ENVIROmental impact of organic and conventional carrots

Objective:
- To compare environmental impact of fresh and dried organic carrot
- To compare environmental impact of fresh organic and conventional carrots
- To quantify primary energy consumption (CED) and greenhouse gas emission

Method:
- LCA of fresh and dried organic carrots (based on 58 t/ha of yield)
- LCA of fresh organic (based on 37.1 t/ha of yield) and conventional (based on 44 t/ha of yield) carrots
- Functional unit (FU) of 1 ton carrot at farm was used in all cases

Development of quality standards and optimised processing methods for organic produce

Climate change impact as % of total GWP values (121 kg CO2 eq for fresh carrot and 111 kg CO2 eq for dried carrot)

Energy consumption as % of total CED i.e. 2.64 GJ in the case of fresh carrot and % of 6.67 GJ in the case of dried carrot value chain

Energy consumption as % of total CED i.e. 4.45 GJ in the case of Organic carrot and % of 4.82 GJ in the case of conventional carrot

Climate change impact as % of total GWP values (193 kg CO2 eq for Organic carrot and 216 kg CO2 eq for conventional carrot)

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