

Case 1: Environmental technology development at Eerola Farm



What is it all about? Why is it needed?

Eerola Farm

1000 pigs, ca. 2500 m³ of slurry annually

Near the urban area of Seinäjoki

Odor emissions and logistics as a challenge

Several developments made by the farmer, now together with Pellon Group Ltd

The innovations: development of environmental technologies at Eerola

a. Manure cooling inside the pig house

Heat pump is used to cool down the manure to ca. 10 °C. Odour emission of exhaust air is reduced.

b. High pressure water spraying of inside air

The optimum droplet size reduces particles. Odour emission of exhaust air is reduced.

c. Biosampo treatment*

Fractioning of slurry: dry fraction, liquid fraction. Pelleting of dry fraction. Microbiological treatment of liquid fraction. NH₃ washer.

Effect: Results of a, b and c

Efficient odour reduction

Better proportion of N/P

Reduction of transports, everything is spread on own fields within 5 km radius

Ready for wide application: The Eerola version is near to production model with modular structure.

Biosampo is to be launched to markets this year in Eurotier 2016 fare.

*The Biosampo™

The process is based on a patented invention of prof. Erkki Aura in Luke (Finnish Natural Resources Institute, former MTT Agrifood Research Finland).

The product development phase done by Pellon Group Ltd has included scaling up the laboratory process and testing the solution in real scale pilots.

Scaling up from laboratory has been challenging since an economical farm-scale product was needed. Completely new solutions were developed.

Testing in pilot farms covered durability and functionality of the technologies. Research on odour reduction in the process and in the fields have been performed. Observations on logistics have been done.