Development of quality standards and optimised processing methods for organic produce

Development of smart and low energy input processing chains natural food additives and colourants, and supportive for a code of practice to increase sustainability and consumer acceptance of organic food stuffs

MATLUST: Food Planning– var finns maten i samhällsplaneringen? Seminar January 31, 2019, Södertälje

ENVIRONMENTAL IMPACT OF ORGANIC AND CONVENTIONAL CARROTS

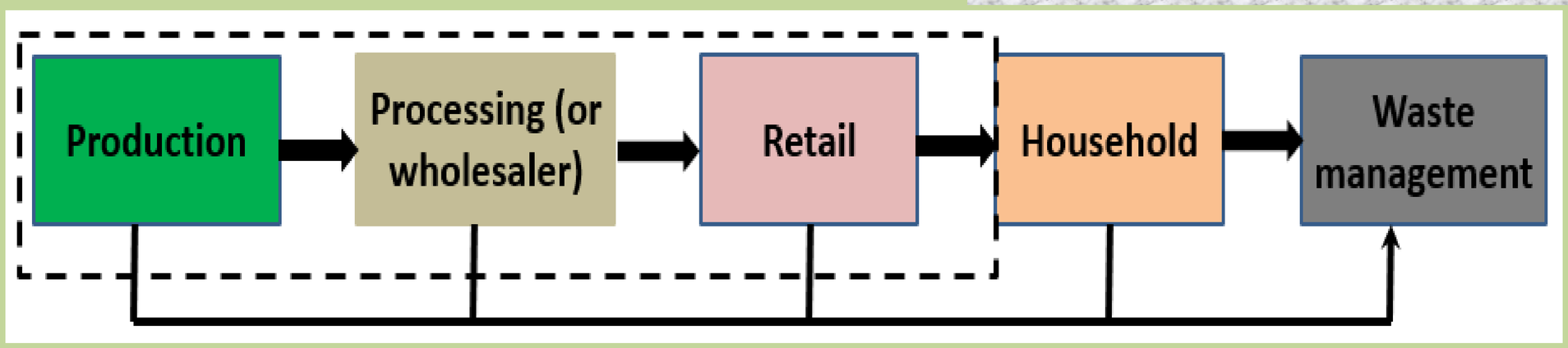
TECHANE BOSONA, ISAC JAREBORG, GIRMA GEBRESENBET Contact: Techane.Bosona@slu.se

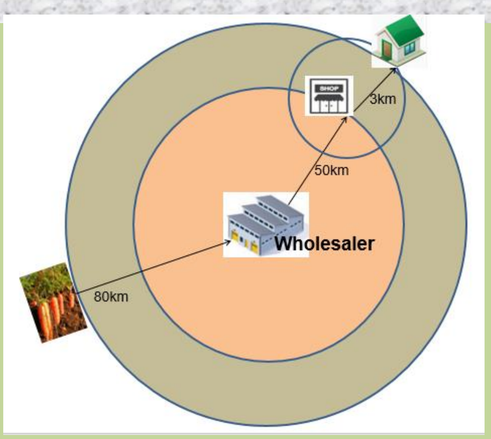
Objective:

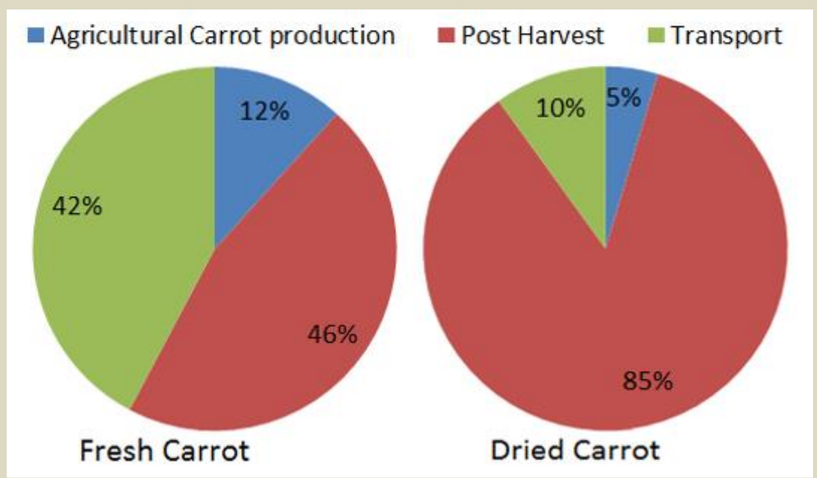
- To compare environmental impact of fresh and dried organic carrot
- To compare environmental impact of fresh organic and conventional carrots
- To quantify primary energy consumption (CED) and greenhouse gas emission

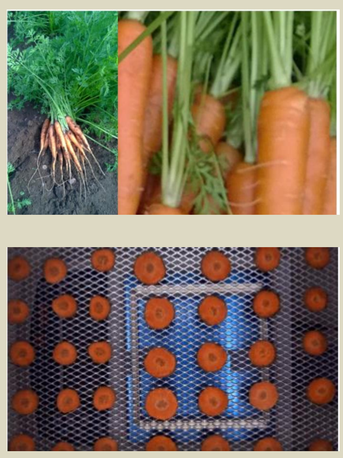
Method:

- 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

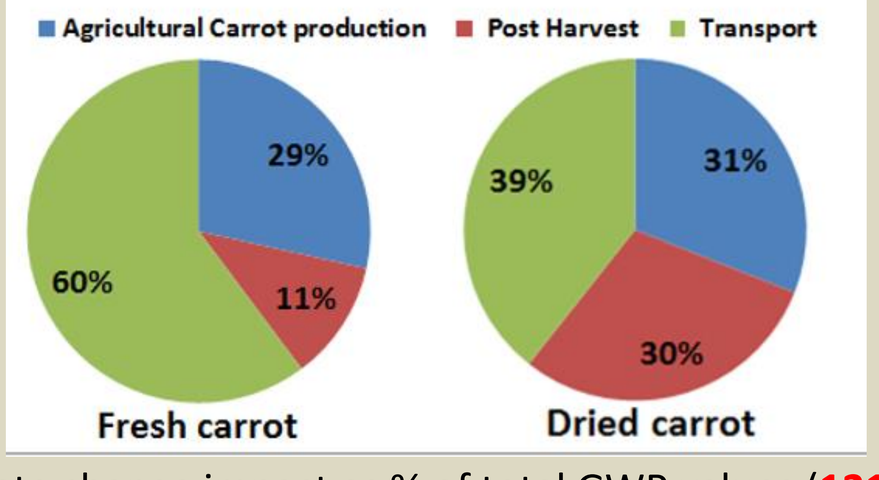




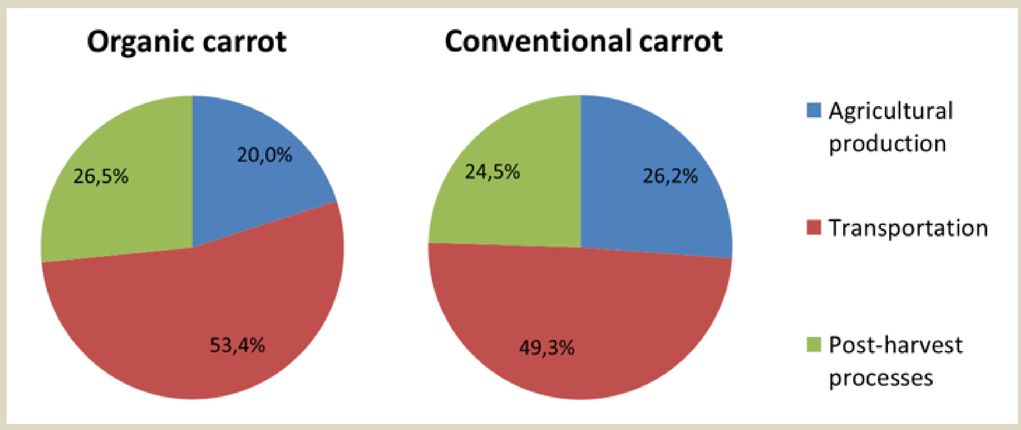




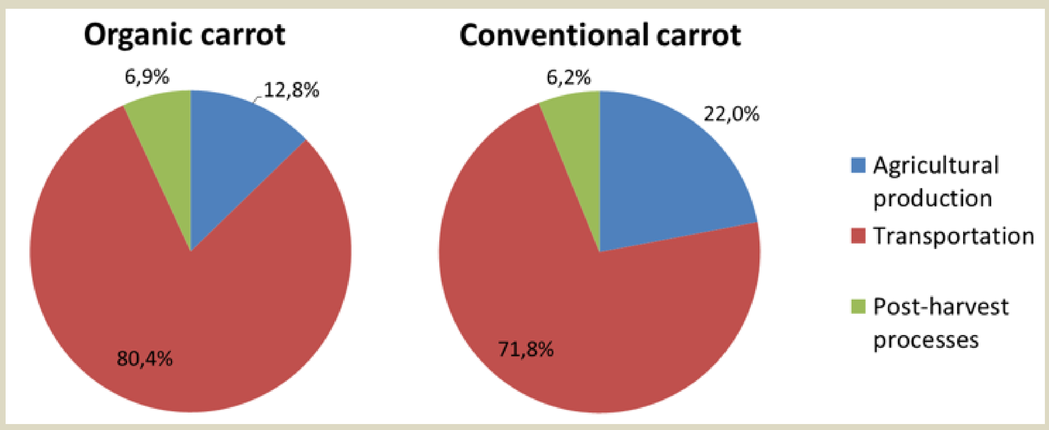
Energy consumption as % of total CED i.e. **2.64 GJ** in the case of fresh carrot and % of **6.67 GJ** in the case of dried carrot value chain



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. **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)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727495 CORE Organic Cofund.