

Reusable pallets better for the environment than wooden

Reusable pallets made out of plastic, which can be reused a large number of times are much better for the environment than pallets made of wood. A new report shows that a reusable pallet has lower carbon dioxide emissions than an equivalent wooden pallet.

Svenska Retursystem compared the life cycle analyses of plastic return pallets with the equivalent pallets made of wood in the FMCG. The comparison showed that the plastic reusable pallets are significantly better for the environment than wooden pallets.

“The result challenges the accepted wisdom that renewable raw materials are always a better choice for the environment. The life cycle analyses show that pallets made from durable plastic that can be reused again and again for several years are better for the environment than wooden pallets that are being used only a few times”, says Anna Elgh, CEO of Svenska Retursystem.

That reusable pallets are better for the environment is mainly due to three aspects; that they have much longer service lives, that they can be repaired and that they can be recycled when they are completely worn out. A reusable pallet has an estimated service life of 15 years, compared to a wooden pallet which lasts for 1-2 years in the FMCG. A reusable pallet also weighs 10 kg less than a wooden pallet, which gives lower fuel consumption during transportation.

More about life cycle analyses

The life cycle analyses for the reusable pallets (Grey Full-size Pallet (1200 x 800) and the EUR pallets) have been developed by Masters students from the Civil Engineering programme in Energy and Environmental Management at Linköping University, and the methods have been verified by RISE, Research Institutes of Sweden.

Within the method for life cycle analyses there are different ways at looking at the combustion of wood raw materials. In the report, we chose to make the comparison according to both the GWPbio method and the calculation for climate neutrality* for biomass. The reusable pallet has a lower environmental impact than the EUR pallet, regardless of how it is calculated.

- When the calculation is made according to the GWPbio method, the return pallet's CO2 impact is 61 percent lower than the wooden pallet. In GWPbio, consideration is made of the time aspects and the natural absorption of CO2. Many researchers use this method and we consider it more accurate. The forest that we have is so valuable to our climate that we cannot use it for products that are so short lived that new forest does not have time to grow.
- If we use the method for climate neutrality, the return pallet's CO2 impact is 10 percent lower than the wooden pallet. By climate neutrality we mean that the carbon dioxide absorbed during the biomass's lifetime is assumed to be equivalent to the amount of carbon dioxide released when burning the same biomass. The emissions of carbon dioxide during combustion are reconciled with the amount absorbed and are assumed to be nil.