

Draft report on development of Finnish quality system for recycled fertilizers

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FINNISH BIOCYCLE AND BIOGAS ASSOCIATION

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ANNEX 2 PROPOSALS TO AMEND QUALITY REQUIREMENTS OF LAATULANNOITE-QAS (ENGLISH)

Element of the QAS	Type of change (proposal)	Reasoning
Scope of products	Replace later the type names by the ones given in the updated national Fertilizer Decree.	The scope and names of the products of the QAS are based on the Fertilizer Decree. In the context of revising the Fertilizer Decree, the type names will be replaced the names given in the EU fertilizer product regulation.
Maturity of compost	Consider later changing the requirement based on the new updated national Fertilizer Decree.	The requirements of the national legislation differ from the ones given by the EU fertilizer product regulation. If the national legislation is changed in the context of the revision work, there might be a need to change the requirements in the QAS as well.
Moisture in the digestate	Consider later changing the requirement based on the new updated national Fertilizer Decree.	The requirements of the national legislation differ from the ones given by the EU fertilizer product regulation. If the national legislation is changed in the context of the revision work, there might be a need to change the requirements in the QAS as well.
Harmful metals: arsenic (As); mercury (Hg); cadmium (Cd); chrome (Cr); copper (Cu); lead (Pb); nickel (Ni); zinc (Zn)	Consider adding Chrome-6 among the monitoring parameters of harmful metals if there are laboratory analysis available at a reasonable price and effort. Other option is to lay down monitoring requirements to be carried out on a risk-based basis, for example, if there is leather industry or slag / lime recovery in the territory, the monitoring requirement can be linked to an industrial wastewater contract.	Based on the average figures for 2019 and 2020 for the products holding the Laatulannoite-QAS, there is no need to change the limit values. According to the information of Laatulannoite-QAS, laboratory analyses are not available at a reasonable price and effort in Finland.
Additional parameters: PAH (16), PCB, PFOS and PFOA, drugs, PBDE, DEHP, dioxins, furans	Stop regular and annual monitoring of other organic contaminants than PAH16. The monitoring of the organic contaminants can be done on a campaign or project basis that allows assessing more products than only those using the QAS.	The Finnish Fertilizer Decree doesn't impose limit values for organic contaminants, but the EU-fertilizer regulation sets limit values for PAH (16) in input materials and final products. Based on the experience of the Laatulannoite-QAS, the analysing costs of the organic contaminants are relatively high. Moreover, the monitoring frequency is very low (once a year per product), which doesn't allow proper follow-ups and comparisons. However, the monitoring is seen valuable by the

		stakeholders. The monitoring can also be seen to enhance the credibility of the QAS.
Other impurities: impurities such as animal matters, seeds of weeds, glass, metal, plastic, bones, stones, common wild oat and parts of plants.	Consider later changing the requirement based on the new updated national Fertilizer Decree.	The requirements of the national legislation differ from the ones given by the EU fertilizer product regulation. If the national legislation is changed in the context of the revision work, there might be a need to change the requirements in the QAS as well.
Micro plastic	<p>Continue to follow up the research projects.</p> <p>Consider taking samples and carrying out analyses on a campaign basis.</p> <p>Consider developing a code of conduct to reduce the risk of micro plastic in bio-waste-based fertilizer products e.g. codes for sorting instructions, pre-treatment, post-treatment, visual quality monitoring and requirement to analyse also the surface area of the plastic waste impurity. The code of conduct can be monitored in connection with an external audit. The proportion of biodegradable plastic in plastic impurities must also be determined. The Code of conduct must be flexible and adjustable to be used in different facilities.</p>	<p>There is not a reasonable analysing method to assess micro plastics in input materials and products. Also, the legislation is under development. However, there is need to find tools for reducing the risk of micro plastic. Also the recyclability of biodegradable plastic is worrying stakeholders.</p> <p>A code of conduct is a cost-effective tool.</p>
Carbon footprint of a product	Consider setting a new requirement to calculate the carbon footprint of a fertilizer product by developing a simplified calculation or guidelines for calculating the carbon footprint. This requirement can be voluntary in the beginning.	The requirement to assess carbon footprint was already in the consideration the development phase of the QAS. Recently, there has been a lot of discussion about reducing emissions in agriculture. The hypothesis is that this would be a strength for recycled fertilizer.
The linkage to other process	Find ways to link the QAS into other processes, for example, clean public procurement (microplastics, carbon footprint), organic-farming approved fertilizer products (bio-waste-based) and the national EoW-criteria (e.g. sewage sludge-based fertilizers used in farming).	To link better the QAS to other processes can create added value for companies using the QAS. The hypothesis is that this would increase the interest of the QAS among the producers and users.

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