



Minutes of Beneficiaries meeting – results and following activities

Date: 27th of September /2021

Place: Arborea (OR)

Subject: Innovative ammonia stripping plant for fertiliser extraction from animals sludges and nitrate on groundwater reduction

Attendees:

Institute	Participants
MEDISS Staff	Mrs. Maria Dessena - ENAS Mr. Andrea Viridis – ENAS Mr Giovanni Ragaglia – Technical assistant for pilote plant (external expert)
CRENoS	Mr. Giovanni Sistu
Beneficiaries	CPA General Director CPA Agronomist charged for pilote site of Mediss Agronomic Consultant

In June we had the start up of the pilote plant and the group of technics Enas coming with the experimental phases of ammonia stripping.





From June to August all the processes and parameters involved was controlled and tested to monitor the total elimination of the ammonia (stripping of ammonia) and production of the ammonio sulphate (fertilizer). Due to the peculiarity of the incoming wastewater (biodigested), numerous checks were necessary but to date the actual production has started and it is necessary to identify the pilot sites where to start the distribution of the fertilizer.

At the moment the ammonia is totally eliminated and the environmental result is obtained!!!

The amount of fertilizer produced is about 60 litres on 250 litres starting from each experimentation. It means that for 1000 litres of biodigested we can produce 240 litres of fertilizer.

The meeting that took place today highlighted two important peculiarities:

- Contribution to environmental protection by eliminating ammonia which is the cause of the impact of nitrates on soil and water;
- the production of fertilizer which from an industrial perspective will allow the self-production of the product and the increase in crop productivity, since compared to the urea that is currently used, ammonium sulphate has a slow release and therefore guarantees a better intake of plant.

In agreement with the agronomists, different plots of land will be set up on which in some cases can even be treated with both sulphate produced in our plant and commercial to see the difference in the field. Irrigation will start in December, a period compatible with the type of crop and the irrigation cycle and the type of fertilizer produced, a necessary condition for good results.

Soon the top soil samplings will start by drilling for a first analysis of the enrichment in nitrates and the main surface characteristics of the soil.





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Enas illustrated to the beneficiaries the environmental monitoring in progress and the results obtained. The water from the wells is generally of good quality and this is an important requirement to test the nitrate enrichment of the area following the experimentation, even if from the results achieved in the plant the ammonia abatement is almost total and the amount of nitrogen present in the fertilizer will be used by the plants in the growth phase.







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