

The Research Hub:

Research Project Proposal - shortlisted by the Research Panel

RESEARCH HUB LOGO -
to be finalised

Title of proposal	Work proposed by	
Reducing plastic and other contaminants in compost feedstock	ORG and The Woodhorn Group	
Summary	Primary objective(s)	Scheme association
<p>Development of guideline input specifications for control of contaminant plastics in biodegradable wastes intended for composting or anaerobic digestion, and guideline methodologies for assessing contaminant plastic concentrations.</p> <p>The most effective way of tackling plastic and contaminants within compost products, which normally falls to the composting facility to bear the cost for extraction and disposal, is to prevent it coming in with feedstock.</p> <p><i>Importance or impact of this project:</i></p> <p>Reduction of compost contamination is crucial to improving markets for certified composts. The onus must be put on packaging producers and local authorities whom collect the waste. Motivating and educating the public is crucial and there is no better time than the present to do this via communication campaigns, development of layout/signage at collection facilities, provision of marketing materials and the harmonisation of policies, regulations and standards. Additional funding is needed to support LAs and industry to achieve this.</p>	<p>Establish guideline maximum concentrations for contaminant plastics in biodegradable wastes intended for composting, taking account of front-end, back-end and any other process steps that removing them and plastics limits in PAS 100 (for composts) and PAS 110 (for digestates):</p> <p>Develop guideline methodologies for:</p> <ul style="list-style-type: none"> • suppliers of biodegradable wastes • composting facility operators, and separately for AD facility operators <p>to use for quantifying contaminant plastic concentrations in biodegradable wastes intended for composting and, separately, for anaerobic digestion.</p>	<p>CCS 50% and BCS 50%</p>
		Reference # (for REAL purposes)
		1 (general)

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Title of proposal	Work proposed by	
Digestate value in agriculture	REAL	
Summary	Primary objective(s)	
Getting proper value for digestate in agriculture, especially relating to the impact on microorganisms, earthworm population in soil and loss of N through ammonia leakage.	To determine the real value of digestate in agriculture. The project would include literature review, working with farmers and development of case studies.	
<i>Importance or impact of this project:</i>		Scheme association
Information will assist AD operators with managing and marketing their quality digestate.		100% BCS
		Reference # (for REAL purposes)
		3 (general)

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Title of proposal	Work proposed by	
Impact of storage on the quality of compost and digestate	REAL	
Summary	Primary objective(s)	
<p>Several case studies to investigate any potential changes in compost and digestate characteristics during and after storage. The project would look at changes of minimum quality criteria specified in the relevant standard (PAS100 and PAS110) at the end of the storage period through comparison of analytical test of certified materials.</p> <p><i>Importance or impact of this project:</i></p> <p>Improve the confidence in quality of certified materials dispatched from sites and provide evidence to a discussion about potential need for retesting at the end of the storage period.</p> <p>Note: A requirement for additional testing following a prolonged storage was considered during recent revision of PAS100.</p>	To determine the impact of storage on the quality of compost and digestate.	
		Scheme association
		50% CCS and 50% BCS
		Reference # (for REAL purposes)
		4 (general)

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<p>Title of proposal</p> <p>Review of physical contaminant test methods specified in PAS100 and PAS110 and appraisal of alternatives</p>	<p>Work proposed by</p> <p>ORG</p>	<p>Scheme association</p> <p>50% CCS and 50% BCS</p>
<p>Summary</p> <p>Review the suitability of the PAS 100 and PAS 110 physical contaminant limits for, respectively, composts and digestates used in agriculture and land restoration to agricultural after-use. Stones are outside the scope of this proposed work.</p> <p>In particular, could testing and reporting distinguish between hard and film/flexible/lightweight plastics, if the PAS plastics limits were split into 'hard' and 'flexible' plastic limits what should those limits be and what should be their units of measure be?</p> <p><i>Importance or impact of this project:</i></p> <p>Are PAS 100 and PAS 110's physical contaminant limits appropriate for, respectively, compost and digestate use in agriculture and land restoration to agricultural after-use. If they are not appropriate, what should the limits be changed to? The project should take into account stakeholder views on the suitability or unsuitability of macroscopic impurities limits in the revised EU Fertilisers Regulation.</p>	<p>Primary objective(s)</p> <p>Review test methods specified in PAS 100 and PAS 110 and assess whether alternative test methods would be more appropriate, or changes should be made to the current PAS specified methods, units of measure and/or dimensions of particles that are counted as contaminants.</p> <p>The review should include test methods (as far as they are available at the time of this project) that will be used for assessing samples' compliance with the 'macroscopic impurities' limits in the revised EU Fertilisers Regulation.</p>	<p>Reference # (for REAL purposes)</p> <p>10 (test methods)</p>

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Title of proposal	Work proposed by	
Review of residual biogas potential (RBP) test method	REAL	
Summary	Primary objective(s)	
<p>Investigate the change of inoculum to substrate ratio specified in the test method. The digestate samples had been causing inhibition of the inoculum resulting in no gas production and therefore, the results were invalid (not pass or fail).</p> <p><i>Although the Wrap report on the RBP test (OFW004-005) suggests that the inoculum to substrate ratio could be changed in order to avoid inhibition, the 'Full Description of the RBP Test' in the report does not specify it clearly whether a higher inoculum to substrate ratio could be used.</i></p> <p><i>Importance or impact of this project:</i></p> <p>The industry will gain a robust and more reliable test method for RBP testing.</p>	<p>Get a consensus about those aspects of the RBP test that are suggested by the report but not clearly stated under the 'Full Description of the RBP Test', including the inoculum to substrate ratio.</p>	
		Scheme association
		100% BCS
		Reference # (for REAL purposes)
		11 (test methods)

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<p>Title of proposal</p> <p>Production of proficiency test materials to meet the analytical requirements of laboratories operating to PAS100 and PAS110 standards</p>	<p>Work proposed by</p> <p>Fera Science</p>
<p>Summary</p> <p>The principal objective of the project is to develop the production and verification methods of proficiency test materials in novel matrices. The knowledge gained can then be used to provide proficiency tests for laboratories operating to the PAS 100 and PAS 110 standards. The operation of proficiency tests themselves is not in question; Fapas is fully experienced in this regard and this aspect is business as usual. The research project being proposed here is the development of the materials which could be used in a proficiency test. Since a proficiency test depends entirely on fit-for-purpose materials being sent to the participants, the material production is the critical step in the process.</p> <p><i>Importance or impact of this project:</i></p> <p>Proficiency testing scheme (PTS) is a tool used to improve consistency of analytical testing between laboratories. Its use may lead to increasing performance of laboratories working under CCS and BCS.</p>	<p>Primary objective(s)</p> <p>Production of Fit-for-Purpose Proficiency Test Materials and establish criteria for Proficiency Assessment.</p>
<p>Scheme association</p> <p>100% CCS and 50% BCS</p> <p>Reference # (for REAL purposes)</p> <p>12 (test methods)</p>	

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Title of proposal	Work proposed by
Research into the history of each test parameter as specified in PAS100/PAS110	RH Research Panel
Summary	Primary objective(s)
<p>The test parameters used to ascertain the quality of Compost and Biofertiliser are long established. Whilst the test parameters have been intermittently reviewed, for example during the recent reviews of PAS100, this has principally been in the context of test methods and limits.</p> <p><i>Importance or impact of this project:</i></p> <p>By examining the history of each test parameter, in particular, how it was initially selected, how the test methods were selected and how limit values have been initially set and if appropriate subsequently amended, it will be possible to evaluate their efficacy and possibly highlight alternative methods of analysis and where appropriate suggest new test parameters.</p>	To ensure that the test parameters chosen to characterise Composts and Biofertilisers are fit for purpose and achieve their objectives of characterising Quality materials.
	Scheme association
	100% CCS and 50% BCS
	Reference # (for REAL purposes)
	13 (test methods)

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Title of proposal	Work proposed by	
Development of a research library for the organics recycling industry	REAL Market Development Working Group (MDWG)	
Summary	Primary objective(s)	
Numerous research projects have been conducted during the evolution of the organics recycling industry both within the United Kingdom and around the world. There is undoubtedly a wealth of existing information which could be collated and curated to advance industry knowledge. In developing a library of information, the 'gaps' in existing information can be identified and research goals clearly distinguished. Once developed all new projects could be logged. Permissions may need to be sought in publishing open access information and so legal aspects will also need to be considered by the deliverer of this project.	Develop a library of existing research and undertake a gap analysis to identify potential areas for research. Project deliverables: <ul style="list-style-type: none"> Literature review of available information Library and extract summary. Example of organisation: https://bmcecol.biomedcentral.com/articles Gap analysis to define future research objectives.	
<i>Importance or impact of this project:</i>		Scheme association
Not only will a valuable resource be available to the whole industry, but research resource will not be wasted due to duplication and repetition of what has gone before.		50% CCS and 50% BCS
		Reference # (for REAL purposes)
		5 (general)