



## **15. Management Tools to Support Circular Economy Practical Herd Applications**

### **Title presentation**

Reducing environmental impact in the Dutch dairy sector with ANCA-tool

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### **Abstract**

ANCA, Annual Nutrient Cycling Assessment or 'KringloopWijzer' (in Dutch) is a software instrument that offers Dutch dairy farmers insight in the environmental performance of their farm. The ANCA instrument measures the cycles of nitrogen (together with ammonia and nitrous oxide), phosphorus, greenhouse gases and carbon. It subsequently quantifies the excretion of nitrogen and phosphorus of the herd for individual farms, the uptake of nitrogen and phosphorus with crops and the total crop yield as well. The ANCA-tool provides useful management information about feeding and crops. The farmer and his adviser get signals if feeding and crop yields can be improved. This helps to reduce mineral losses and to reduce costs for feed, fertilizer and manure. The dairy sector, the feed industry, the milk processors and the accountancy organisations made an agreement to reduce the environmental impact in the Netherlands by using ANCA. They agreed that from 2016 onwards it is mandatory for Dutch dairy farmers to use the ANCA tool and to store the input and output data in the central database that is owned by DairyNL, organisation of the Dutch dairy supply chain. DairyNL has developed a database system to connect available input data to the ANCA tool to determine the environmental performance for each farm individually. Using available data connections with dairy processors, feed companies, governmental institutes (animal numbers, manure and land) and analysing laboratories reduce the effort from farmers and advisors to fill out the ANCA tool, but will also help to ensure the correct data input values. This database with results enables to establish a benchmark for relevant indicators and thus room for improvement. The results can be used for improving the mineral management on farm. On the other hand the results can be used as indicators in sustainability programs. Depending on the scores of the indicators farmers can be rewarded with financial bonuses. Several dairy processors already implemented indicators from the ANCA tool in their sustainability programs, where dairy farmers can earn extra income. Quite well known is the 'on the way to planet proof' certificate, where collaborating dairy farmers can earn up to 2 cents per kg milk extra. The Dutch government is using the farm specific performances only in few pilots.