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What are the Desired Properties of Recycling-Derived Fertilisers from an End-User Perspective?

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Recycling derived fertilisers (RDFs) are recycled products that come from several different sustainable sources. These products have significant potential for replacing mineral fertilisers. In the case of phosphorous, the supply is at risk and the EU placed phosphorous on its list of critical raw material, therefore alternatives sources are required. RDFs are safe to use, have a high nutrient value and are readily available. However, their uptake by farmers has been limited to date. Thus, it is important from a producer and suppliers perspective to know what are the end-users (farmers) desired properties of RDFs. Knowing this will help to develop RDF products and promote their use.

A survey was conducted across seven different countries in North-West Europe (NWE), the results were collated, assessed and statistically analysed. Over 1220 farmers and stakeholders responded to the survey. Overall, participants in Ireland that currently use or have used RDFs in the past found that a nutrient ratio that fits with crop nutrient demand was the most important quality in RDFs (89%) compared to those in NWE (80%). However, participants in Ireland that never used RDFs before, indicated that price was the most important quality in RDFs (91%) compared to participants in NWE (85%). Both farmers and advisors indicated they preferred RDFs to have a granular texture in comparison to paste and powder which were the least preferred textures. Those in Ireland suggested that a known NPK concentration was important to encourage mineral fertiliser substitution (72%) compared to the NWE countries (57%). On the other hand, those in NWE indicated a nutrient ratio that fits with a crop nutrient demand was an important quality to encourage substitution (45%) compared to Ireland (25%). In addition, both those in Ireland (68%) and NWE (64%) were willing to substitute mineral fertilisers with RDFs if they are subsidised and free of charge.

Conducting a survey is an excellent way to, directly and indirectly engage with the stakeholders, to determine what they are looking for in RDFs to increase the use and uptake of these products. Using RDFs positively feeds into closing the nutrient cycle-loop which contributes to the circular economy.

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