BIOCHAR BRIEF 4

Farmers and Local Authorities Learning Together about Biochar

1. About (this) Biochar Brief

Biochar Briefs are a series of short documents produced by the social sciences team on the UKRI-funded Biochar Demonstrator programme (2021–2026). The series aims to present aspects of the social science research in an accessible form for a variety of audiences interested in biochar production, utilisation/deployment, governance, and science.

Biochar is increasingly discussed as one of several land-based options that could contribute to the UK's greenhouse gas removal (GGR) ambitions. Its appeal in this context stems from the ability of some biochars to store carbon in a relatively stable form, offering a removal pathway that is both measurable and potentially long-lasting.



Close up of a wood-based biochar

This Biochar Brief summarises perspectives shared during a biochar workshop, held on Friday 11th April 2025 at Conference Aston, Aston University, Birmingham. The workshop brought together mainly farmers and representatives from local authorities who were beginning to think about biochar and to provide a space in which these different stakeholders could learn about biochar together. Having these different perspectives in the same room made it possible to share uncertainties, compare practical experiences, identify the kinds of support needed to enable responsible and confident uptake, and highlight the gaps in regulation, standards, and evidence that matter across both farming and local government sectors. It also made visible the kinds of questions that arise only when people learn together, bringing different contexts and experiences into the same conversation. A summary of the workshop discussion is provided below. It reflects participants' views and understandings as expressed during the workshop. These comments represent perspectives shared on the day and may not capture the full technical detail of the issues discussed.

Throughout this Biochar Brief we use both 'biochar' and 'biochars', recognising the tension between the usefulness of a common category and the diversity of materials that sit within it[1]. We use 'biochar' when discussing the category more generally and 'biochars' where those differences are important.

2. Farmer and Local Authority Perspectives

Farmers

Farmers described strong interest in biochar for improving soil health, increasing water holding capacity, and reducing fertiliser inputs — all central to everyday farm management[2]. These agronomic possibilities were often linked to broader concerns about farm resilience, particularly the need to cope with drought and reduce reliance on costly fertiliser inputs. Some farmers were already experimenting with biochar in livestock systems, especially poultry, where it was being trialled to reduce ammonia emissions and improve shed conditions. Others were interested in using farm residues, brash, or material from unmanaged woodland as feedstocks, turning resources that currently have little value into something productive.

There was also interest in the idea of cooperative approaches. Several farmers imagined shared pyrolysis units or "Biochar Hubs" that could distribute costs, equipment, and knowledge across neighbouring farms. This model was seen as a way to create new revenue streams, diversify farm businesses, and make better use of local biomass. For some, biochar offered a route to improving on farm soil carbon balances and reducing greenhouse gas emissions through lower fertiliser use. These various motivations reflect farmers' focus on practical benefits and opportunities to strengthen farm systems[3].

Local Authorities

Local authority representatives identified a different but complementary set of opportunities. Biochar was viewed as a potential route to their (i.e. local government) net zero targets. Participants discussed interest in using green waste for biochar production, seeing it as a possible way to make better use of local biomass including from farms. They also considered how heat from biochar processes could link to community heating schemes and how biochar might contribute to local energy planning. Construction related uses were also noted, with participants exploring how biochar could be incorporated into construction materials. These perspectives suggest that local authorities view biochar not only as a waste management tool but as part of a broader vision for sustainable local development.

3. Shared Challenges

Participants emphasised several challenges that cut across sectors. The absence of clear governance and standards for biochar raised questions about biochar feedstock safety, traceability, and product quality. Economic barriers were significant, with high costs limiting

[1] For a fuller discussion of the distinction between 'biochar' and 'biochars', see Biochar Brief 1: 'We Need to Talk About Biochars, Not Biochar'.

[2] For further information on biochar, its uses, and practical options for its production and application on farms, see Biochar: A Practical Guide for Farmers. Biochar-farmer-guide-final.pdf

[3] For a fuller discussion, see Biochar Brief 2: Stakeholder Visions for Biochar in UK Agriculture: Implications for Governance.

biochar application to agricultural land, and lack of funds restricting the purchasing of biochar production equipment[4]. Views on carbon markets varied, with some seeing opportunities and others expressing scepticism, even outright resistance[5]. These shared concerns highlight why these stakeholders are cautious and why clearer guidance is needed.



Biochar in a stubble field

4. Next Steps

Participants stressed the need for standards covering biochar feedstocks and product quality. Clearer guidance on application rates, transparent product labelling, and regulation were all seen as essential for building trust. Practical knowledge exchange — including demonstration farms, peer-to-peer learning, and short, accessible information — was identified as a key route to supporting uptake across the different sectors. Many argued for the creation of a UK Biochar Association[6] to provide coordination, legitimacy, and a single point of engagement for those interested in biochar. These steps reflect a shared desire for credible, practical support that assists in making informed decisions.

5. A Visual Summary of Farmers' and Local Authority Representatives' Perspectives of Biochar

The illustration on page 5 (Figure 1) was produced after the workshop, drawing on discussions from the day. It is a visual summary of the perspectives shared mainly by farmers and representatives from local authorities. Its role is not to introduce new information, but to bring the workshop's themes together in a single place, making it easier to see how the different perspectives of biochar, and the challenges and opportunities connect.

[4] See also Price C, and Morris C (2026) Losing out in Land-Based Greenhouse Gas Removal: A critical justice perspective on biochar. Exchanges: The Interdisciplinary Research Journal 13(2): 48-72. https://doi.org/10.31273/eirj.v13i2.1892.

[5] For a fuller discussion, see Biochar Brief 3. Biochar Carbon Markets: Stakeholder Perspectives and Governance Implications.

[6] The recent creation of the British Isles Biochar Association (BIBA) may help to meet this expressed need.

The illustration offers a different way of engaging with the workshop's discussions, providing a quick, accessible overview of the issues involved. By presenting the workshop discussions visually, the illustration offers a shared starting point for exploring biochar. It makes the relationships between different issues easier to see, helping people see the complexity of biochar more clearly. This visual overview can support wider reflection and conversation, encouraging different audiences to consider how the various issues relate and where further attention may be required.

6. Conclusion

The workshop brought farmers and local authorities together at a time when both groups were exploring what biochar might offer them. Their discussions showed that, although they approach biochar from different situations, they share many of the same uncertainties. Farmers emphasised soil health, feedstocks, practical on-farm applications, and increasing farm resilience, while local authorities focused on net zero commitments, waste, and the potential for heat and energy generation. Both groups highlighted gaps in regulation, and the need for clear standards. By sharing experiences, participants were able to recognise where their priorities overlap, where opportunities for working together with biochar exist and where their challenges differ. The workshop helped surface these issues in a way that allowed each group to understand the pressures the other is working within.

Bringing these perspectives together also showed the value of creating space for different stakeholders to compare what they are already doing, what they are unsure about, and what they need next in relation to biochar. Hearing directly from one another helped clarify the practical and regulatory gaps that matter most, and highlighted the kinds of evidence, standards, and guidance that would support decision making across both farming and local government. In this way, the workshop demonstrated how a shared conversation can help build a clearer picture of biochar's current possibilities and constraints.

Contact details.

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Biochar DEMONSTRATOR

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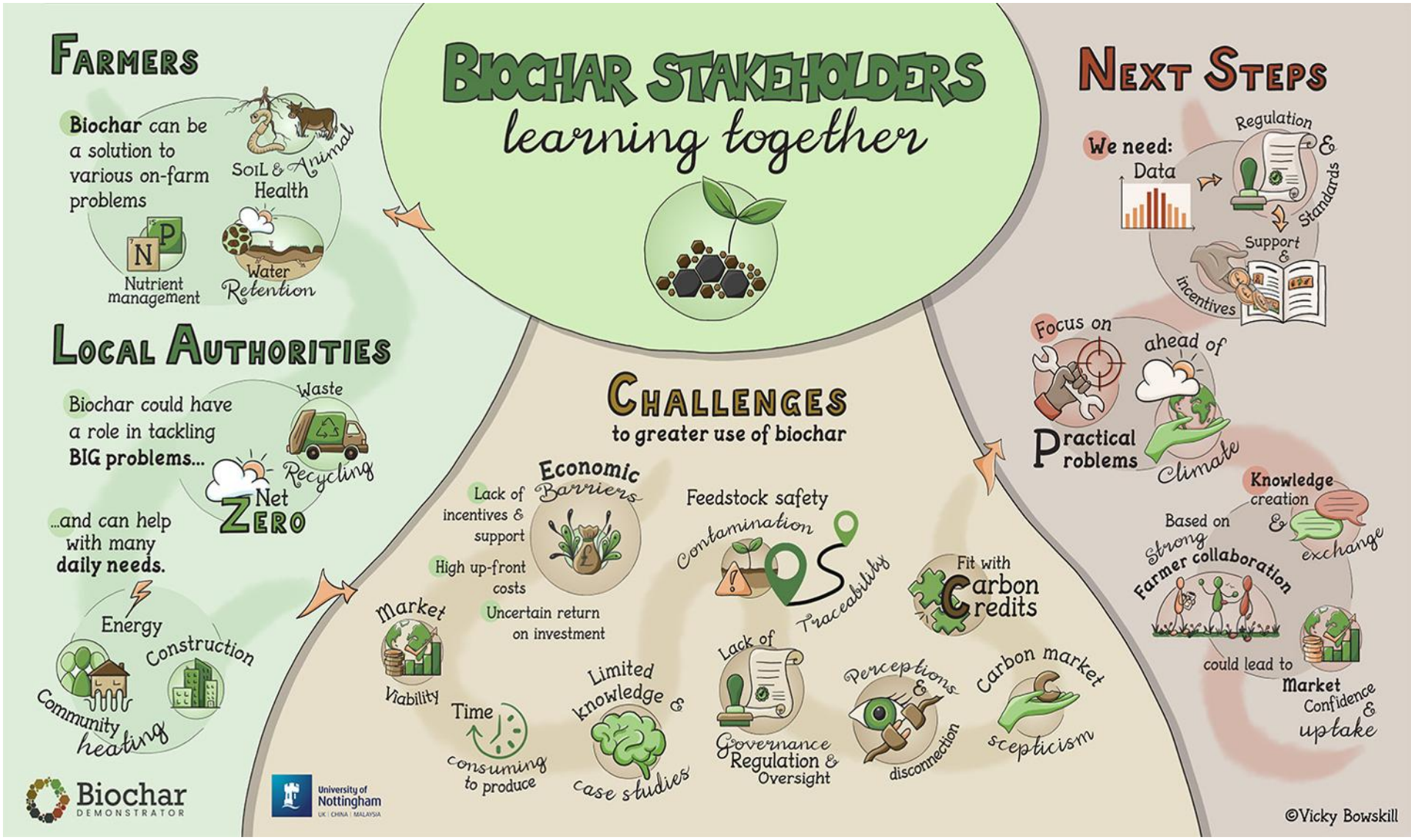


Figure 1: A Visual Summary of Farmers' and Local Authority Representatives' Perspectives of Biochar