

The need for real-time measurements in the coming circular water economy

It is a certain fact that we must rethink the use of natural resources in the coming decades. Explosive growth of the world's population will increase the demand for food production beyond what is sustainable at the moment. Our most precious resource, the fresh water supply, and its role in food production, is a topic that needs urgent attention if we want to produce food in a sustainable way.

Technologies for reducing the water footprints of food manufacturing processes is developing rapidly, particularly systems that allow for reclaiming water and closing the production loop. By applying the technologies, we can establish sustainable productions where intake of fresh water and outlet of waste water streams can be eliminated – or at least reduced to a bare minimum.

In order for the food manufacturers to embrace these technologies, it must be guaranteed that the quality or safety of the food production is never compromised when waste water is reused. In the presentation, research and ideas is presented and discussed on how the quality of reclaimed water used for food production, and the food products themselves, can be monitored by advanced sensors and data analysis augmented by artificial intelligence and machine learning.