Impact on climate

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Willow wood as carbon sink, using the example of ''s Körbla'

The weaving craft can relatively easily demonstrate its contribution to reducing climate-relevant gases (particularly CO_2), as the following calculation shows.

From the **dry density** (= Mass of the timber at 0% moisture content) for willow (Surce: gdholz.de) of **520 kg/m³** wood,

as well as the proportion of CO_2 in this wood, which is calculated based on the **proportion of carbon in the wood** (50% of the wood mass = C) and the relative molecular mass of CO_2 (3,67) in opposite to C:

520 kg/m3 : 2 x 3,67 = **950 kg/m³ CO_2**

CO_2 content per kg of willow

CO_2 content in wood

950 kg CO2/m3 : 520 kg wood/m3 = 1,82 kg CO2/kg wood

To produce one kilogram of dried willow, the plant requires **1.82 kg of CO_2** during photosynthesis, or in short:

1 kg woven willow stores **1.820 g CO_2**

Example:
Weight „'s Körbla" = 800 g =>

One „'s Körbla" stores **1.450 g CO2**

Plastic and other materials

The respective ecological footprint – that is, the **CO_2 emissions during production** varies considerably amongst the most commonly used materials
(Quelle: Research Institute Delft).

	Paper/ Cardboard	Corrugated cardboard	Steel	Plastic	Aluminium
CO_2 emitted during production in **g per kg**	**676**	**887**	**1.095**	**3.453**	**5.570**

The production of plastic releases approximately **3.5 kg of CO_2 for every 1 kg of finished product**, and is so contributing to climate change.

If you then estimate the weight of the plastic containers as shown in the table opposite, the difference becomes clear:

To carry 10 kg of goods, I need either a plastic bag (woven or non-woven) or a plastic carrier bag (LDPE).
(Quelle: Umweltbundesamt)

- Baumwolltasche (ca. 130 g)
- Kunststofftasche - Woven, Non-woven (ca. 190 g)

- LDPE-Tasche (ca. 30 g)
- PCR-Tasche (ca. 30 g)
- bioPE-Tasche (ca. 30 g)
- Bioabbaubare Tasche (ca. 40 g)

- Papiertasche (ca. 40 g)

- *HDPE-Tasche (ca. 10 g)*

Manufacture of **plastic bag = 450 g CO2-Release**; is used for a long period of time!

Manufacture of **LDPE-bag = 140 g CO2-Release**; is usually used once or twice