

**TRANSLATION:**

The translation of this fact sheet is provided by *climatop* with the aim of reflecting in the most accurate way the original German text. In case of interpretation difficulties, please consult the original, valid German text.

**CO<sub>2</sub> Balance: Sugar**

The CO<sub>2</sub> balance shows which sugar product out of the Migros sugar assortment is most climate friendly. The following sugars were compared:

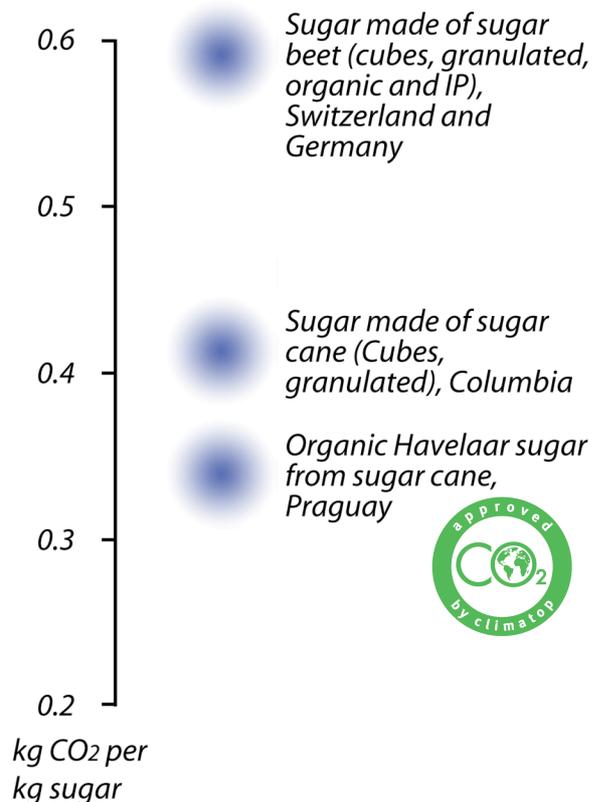
<b>Sugar cubes</b> Made of sugar beet origin Switzerland/ Germany	<b>Granulated sugar</b> Made of sugar beet origin Switzerland/ Germany	<b>Organic granulated sugar</b> Made of sugar beet origin Switzerland/ Germany	<b>Organic Max Havelaar sugarcane sugar</b> Made of sugar cane from Paraguay	<b>Sugar Cubes</b> Made of sugar cane from Columbia	<b>Sugarcane sugar</b> Made of sugar cane from Columbia

**Comparison / Life Cycle Assessment**

The climate relevant emissions of 1 kg sugar of each type were compared. The greenhouse gas emissions (expressed in CO<sub>2</sub>-Equivalents) were summed up over the whole life cycle of each sugar type, which means from the cultivation of the sugar beet/cane, to the processing steps as well as the transport through to the waste disposal of the packaging.

**Results**

The product comparison proved the Organic Max Havelaar Sugar from Paraguay having the lowest total emissions. The climate charge is about 40% lower than the average sugar sold by Migros. The most decisive reason for the good scoring of Organic Max Havelaar sugar from Paraguay is due to the fact that cultivating sugar cane is in general less CO<sub>2</sub> emission prone than sugar beet – in addition, organic sugar does neither receive synthetic fertilizer nor pesticides and agricultural machines are seldom used. Moreover the waste sugar cane plant material is used to generate the



necessary energy and process heat needed to fire the plant, which renders the input energy climate neutral.

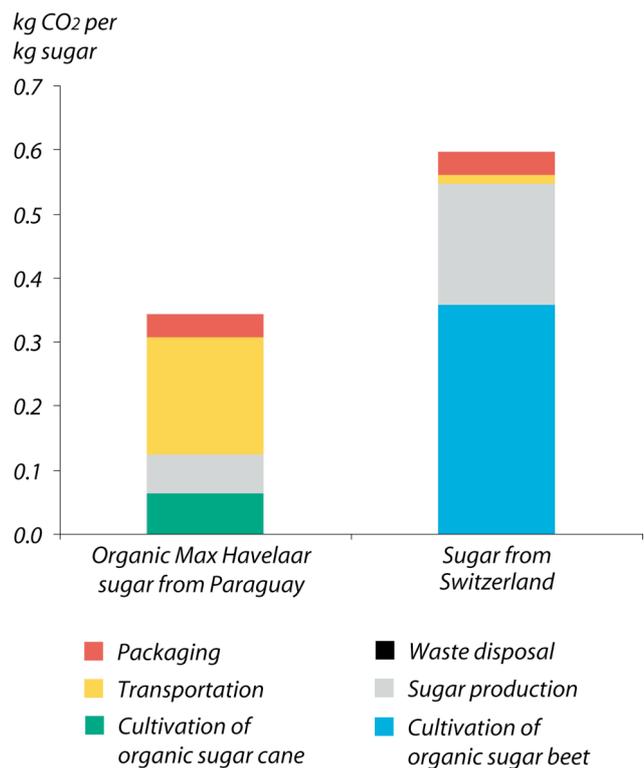
The climate impact of sugar from Columbia is higher than from the Organic Max Havelaar Sugar from Paraguay. Clearly the highest climate impact can be found with sugar from sugar beet from Switzerland or Germany.

### Sustainable sugar

Organic Max Havelaar sugar from Paraguay is not only the best product from the climatic point of view – also with respect to other environmental aspects it is best. Since no pesticides are used, the toxic emissions in the cultivation are diminished. The low intensity cultivation and the fact that the sugar cane fields are not burned off before the harvest leads to a considerably lower total environmental impact than with other sugars, despite the long transportation routes.

Furthermore the Max Havelaar Guidelines guarantee a secured demand of the sugar cane and the compliance with certain social standards. The organic Max Havelaar sugar from Paraguay is, by consequence, a valuable alternative also from a socio-economical point of view.

The figure on the right hand side illustrates where exactly the greatest climate impacts can be found, shown exemplary with the organic Max Havelaar sugar from Paraguay and sugar from Switzerland. The organic Max Havelaar sugar accumulates the largest CO<sub>2</sub> quantities on the sea-transport over the Atlantic and then up the Rhine to Switzerland followed by the CO<sub>2</sub> loads emitted during the cultivation, whereas sugar from Switzerland shows the largest emissions during the cultivation of sugar beet, followed by the sugar beet processing in the plant. The impact caused by the paper and cardboard packaging as well as their disposal is insignificant for both products.



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