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# The common sense has been lost

## Brussels strategy papers open the way to eco-communism

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With its strategy papers "From Farm to Fork" and "Biodiversity" the EU Commission addresses all areas of animal and plant production, but also processing and labelling. The strategies are explicitly intended to give the EU agricultural sector a worldwide role model – which clearly shows the usual German hubris. But of course the French and Italians are also to be found: their long-standing practice of labelling foreign (milk) raw materials on finished products, which is contrary to the Single Market, is to become an EU standard.

The aim of the strategies is almost awe-inspiring. They are intended to create nothing less than a "fair, healthy and environmentally friendly food system". Hardly anyone in the population will object to a reduced use of crop protection products and antibiotics. The situation is likely to be completely different on the side of agricultural producers, who are only able to supply bulk goods at the prices dictated by the retail trade because of plant protection and the use of antibiotics. So, the signs are pointing an increase of costs of production, especially since the proportion of organic land is set to rise from 8% to 25% of the land under cultivation.

As always, Brussels does not care whether the market plays along with this. In times of a severe recession triggered by Corona hysteria, a recession which is not yet fully felt, consumers will hardly be willing or able to spend more on food. On the contrary, the role of discounters will increase significantly for sales. This means nothing other than even more extreme price and competitive pressure for agriculture under the sign of a pioneering role in sustainability decreed from above.

What reduction targets in the two strategy papers refer to, however, remains open. No concrete targets are named at all, everything becomes blurred in the ambiguously defined concept of sustainability. If Brussels asserts itself with its ideological ideas, which are, it must be said, beyond all reason, unilateral disadvantages threaten to EU agriculture. After all, experience shows that EU law is executed meticulously or considered negligible, depending on the country. If, contrary to expectations, the Commission is able to assert itself throughout the EU, overseas farmers will be pleased about the partial abandonment of the EU position in world agricultural trade. Whether the EU farmers will be able to make their lives just from being world pioneers in sustainability, is highly doubtful, thinks Roland Sossna.



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# Much more whey

## Fonterra Manufacturing Europe increased capacities of the Heerenveen plant

**T**o be able to process whey from the new Mozzarella production at A-ware in Heerenveen, the Netherlands, Fonterra's European plant that is located right beside the A-ware cheese factory had to increase capacities. With a € 10 Mio. investment, a new building was erected on top of the existing production which now houses a membrane filtration plant supplied by ALPMA/LTH.

IDM had the exclusive chance to visit the new premises. Fonterra and A-ware have been partnering in whey utilization since

2015 in the industrial estate of Heerenveen. Initially, this agreement covered whey from semi-hard cheese making. When A-ware decided to enter the growing Mozzarella market, large-style of manufacturing capacity, Fonterra simply had to pull right away to cope with a massive flow of new whey.

"We knew exactly the time when the additional whey would have to be processed and prepared accordingly," explains Diana Krabbe, General Manager Operations Fonterra Europe & Africa. "But the process itself was quite difficult as everything had to be done right in time and as we had to integrate the new capacities

into the existing processing environment without interruption".

### Suppliers presented individual solutions

Fonterra opened a tender for suppliers in which it thoroughly specified all requirements in detail. Participating suppliers had to present their individual turnkey solutions. Fonterra then decided on the basis of the quality of the proposed solutions and CAPEX aspects. The team that did the job of selection consisted out of specialists from a number of fields such as QA, processing, engineering etc. In the



**The turnkey project supplied by ALPMA/LTH encompassed not only the RO plant, but also automation (for which long-term partner Beenen was subcontracted) and a CIP solution (photo: IDM)**

### Fonterra plant in Heerenveen, NL

Fonterra opened the plant in Heerenveen, the Netherlands, at the end of 2014. It was built in a whole-through-the-wall way to process all whey coming from the neighboring cheese factory operated by A-ware. The Fonterra plant processes only sweet whey from semi-hard cheese as well as Mozzarella whey. The portfolio is WPC 80, WPI and functional WPC's for infant formula, sports nutrition and medical applications. Most of the products are sold in dry form but Fonterra can supply their B2B customers also with whey concentrates of >28% dry matter. Since the start of the factory, Fonterra increases production capacity and product portfolio ongoing.

Products manufactured in Heerenveen are of superb quality. The whey arriving at the plant has passed a bactofuge for additional safety and will almost inline processed.

end, ALPMA/LTH's solution was chosen as best fitting to the processing requirements.

### Thorough checks

This happened in December 2018. But then, things became tough for ALPMA/LTH. Fonterra has a habit of being involved in all development stages of equipment its sources on worldwide scale. This meant that ALPMA/LTH had first to produce the P&ID (Process and Instrumentation Diagram). Once this was agreed by Fonterra, everything had to be transferred into 3D drawings incl. all peripheral equipment such a tanks, fittings, valves and pumps. This draft was then reviewed by Fonterra again, with team members on aspects like HACCP, Hazard Analysis, Maintenance etc. stating their demands for adaptations and changes. "This is all quite time-consuming and tedious," admits Johan Hoeksma, Project Manager at Fonterra. "But an in-deep preparation of such complicated projects in a very strict process avoids mistakes in the end. We never assume that our counterparts might have understood what we mean or need, we make sure that there is real understanding, assumption are not allowed".

The final agreement took place in mid-February 2019 and ALPMA/LTH were told to start the at site installation in mid-September. At the same time, Fonterra had to arrange for space to house the new whey processing line. The solution proposed by Advies- & ingenieursbureau Het4kant was to build a new plant on top of the existing one. The 30x30 meter building on the rooftop was finished right in time when ALPMA/LTH sent the skid-mounted equipment in seven trucks. Everything had to be lifted by a crane into the new building for which purpose one of the side walls was left open. Of course, all trucks had to arrive in an orderly manner, everything exactly on time. As the project was prepared so precisely by Fonterra and ALPMA/LTH everything was right from the start which was confirmed by a FAT in August. The first Mozzarella whey was processed in November 2019.

The turnkey project supplied by ALPMA/LTH encompassed not only the RO plant, but also automation (for which long-term partner Beenen was subcontracted) and a CIP solution. Before Beenen came into the game, Fonterra made sure that their IT solutions were

exactly fitting to their very structured and global proprietary automation concepts.

"The project was all a brownfield operation. Much more complicated than equipping a greenfield plant," is the resumé of Wietze Jongsma who is the representative of ALPMA/LTH in the Netherlands. He adds: "We had to do seven open heart surgeries when installing and integrating the new whey processing capacities into the running operation. And given the thorough preparation and the joint team spirit of Fonterra and ALPMA/LTH we succeeded in doing all this without causing havoc to the ongoing whey processing that was to be kept running and his high quality".

Johan Hoeksma comments from Fonterra's side: "ALPMA/LTH performed well above the regular level. They made things right first time, what isn't always the standard in projects. Overall, when taking into account waste water and utilities consumption, installation and quality of work, we are absolutely satisfied".

### The solution

The heart of the Fonterra project is a new ALPMA RO HighTS plant with integrated RO-



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**The heart of the Fonterra project is a new ALPMA RO HighTS plant (photo: IDM)**



**Fonterra confirmed: ALPMA/LTH performed well above the regular level (photo: IDM)**

Polisher, designed for two different modes of production: a feed flow from 6 % to 30 % total solids and a feed flow from 6 % to 9 % total solids Both in a capacity that meets the volumes of Mozzarella Whey.

Solids from the RO Polisher section are returned to the feed tank to prevent drain losses. The plant can be operated with a 20 % turn down in capacity related to the maximum. An automated citric acid dosing system reduces the pH of incoming whey based on measurement for automatic control of the pH.

The new RO plant supplied by ALPMA/LTH Dresden comprises additional equipment. A new manifold for Mozzarella whey with two filling lines has one emptying line to the new RO plant. Also the integration of the new tank storage was part of the design and implementation from Alpma.

Manifold valves were installed in the feed line to the UF plant to send RO concentrate with 9 %

dry matter or to dose RO concentrate with 30 % solids for blending with low solid whey. The correct dosing is controlled by inline measurement.

New polished water storage and connections to existing manifold were installed. A line from the new RO plant for RO concentrate and cooling of the concentrate to 5 °C was integrated. Via this line it is possible to store the concentrate (30 %) or to bring the 9 % concentrate direct from the RO plant to the UF plant.

An additional circuit was introduced to the existing CIP plant. Delivery and installation of all necessary supply and return valves with same design as the existing valves was part of the package.

Fonterra uses Grundfos booster pumps, valves from GEA and the loop pumps from Alfa Laval. They all were arranged in way to ease maintenance. The RO-Polisher permeate is, after treatment, used for some phases of the CIP process.

### The building

The Fonterra project from 2019 is an extension on the existing production plant, built in 2013, also engineered by Advies- & ingenieursbureau Het4kant b.v. When developing in 2012, Het4kant advised Fonterra to take future expansion into account. Especially to anticipate upon a load bearing roof, as there was little free space for high-care rooms next to the building. This provision now benefited the realization.

Issues during the process of engineering and realization of the expansion were, after all, that the factory was in constant operation for production; hygiene and existing constructions had to be maintained as they were. Not in the least because the plan was well developed from the start, and thanks to the various parties and consultation with the customer, the end result seems as if it has never been different.

Het4kant is a civil engineering company with 18 employees, including project managers, project leaders, building engineers, construction calculators and 3D-modellers. The professional scope includes all engineering activities from feasibility study up to support during construction. Het4kant do Greenfield as well as Brownfield projects, big and small. Among the clientele there are mainly dairy companies.



**The leaders in the team that managed the plant expansion (from left): Johan Hoeksma, Diana Krabbe and Mike Toplis, Fonterra, and Wietze Jongsm, ALPMA/LTH (photo: IDM)**