

CURRICULUM VITAE Jan Broeze



Jan Broeze (1966) is specialised in mathematical-physical modelling of agro-food production processes. From a modelling approach, he designs and evaluates technical and spatial designs of production chains.

Jan presently works at the business unit Fresh Food & Chains (FFC) of Wageningen UR Food & Biobased Research (formerly known as Agrotechnology & Food Sciences Group). FFC develops and applies knowledge in the field of safe and sustainable food and non-food production. Jan combines this with general knowledge of agricultural production systems, including innovative systems as developed by other researchers and industrial organisations.

On the scale of process detail, through mathematical modelling approaches Jan and his colleagues create insight in effects of input material properties and processing settings on the products, e.g. effects of packaging and cooling system design on product temperature, product activity and keeping quality decay. Based on such approach new climate control methods have been developed that reduce energy need up to 50% without negatively affecting product quality.

On a chain level, Jan and his colleagues use modelling approaches for material and energy flows between processes. Based on background knowledge base, global models describing input and output of a broad set of agro- and bioprocesses have been formulated. Through combining these models production chains and networks (like agro parks) are simulated. Specifically the models describe energy (electricity and heat production and use per step and potential exchange between processing steps) and material flows (flow rates and composition including dry matter content, organic matter content and potentially chemical composition). In order to further elaborate the knowledge base on existing and new processes, Jan is involved in European research projects and has contacts with companies that offer innovative processing technologies.

Jan acts in various projects as technical expert, consultant as well as project manager.