

# What Wood is Safe to Use in My Garden?

By Dr. Leigh Whittinghill, Assistant Professor of Urban Agriculture

## Pallets

Pallets are readily available and versatile. They can be used to make horizontal or vertical gardens or repurposed as many other things. When selecting a pallet for use, there are a few things you should consider:

- First, look for the International Plant Protection Convention (IPPC) logo. The IPPC developed the International Standards for Phytosanitary Measures No. 15 (ISPM 15). This is a standard that requires all solid wood packaging material to be treated and marked to prevent the spread of disease and insect pests. If you can't find this logo, it is best to avoid using the pallet because you will not have clear information about how it has been treated.
- Examine the treatment code. There are several treatment codes used by IPPC:
  - All pallet wood has had the bark removed using a cutting tool and may carry the designation DB, which stands for debarked.
  - The heat treatment (HT) symbol indicates wood that has been heated to achieve a minimum temperature of 56°C throughout the profile of the wood for a minimum of 30 continuous minutes. If this is the only treatment code, this wood is otherwise untreated and safe to use.
  - The methyl bromide treatment (MB) symbol indicates the wood was fumigated with methyl bromide to achieve a minimum concentration of methyl bromide throughout the wood. This wood is considered unsafe for use in the garden or as compost bins.
  - Both heat treatment and treatment with methyl bromide are used to kill potential invasive insects and pathogens
- Country codes. Pallets will also have a two letter country code (e.g., CA for Canada, US for United States, MX for Mexico). This may give you an indication of how the pallet was treated because regulations and practices differ among countries. Some people avoid imported pallets because of this, although all pallets marked with IPPC should meet their standards.



Example of Pallet Stamp

- The numbers after the country code indicate the supplier of that pallet.
- Examine the pallet. If there are any spills or stains on the pallet, you may not want to use it. Colored pallets should also be avoided as they are often used to ship toxic chemicals.
- You may find other markings on a pallet. These may include markings of an inspection agency, a specific country or region specific, a manufacture date, or may indicate an uncommon type of wood. EPAL, for example, means that the pallet meets the modern European standards and are safe for use. If you find one you are not sure about, try to look it up and determine what it means before you use the pallet.
- If you are unsure about reusing a pallet, new pallets can be purchased.

## Treated Lumber for Raised Beds

You should avoid treated lumber in garden beds. Most wood treated before January 2004 was treated with chromated copper arsenate (CCA), which can leach into soils (more

chromium, copper, and arsenic from CCA will leach into acidic soils and soils with high organic matter content). Chromium and copper are usually not considered a problem because they bind very strongly to soil particles, so only very small amounts of these metals are absorbed by plants. In addition, plants are more sensitive to chromium and copper than humans and any affected plants will die before they absorb enough chromium or copper to be harmful to a human who eats them. However, arsenic is bound less strongly by the soil so it is more mobile and can be absorbed by plants easily. Arsenic is also harmful to humans at lower levels than chromium and copper. Scientific studies do not agree on how far these chemicals can move from treated lumber sources or how much can be absorbed by plants. conflicting.

If you use treated lumber, you should cover the lumber with heavy plastic to prevent it from having direct contact with the soil. In addition, manage the garden soil to minimize leaching into the soil and be sure that plants, especially root crops, are planted at least 12 inches from treated lumber.

Since January 2004, other compounds have been used to treat lumber. These new compounds do not contain arsenic so they do not pose the same risks as CCA. The most commonly used compounds for treating lumber are alkaline copper quaternary ammonium (ACQ), which contains no chemicals considered toxic by the EPA, and copper azole (CA), which has two formulations, both with a negligible impact on the environment. These compounds are copper-based; therefore, they are less mobile in the soil and pose a much lower risk for

plant uptake and human consumption. They also contain a fungicide, which is used on agricultural crops. Both of these should still be avoided if you want to meet the standards of the National Organic Program.

## Naturally Decay Resistant Woods for Raised Beds

There are a number of naturally decay resistant woods that can be used for raised beds. Some of these may not be readily available for purchase and others are quite expensive. Old-growth wood, or wood from an area that has never been harvested, can be more resistant than second-growth wood, possibly because of differences in the rate of growth in these to forest types. How decay-resistant these woods are depends on environmental factors, such as moisture availability, soil conditions, and climate. Starred species have conflicting assessments of durability.

**Exceptionally resistant:** black locust, red mulberry, Osage orange, Pacific yew.

**Resistant or very resistant:** old-growth bald cypress, catalpa, eastern or western red cedar, black cherry, chestnut, juniper, honey locust, white oak, old-growth redwood, sassafras, and black walnut\*.

**Moderately resistant:** second-growth bald cypress, Douglas fir, eastern or western larch, old-growth eastern white pine, some varieties of old-growth pine\*, second-growth redwood.

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