Cattle Farm

OLOID Solution GmbH

Liquid Manure Treatment

Sarkeresztesi Agricultural Plc, Sarkeresztes, Hungary

Sarkeresztesi Agricultural Plc

Operation
1 liquid manure basin with 9.000 m³ with two OLOID Type 400

Period
06-08/2015

Success
Organic matter content reduced by 42%

Reliable reduction of odours

Reduced bacteria count

Process
The liquid manure from 450 cattle has been mixed with Effective Microorganisms (EM) in a 1:1000 dilution. Two OLOID Type 400 were responsible for the homogenisation and the circulation of the EM in the manure lake. Both OLOIDS were set for maximum agitation without air intake.

Target
Treatment of the separated cattle liquid manure with two OLOID Type 400 units and EM microbial inoculate to achieve solutions for the following problems:

1. Soil fertility: Liquid manure is rich in unprocessed raw organic matter. When sprayed to the lands, this organic matter takes time for soil microbial life to digest and transform to plant soluble matter, which consumes the energy reserves of the soil. The high nitrogen (N) content of the liquid causes an N-shock for the plants when spraying, which can even stop plant growth for weeks. Plus, most of the N is washed out from the lands by rain.
Result: Organic matter content reduced by 42%, while stagnation of the COD with increasing BOD: increase shall mean that the organic matter's transformation to plant consumable food improved.

2. Methane and odour: Liquid manure is a highly anoxic liquid and methane, a very aggressive greenhouse gas, is released into the N-cycle. Moreover, simultaneously released gaseous hydrogen sulphides cause a bad smell.
Result: Both aerobe and anaerobe microbial forms, as well as lacto-bacillus (one of the main components of EM) have been increased fixing N in their bodies. Odour increased in the first period and then substantially decreased (due to the formation of a new microbial balance in the lake).

3. Cleaning water: Liquid manure is used as cleaning water of the stalls of the animals and is heavily infected with pathogenic germs causing illnesses for animals.
Result: E-coli and total coliforms reduced from 180 000 to 80 000 individuals.

The project was carried out by our partner Agrofutura Ltd., Budapest, Hungary
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