

First, measure the pallet and add 10 cm so that the fabric can be secured against the sides of the pallet. Cut your fabric using scissors. If you need to use 2 or more pieces of fabric, make sure the pieces overlap each other by 10 – 15 cm. Secure the fabric by stapling along the side and center panels. Leave the top of the pallet uncovered – this is a great spot to plant more vegetables or flowers.

You can add an extra layer of waterproof material such as a heavy-gauge plastic to prevent the media and moisture from leaking or staining the wall that the pallet will lean against.



Step Three: Install drip irrigation system (optional)

Drip irrigation is more efficient than watering with a watering can or hose because water is applied directly to the roots. This decreases evaporation and leaves foliage dry which decreases the risk of disease. Pallet gardens are not very deep and can dry out quickly. Drip irrigation systems are widely available from hardware stores and garden centres. Install the system according to the package instructions before adding soil-less potting mix and plants.



Step Four: Add the soil-less potting mix and transplants or seeds

Place the soil-less potting mix in a wheelbarrow or other large container. Slowly and thoroughly wet with water and mix well using the shovel. The potting mix should not be too soppy – when it feels like a moist sponge, it is ready to use.

Lay the pallet down flat and fill with moistened soil-less potting mix until the planting area inside the pallet is about three quarters full.

Gently place transplants into the soil-less potting mix in each row of the pallet garden, but leave the top row alone for now. Lightly press the transplants into the soil-less potting mix to ensure there are no air gaps near the roots. Add soil-less potting mix as needed to support the root ball. Water the transplants. Repeat until each row is complete.

Leave the pallet garden laying flat for two to three days to allow your transplants to root and stabilize. Once plants have adjusted, gently lift the pallet to a standing position. You can then hang, attach or lean the pallet garden on a wall or other sturdy vertical surface. Now plant the top row and water again. Enjoy your hard work; you have just created your own pallet garden!

What to grow in a Pallet Garden

You can grow edible vegetables and herbs, ornamental flowers or succulents, or any mixture in your pallet garden. Use this guide to help you creatively plan your pallet garden.

Vegetables

Saskatoon is a Zone 3 plant hardiness zone, with a growing season of approximately 116 days. June, July and August are typically high heat growing months; May and September tend to be cooler. Use transplants purchased from a greenhouse (or grow your own indoors in early spring) to maximize the growing season.

Some vegetables such as lettuce, salad greens, spinach and arugula can be planted in cool soils (5°C or higher). However, high temperatures may cause cool season vegetables to bolt (produce a flower or seed stalk) which can alter the flavour and texture of the plant.

Other vegetables do not tolerate cool soils and need to be planted in June. Warm season vegetables include tomatoes, peppers, eggplant, squash, beans, cucumbers, and most herbs (growth occurs above 15°C, plants suffer under 7°C).

Pallet gardens are too small for growing root vegetables like carrots, beets and potatoes; or vegetables which benefit from large root zones such as tomatoes and squash. Large, heavy vegetables such as cabbage and squash may not do well in a pallet garden. Vegetables that have a compact growth habit or ones that can be easily staked work best.

Herbs

Herbs grow well in pallet gardens where they are accessible and convenient to use.

Purchase herbs as transplants at your local greenhouse. Most herbs will not tolerate cool soils and need to be planted when the daily temperature is at least 15°C. Thyme, basil, parsley, rosemary, oregano, lavender, cilantro, mint, chives and sage all work well in pallet gardens.

Herbs are ready to harvest either just before or when they begin to flower. Use sharp scissors to snip off what you need. Many herbs will continue to grow all season. Perennial herbs are unlikely to survive the winter in a pallet garden.

Ornamental annuals

Intersperse ornamental annuals such as succulents, portulaca, alyssum or with vegetables and herbs in your pallet garden to add colour and texture. Choose annuals with a low or compact growth habit. Rainbow chard is both edible and ornamental.

Vegetable	Planting Information
ARUGULA - Arugula can be seeded directly into the pallet - Plant seeds every 2-4 weeks for continual growth - Harvest every 4 weeks - For the best flavor harvest when the leaves are young	- Early to mid May **Direct seed - Daily temperature of 5°C
CUCUMBERS - Cucumber plants grow very quickly; harvest them when they are small and tender - Plant in full sun - Plant on the top row and add a trellis to provide good air circulation and support - Bush-type cucumbers work best as they are much smaller than the vine type	- Early June **Transplant - Daily temperature of 15°C
LEAF LETTUCE & OTHER SALAD GREENS - For continuous harvest, seed lettuce and other leafy greens every 2 weeks – this is called succession seeding - Lettuce plants require full sun, but if temperatures are too hot, lettuce can develop a bitter flavor. To keep soil cool, seed plants close together but allow for good air circulation - Harvest when plants are 15 cm tall	- Early - Mid May **Direct seed - Daily Temperature of 5°C
SPINACH - Spinach requires very similar growing conditions to lettuce - Savoy, semi-savoy or flat leaf all work well - If media is too warm, spinach may bolt ; can seed in autumn in cool temperatures	- Early – early to mid May **Direct seed - Daily Temperature of 5°C

■ Placing your plants

spinach		cucumbers	
salad mix		salad mix	
leaf lettuce		basil	parsley
arugula		mint	cilantro

Top row

Tall vegetables grow best in the top row. You may need trellising for plants such as cucumbers for optimal growth and air circulation. Choose 2 of the following tall vegetables: cucumbers (with trellising), spinach, salad mix, chard, arugula or leaf lettuce.

Middle rows

The middle rows of the pallet are best for compact plants like salad greens, lettuce mixes, or herbs. Choose 2-4 of the following vegetables: spinach, salad mix, leaf lettuce or herbs

Bottom row

Add more salad greens or herbs if desired. Choose 2 of the following vegetables: spinach, salad mix, lettuce, arugula or herbs.

■ Fertilizer and Annual Maintenance

To improve the quality and quantity of your produce, fertilize weekly with an all-purpose fertilizer. Follow the directions on the package.

Pallet gardens can be used for many years. In winter, store in a shed or other sheltered area. Check your pallet garden every spring and secure loose boards or make other minor repairs. Replace or secure landscape cloth or burlap as needed. Remove and replace the spent soil-less medium every year.

Adapted from:

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