Environmentally-Friendly Liquid Manure Processing in Belgium
At the beginning of the 1990s, environmental laws became more strict and implementation was monitored more closely. The use of nutrients – and in particular those of animal origin – on agricultural areas became more and more restricted. This meant that a surplus of liquid manure occurred in Belgium as a result of intensive pig farming.

Separation of liquid manure
With a decanter, liquid pig manure can be separated easily into a solid mass and a “thin” centrate phase without the addition of polymers. Up to 40 percent of the nitrogen content and up to 80 percent of the phosphate content are concentrated in the solids. After processing, the solids normally have a dry matter content of approximately 30 percent and the centrate has approximately one to two percent solids and some salts. Decanters from Westfalia Separator are increasingly handling liquid manure separation, and Westfalia Separator Belgium has in recent months received orders for numerous projects, particularly with machines of the type UCD 305 and UCD 345, which are ideal for these applications. The dewatered solids are not sterile and have to be processed further. A heat-based procedure is usually used for this purpose, for instance drying, composting or combustion. After having been sterilised, the solid manure can be exported or sold to private customers, for instance as soil for gardening purposes. Until 2006, the nutrient-reduced centrate was used as a fertilizer on agricultural areas. Since the beginning of 2007, there has been a further tightening of Belgian laws with regard to the European nutrient laws. The consequence was that either pig stocks had to be reduced or that the centrate had to be processed accordingly (or both).

In certain regions, for instance the northern part of Belgium, the amount of nutrients resulting from agricultural fertilizers is higher than the environment can absorb. Agricultural areas are saturated with nutrients to such an extent that there is a risk of drinking water becoming contaminated.

Separators handle centrate clarification
In practice, the stricter legislation meant that some small and loss-making farmers had to abandon their pig-farming operations. In this way, nation-wide pig stocks declined slightly. On the other hand, larger farms and pig-breeding operations are investing in liquid manure processing installations. At present, there are only a few centrate-processing installations in Belgium which can guarantee that the effluent is of adequate quality for being discharged into rivers. Most of the effluent is still used as fertilizer to be spread over fields. However, Westfalia Separator has shown that further clarification of decanter centrate by means of a disc centrifuge (separator) is feasible.

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