More mushroom in the jar

Wageningen UR Food & Biobased Research studied a factory belong to Lutèce, a company that bottles mushrooms. This led to a new production process that is both cheaper and more environmentally friendly. **TEXT** ASTRID SMIT **PHOTOGRAPHY** LUTÈCE

When you fry mushrooms, they shrink. The same thing happens in the factory. Almost thirty percent of the mushroom evaporates, in a manner of speaking. And that is a lot, especially if you are bottling mushrooms on a large scale, as the Limburg company Lutèce has been doing for more than a century. Of the 100 million kilos processed every year, roughly 70 million kilos end up in the jars. So Lutèce wanted some research done, to see whether more of the mushroom could be kept after processing. 'We were due to replace a number of our machines and we wanted to know whether we could strike a blow for efficiency at the same time', says Eddy Teernstra, director of operations at Lutèce's biggest factory, in Velden.

In 2007, Lutèce asked Jan Broeze and Miriam Quataert at Wageningen UR Food & Biobased Research to examine the whole production process at the factory, to delve into the scientific literature on each part of the process, and to sit down with eight production staff members and process technologists to document their experiences. This was a special assignment for Food & Biobased Research. 'Normally we study one component of a food processing system, experiment with it in our lab, and then give advice', says Broeze. 'This time we had to look at the process as a whole and come up with an analysis of its strengths and weaknesses. The discussions with the people on the work floor were particularly useful, giving us a good overview of the production process.'

WATER CHANNELS

The results are impressive. Broeze and Quataert advised the company to keep part of the process the way it was, but to change other parts radically. Lutèce would be better off transporting the newly blanched, still steaming mushrooms through the factory in water-filled tubes than on open, dry conveyor belts. This entailed an investment of two million euros, but Lutèce had recouped that in just one year. 'Sometimes advisors paint too rosy a picture of the changes they suggest but this time it was the other way round. The returns were even higher than expected', says Teernstra.

This leaves two to three percent more of the mushrooms over after the bottling process. But these investments also reduced the energy bill and the tax bill from the water board. The waste water at the Velden factory is a good deal cleaner now. With the new production process, in full swing since 2010, there is less leaching from the mushrooms. 'This has brought the waste water tax down by 20 percent', says Teernstra. ■

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