

Plastic pallets and crates: More expensive, less sustainable



Plastic pallets, crates, and boxes are used for the transport of products in some supply chains. Here is a comparison of the environmental credentials and cost of using wooden pallets and plastic pallets - and some important questions about the hazards and environmental impact of plastic pallets on supply chains, too.

Scarce versus renewable

Plastic pallets are made from oil, an expensive fossil fuel that is increasingly scarce and non-renewable.

Compare this with wood, which is less expensive to produce, widely available - and endlessly renewable.

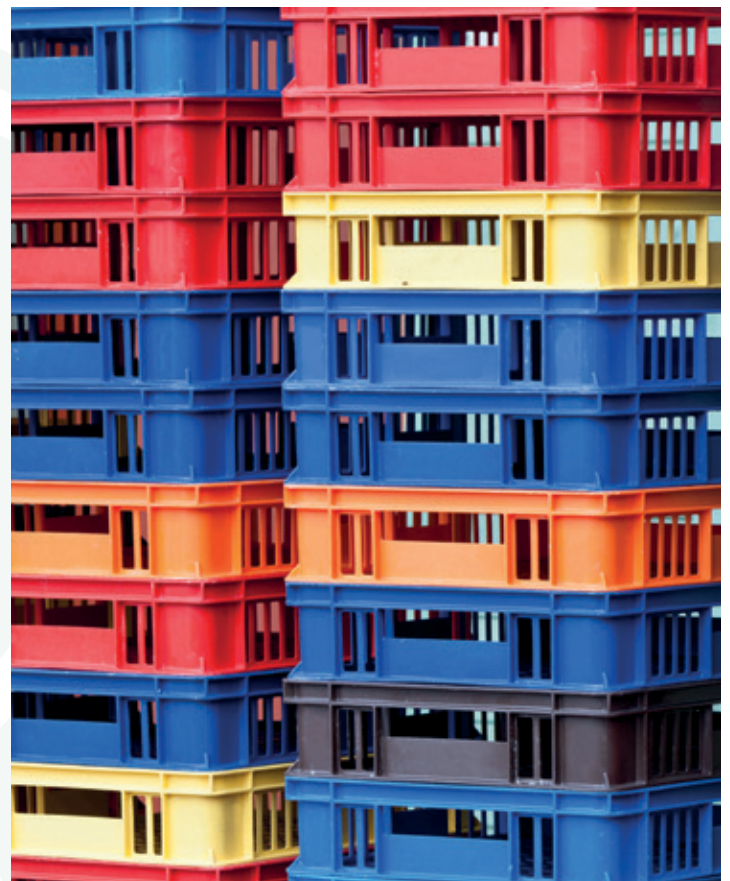
More carbon emissions

Manufacturing plastic pallets generates CO₂ emissions - compare this with using timber, which absorbs CO₂ from the atmosphere as it grows.

Repairable and recyclable?

Plastic pallets are reusable; but they are not repairable, as they are made from a mould. A plastic pallet is a single piece, which, if damaged, must be replaced in its entirety.

Wooden pallets are made from several components, including boards and blocks. When one part of the pallet is damaged, it can be replaced - and the repaired pallet returned to the supply chain to be used.



Key questions

Plastic pallets, crates and boxes are used in some supply chains. However, there remain questions over the suitability for purpose of plastic for pallets and packaging. These include:

What is the environmental impact?

Plastics are made from a finite and polluting resource: fossil oil.

Plastic pallets and packaging also take hundreds of years or even more to degrade – which makes them effectively non-biodegradable.

Wood is endlessly renewable and biodegradable, too.

How does the carbon impact of

plastic pallets and packaging compare with the negative (beneficial) carbon footprint of similar products made from wood?

Plastic pallets are also heavier than wooden pallets, making them more costly to transport.

What additives do they contain?

In some markets, the toxic metal cadmium has been used as a chemical stabiliser in plastic products – including plastic pallets, crates, and other packaging – but was withdrawn due to health and environmental concerns. How many of the plastic pallets and how much of the plastic packaging in circulation still contain this hazardous metal?

In the United States, harmful decabromine was widely used in plastic pallets and other rigid plastic products to protect against fire. Is it still present in any pallets in circulation?

What are the fire risks?

If decabromine is no longer being used as a fire retardant in plastic pallets, what is being used in its place – and is this any safer?

Also, wood burns slowly and predictably. A fire fuelled by plastic burns unpredictably, and is therefore more difficult to fight and control. If no fire retardant is being used, isn't plastic packaging a dangerous fire hazard?

Wood is by far the most competitive material for pallets and packaging. International pressures have pushed prices up for all materials, but wood remains less expensive than plastics.

Given the question marks above – and the increasing sustainability obligations in Europe and beyond - why would a business choose any plastics over wood?

Contact FEFPEB

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