WATER CONSERVATION AND RECYCLING IN ORGANIC BEVERAGE PROCESSING

BACKGROUND

Enhanced environmental performance of organic processing is critical in ensuring the long-term sustainability of all stakeholders in the organic food chain. Water is in particular a critical resource for food and beverage manufacturers who strive to produce food and drinks to the very best quality that organic consumers expect and demand.

In Germany the organic brewing company *Neumarkter Lammsbräu* has been actively working to improve its sustainability credentials on water as it needs secure access to natural untreated water sources for its product lines. As a result good water management and natural resource conservation are important priorities for the company from water extraction and recycling necessary for the processing of organic raw materials, to the manufacturing of product lines and education and awareness-raising on sustainable water use and management.

ACTIVITIES

In 2006, *Neumarkter Lammsbräu* set new targets to reduce water consumption in the brewery by investing in new cleaning-in-place equipment. To this end, water that is used for the rinsing cycle - after the actual cleaning - is stored in a separate tank until the next cleaning cycle for pre-cleaning. For reasons of hygiene, the rinsing process is carried out again with fresh water which is then stored and reused for future cycles. A similar procedure is undertaken for cleaning bottles and crates since 2002.

Neumarkter Lammsbräu is also looking at ways to utilise rainwater in order to reduce the water consumption from the network. Water is cleaned using filter systems before it enters the cooling condensers or it is sent to storage tanks. Rainwater is also used for other purposes such as washing vehicles or outside areas. In addition, the company is active in highlighting the issue of water conservation in the public arena through targeted media work, educational initiatives and raising public awareness about the social importance of water resources - particularly in the beverage industry and organic food sector. The company also offers workshops to schools, and a course on soil health to farmers - developed together with the organic farmers association, Bioland – to improve knowledge transfer on water protection.

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RESULTS

With cleaning in the brewery carried out several times a day using about 30 m^3 of water per day, optimised processes have the potential to save up to 120 m^3 of water per week. This adds up to more than 62,400 hectolitres of saved water annually. Since the installation of the rainwater collection systems in 2003, the company has been able to save a total of 6,688 m^3 of water as well as considerable quantities of softening salts used in the cleaning process.

LESSONS LEARNED

Increased sustainable water management at *Neumarkter Lammsbräu* has been achieved at relatively low cost to the company. However more could be achieved to reduce water consumption levels particularly in terms of the amount of water used per hectolitre of product produced. One possible obstacle in achieving even greater efficiencies relates to the constraints imposed by the business' premises which have been successively developed since late 19th century. As a result opportunities to further reduce product flows, optimise the plant's layout and thus reduce consumption levels can be more challenging to develop than for a business who is building new facilities from scratch.

Where	Bavaria, Germany
What	Increasing water conservation and recycling, and raising awareness of sustainable water use in organic beverage processing
How	Investments in cleaning equipment, rainwater collection systems and education and public and sector awareness-raising
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