



Regenerative agriculture in the UK: Stakeholder perspectives and tensions around livestock's role in sustainable land management

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ABSTRACT

Regenerative agriculture (RA) has been promoted as a transformative approach to sustainable land management, even as its meaning remains fluid, with livestock integration often considered as a central principle. Drawing on interviews with UK food system stakeholders, we apply a critical discourse analysis, revealing how livestock functions as a key organising reference point in the RA discourse, through three dominant, partially overlapping narratives of livestock's function: as labourers, landscape managers, and food security stewards. These narratives frame grazing livestock as central to land regeneration and as addressing environmental degradation, supporting rural economic resilience, and contributing to the production of all food. While conveying a strong sense of rural empowerment and offering farmers a form of moral and practical agency in navigating policy, market, and climate uncertainties, this discourse simultaneously works through and rearticulates long-standing hierarchies in land-use priorities, market relations and agricultural subsidy structures. At a time when climate and ecological debates increasingly foreground the need for land-use change, our analysis highlights how RA discourse gives relatively limited consideration to questions of livestock scale, despite livestock occupying a dominant proportion of UK agricultural land. In positioning livestock integration as an assumed component of regeneration, the discourse risks narrowing the scope for imagining more plural and differentiated transformative pathways, including approaches aligned with livestock reduction and stockfree regenerative systems.

1. Introduction

Agriculture in the United Kingdom is navigating a period of unprecedented uncertainty, shaped by a global polycrisis of climate change and geopolitical turmoil (Jones et al., 2023; Lenton et al., 2023; Richardson et al., 2023), alongside UK-specific pressures from post-Brexit policy reforms and shifting socio-economic and environmental conditions (Dewally et al., 2025; Ojo et al., 2021). Livestock production, which occupies most of the agricultural land (Defra, 2024), is widely discussed as a key challenge for sustainable food systems (FAO, 2006, p. 20; Poore and Nemecek, 2018; Rockström et al., 2025; Willett et al., 2019). Biophysically, livestock-reduced systems offer lower emissions and greater nutritional efficiency than intensive or extensive livestock systems (Garnett and Godde, 2017), with both reductions in livestock and improvements to management are regarded as relevant to staying within planetary boundaries (Herzon et al., 2024).

Yet, responses to land management problems and livestock's footprint, its 'long shadow' (FAO, 2006), are diverse. Policy, industry, and scientific discourse often emphasise sustainable intensification (Godfray et al., 2010), controlled environment agriculture, gene editing, and automation (Abbate et al., 2023; Armanda et al., 2019; Verma et al., 2023), reflecting concerns over food security while assuming a need to meet a rising demand for food, including meat. These strategies aim to relieve ecological and socio-economic pressures without necessarily reducing livestock numbers, reinforcing productivist assumptions about food demand (Schnack et al., 2024; Tomlinson, 2013). In contrast, regenerative agriculture (RA) presents an unconventional, land-centred approach. Opposing intensified production and reliance on technological fixes, it seeks to transform food and farming systems through ecological restoration, conservation, and deep engagement with land-based practices and to foster resilience at the farm- and landscape scale (Beacham et al., 2023; Gordon et al., 2022; Newton et al., 2020).

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Although broad agreement exists around a set of core soil-health principles, RA, unlike organic agriculture, remains without a standardised definition. Practitioners commonly reference five principles for land management (Ritz, 2021; Royal Agriculture Society of England, 2022): (i) minimise soil disturbance, (ii) maximise crop diversity, (iii) keep the soil covered (iv) maintain living roots, and (v) integrate livestock. These principles guide practices aimed at increasing soil organic matter primarily through grazing and manures, while reducing reliance on chemical inputs. RA is further understood as a farmer-led, flexible approach to land management innovation, focused on restoring soil health and delivering multiple claimed benefits across the food system, from carbon sequestration and enhanced biodiversity to greater farm resilience, reduced input dependence, and improved social and economic wellbeing (Ojo et al., 2021).

Despite the absence of a clear definition, RA has gained traction across UK and devolved governance, including Scottish Government policies (Scottish Government, 2022, 2025), parliamentary briefings (Cunningham-Eurich and Wentworth, 2025), local and regional governance (e.g., the Local Food Strategy of Monmouthshire County Council, 2024), and civil society and sustainability organisations (e.g. Forum for the Future, 2023; Wildlife Trust, 2025). At the national research level, the strategic significance of RA is also reflected in investments by funding organisation UK Research and Innovation (UKRI). Through its Transforming UK Food Systems (TUKFS) programme, launched in 2020, UKRI has funded large interdisciplinary projects that explicitly engage with RA as a pathway toward sustainability and resilience goals (Doherty et al., 2022; Jackson et al., 2021). More recently, UKRI invested £14.5 million in the Transforming Land Use for Net Zero (LUNZ) programme, co-funded by Defra, to explore soil health, agricultural systems, and land-use change - supporting research aligned with RA principles (UKRI, 2024). RA has also been incorporated into corporate sustainability strategies, with companies such as Nestlé, Unilever, and McCain publicly committing to scale RA across millions of acres (Deloitte, 2025; McKinsey, 2025), although critics warn that co-optation risks reducing the 'regenerative' label to a flexible greenwashing device, rather than enabling substantive industrial transformation (The Bureau of Investigative Journalism, 2026).

The growing popularity of RA has attracted scholarly attention. Research frequently frames RA as a farmer-led practice, highlighting community knowledge exchange, practitioner agency, and pragmatic experimentation that reduces inputs and environmental impacts without strict prescription (Beacham et al., 2023; Cusworth et al., 2021). Many take an explicitly normative stance in support of RA, understanding it as a value-led, empowering movement and aiming to guide RA towards genuinely relational and socially just outcomes, including more-than-human forms of care and responsibility (Gordon et al., 2025; Hargreaves-Méndez et al., 2025) or call for farmer-supportive, flexible policy approaches rather than prescriptive top-down models (Caruso et al., 2025). This scholarly work highlights both its empowering potential and the risks of co-optation, including standardisation, commodification, or alignment with neoliberal policy agendas of corporations (Bless, 2025; Bless et al., 2023, 2025; Kallio and LaFleur, 2023; Mambo and Lhermie, 2024). However, those expressing concerns that RA may lose its transformative potential also take for granted that its outlook and practices – the socio-material basis on which it “regenerates” – is progressive in the first place. Relatively few studies have examined more fundamentally what ‘regeneration’ means in practice, particularly in relation to the role of livestock in sustainable land management (see Cusworth et al., 2022 for an exception). Some call for a clearer conceptualisation of RA to enable better support for farmers and link practices to broader planetary and social goals (Garbisu et al., 2025; Schreefel et al., 2024).

Few studies examine RA from a discursive lens, which is crucial for understanding how such an emerging concept shapes what is seen as possible, legitimate, or reasonable for the future of land management. Gordon et al. (2022) are among the few who explicitly explore RA as a

pluralistic, discursive alternative to industrial-productivist agriculture, emphasising its transformative potential through narratives, networked communities, and collective learning. Similarly, Bless et al. (2023) position RA as one of several sustainable agriculture narratives - a discourse which can promote ecologically oriented practices and farmer agency, while also vulnerable to corporate co-option which could marginalise Global South or more radical social-ecological perspectives. In its ambiguity and interpretive flexibility as a ‘buzzword’ that shapes ideas, priorities, and practices, RA “has not escaped similar contested narratives of other terms trying to motivate food systems change” (Wilson et al., 2025, p.265).

RA's rise is occurring at a moment when two key domains in UK agriculture, the future of land use and the future of livestock, are becoming increasingly polarised. RA is widely seen as an inclusive and flexible field, characterised by open definitions, experimental practice, and interpretive plurality, and is increasingly embedded in the strategies of public bodies, research councils, NGOs, and agri-food businesses. Precisely because RA appears to offer a rare point of apparent consensus, a discursive approach is needed to identify which interpretations of ‘regeneration’ become stabilised as common sense and which future pathways for land use are legitimised and marginalised through RA. This paper addresses this gap by interrogating how RA is framed, mobilised, and rendered meaningful as a land-use model across stakeholders, with particular attention to how livestock, and its perceived implications for farm viability, ecosystems, and food security, is accounted for in stakeholder accounts.

The following section (2) examines the historical and contemporary conditions, both material (2.1; e.g., land use, production practices, subsidies) and discursive (2.2), through which livestock takes a primary position in UK land use. The methods section (3) details the interview data set, which was originally collected for two UK food system-related studies with a different focus (supply chain dynamics and resilience-building strategies). RA emerged as a salient topic within these interviews, although it was not the focus of the interview guides. Section 4 subdivides our results into the narratives of livestock as labourers (4.1), landscape managers (4.2), and food security stewards (4.3). Section 5 then discusses RA's discursive positioning as contributing to rural empowerment and resilience (5.1), while also reinforcing the logics of the modern industrialised system (5.2) and constraining what is considered possible, legitimate, or reasonable in sustainable land management (5.3). We conclude (6) that RA discourse stabilises livestock's prominence in land use, while constraining the range of (regenerative) practices considered legitimate in UK sustainable land-use debates.

2. Livestock in the UK – historical trends and narrative perspectives

In the following sections, we first review quantitative data and the historical and policy-related context of livestock farming in the UK. We then summarise existing literature that explores its dominance through mediated narratives.

2.1. Land management for livestock

While farm-level productivity in the UK has continued to increase through intensification and technological improvements over the past decades, this occurred within a broader system reconfiguration characterised by substantial inefficiencies in land use and overall food supply (Benton and Bailey, 2019; Climate Change Committee, 2020; Dimbleby, 2021). The UK's agriculture is overwhelmingly oriented towards livestock. Currently, around 85% of the total utilised agricultural area is dedicated to animal feed or animal production, accounting for all grassland pastures, and a 58% share of arable land used for growing feed crops rather than crops for direct human consumption (Defra, 2024). Put differently, crops for direct human consumption are produced on around only 15% of agricultural land.

Long-term trends of land use in the UK are driven by intensification and specialisation (fewer mixed crops, and gradual expansion of pasture to support livestock). Since the 1940s, due to mechanization, hedgerow loss, and increased chemical and nutrient inputs, pastures have become more homogenized (e.g. with simplified habitats and altered plant communities, leading to declines in biodiversity and populations of specialist mammals and invertebrates; House of Commons, 2019; Robinson and Sutherland, 2002). Over the past 150 years, numbers of grazing livestock in the UK have generally increased, though there have been significant fluctuations since the 1970s. In terms of cattle, declines were largely driven by policy interventions such as milk quotas and market changes related to falling profitability, with disease outbreaks like Bovine spongiform encephalopathy (BSE) and foot-and-mouth magnifying the reductions. In terms of sheep, numbers increased sharply in the 1980s and early 1990s due to subsidies paid under the EU Common Agricultural Policy (CAP) framework. Profitability was improved, while subsequent foot-and-mouth outbreaks caused a significant temporary drop. Thus, alongside disease outbreaks linked to intensification, the management of livestock has been largely driven towards intensification by market changes and policy interventions (House of Commons, 2019).

Throughout these periods, livestock grazing has been and continues to remain structurally significant within UK agriculture, with 42% of all agricultural holdings in England classified as grazing livestock farms (Defra, 2025). Evidence suggests that grazing-based systems have historically remained widespread, with estimates indicating that around 85% of UK dairy farms still used grazing as a management practice (Defra, 2019; Reijers et al., 2013), albeit often within mixed systems combining grazing and housing (March et al., 2014). More recent reporting by TBIJ indicate a rise in more intensive production models since the mid-2010s, including a doubling of zero-grazing dairy systems and growth in very large-scale “mega farms” (The Bureau of Investigative Journalism, 2026), suggesting a reconfiguration of livestock systems in which pasture-based practices persist alongside increasing intensification and indoor production models. Within sustainability debates, grazing is frequently framed as environmentally beneficial, particularly through claims around soil carbon sequestration. However, this remains contested, with estimates suggesting that sequestration may offset only 20–60% of annual emissions from grazing ruminants, and with alternative land-use pathways such as reallocating land to direct human food production or agroforestry-proposed as potentially lower-emission configurations (Garnett and Godde, 2017).

Currently, the UK's land management policy is undergoing its most profound shift in 50 years. This is driven by climate and biodiversity commitments, Brexit and the end of EU CAP subsidies (Gov.UK, 2020), and the rise of carbon markets supported by ‘green finance’ (Gov.UK, 2019). In line with the commitment to reach net zero emissions by 2050, this subsidy reform is framed as a shift of land management and farming to public goods provision (Cusworth and Dodsworth, 2021). The new UK Environmental Land Management Scheme (ELMS) - which funds practices to improve soil health, reduce greenhouse gas emissions, and enhance biodiversity, i.e. parameters in favour of RA, functions as both a lifeline and a source of uncertainty. Long-term (often 30-year) ecological commitments and the introduction of new private actors through carbon and biodiversity markets increase uncertainty around income, land control, and regulatory integrity. In addition, the UK government announcement of the inheritance tax in 2024 raised intense public debates about the viability of farm businesses (Country Land and Business Association, 2024, National Farmers' Union, 2026), further amplifying wider uncertainties around intergenerational farm succession, land control, and the financial sustainability of land-based livelihoods within an increasingly complex and marketised policy landscape shaped by ELMS and expanding carbon and biodiversity finance. Altogether, these developments are making trust between farmers, government, and market intermediaries more critical (Dewally et al., 2025).

At the same time, these changes to subsidies sharpen the tension

between food production and ecological functions (Westaway et al., 2023) and raise more questions about agency in farm management (Cusworth and Dodsworth, 2021; Hamilton, 2024). Upland sheep farmers' strong reliance on public payments, combined with limited diversification opportunities, leaves them particularly exposed to the uncertainties and redesigns related to the new post-Brexit environmental schemes. Much upland grazing takes place on non-croppable tenanted land (Defra, 2024), making long-term ecological commitments under ELMS especially consequential for these areas. However, recent figures from England show that grazing livestock farms are far more common in lowland areas (30,800 farms; 30% of all farms) than in areas designated as 'Less Favoured Areas' (LFAs), which include most of the UK uplands (12,000 farms; 12% of all farms). Moreover, grazing livestock in lowlands also represents the by far most common farming type in England, accounting for 30% of farms and 62% of agricultural output value in 2023 (Defra, 2025). This continued use of potentially croppable land for livestock production in particular is contested, given the question on whether such land should be used for direct human food production (Defra, 2024).

2.2. Livestock narratives between polarisation and naturalisation

Narratives of rural heritage and imaginaries of future landscapes, livelihoods and food systems can stabilise certain food production and consumption practices amid contested sustainability, ethical, and economic pressures. A growing body of literature shows this for the particular case of meat and dairy production and consumption. For example, Arcari (2017) shows that dominant policy and research narratives treat meat and animal use as natural, necessary, and largely unproblematic. Van Wessel (2018) argues that livestock farming is depoliticised by the issue being framed as a market problem, with solutions being associated with the reshaping of consumer behaviour and deployment of market-based instruments to promote sustainability, locating the resolution of the legitimacy crisis of the sector in private consumption decisions. Other studies show how the concept of ‘protein diversity’ reframes meat consumption debates by emphasising the opportunities of varied diets, shifting focus from restrictive calls towards a more positive, “eat less ‘less but better’ meat” market- and nutrition-oriented sustainability discourse (Ehgartner, 2020; Hundscheid et al., 2022).

Grazing livestock husbandry in itself represents a politicised discourse going back to the post-war era. Organisations such as the Rare Breeds Survival Trust aim at preserving traditional breeds to support biodiversity and maintain landscapes through traditional grazing practices. In response to post-productivist policy largely focusing on habitats and landscape features rather than livestock, these breeds are positioned as the key subjects in a counter-narrative to efficiency-driven agricultural politics (Evans and Yarwood, 2000). Over more recent years, as the proportion of dairy cows that are grazing has slightly decreased, grazing of dairy cows has been politicised through public controversies, NGO campaigns, and market initiatives that highlight grazing as a marker of animal welfare, alongside scientific debates on the health and welfare implications of grazing versus indoor dairy systems. Some scholars have examined how the benefits of grazing are discursively constructed and stabilised. Ó Murchú (2023) analysis of *grass-power* in Ireland shows how the grass crop, aligned with the dairy industry, is naturalised as inevitable and desirable, shaping landscapes, consumer perceptions, and policy, while masking environmental tensions and competing interests. Cusworth et al. (2022) examine how RA debates reframe cattle by invoking idealised agrarian pasts to legitimise future, nature-based livestock systems. They show how post-pastoral storytelling positions ruminants as environmental allies, while also drawing attention to the political, ecological, and equity risks associated with this form of green rebranding within global food systems.

Extending this discursive perspective beyond livestock husbandry and meat- and dairy production into mediated and global arenas, some

studies specifically engage with the polarisation of livestock and land use in the media. A study from 2021 shows how Twitter shaped early-stage, contested debates around meat consumption by facilitating fragmented, value-laden discussions, which highlights social media platforms' performative and potentially transformative role in imagined sustainable meat futures (Maye et al., 2021). Another study shows how polarised narratives emphasise individual responsibility, neglect systemic power dynamics and, thereby, reinforce cultural and sectoral identities, potentially slowing just transitions or innovations in livestock systems (Simmonds et al., 2025). García-Dory et al. (2022) take a global perspective and argue that climate and livestock policy processes are often shaped by generalised narratives that overlook or misinterpret local contexts, resulting in epistemic and procedural injustices that disproportionately affect marginalised communities, particularly livestock keepers in extensive, often remote systems.

Drawing on empirical work on regenerative ranching in the US, Hargreaves-Méndez et al. (2025) explore the extent to which these discursive reframings translate into transformed human-animal relations in practice and highlights that while more relational and ethical orientations towards animals are emerging, these remain uneven and contested in practice. Ranchers often articulate values of care, responsibility, and respect for animal sentience, alongside efforts to adopt low-stress handling and more attentive forms of management. Yet these relational values coexist with persistent instrumental logics that continue to justify practices such as branding, castration, and slaughter, as well as the use of instrumentalizing language, for example referring to livestock as 'tools', producing tensions between care and production. Crucially, these contradictions are not only situated at the level of individual attitudes but are embedded within cultural traditions and institutional structures, including legal requirements, market pressures, and industry norms. Thus, even where regenerative discourse positions livestock as partners in ecological restoration, its enactment remains constrained, revealing a misalignment between emerging ethical narratives and the socio-economic systems within which livestock production operates (Hargreaves-Méndez et al., 2025).

These discourse-centric studies demonstrate how livestock is continuously re-signified across market, media, and policy discourses, with implications for how particular actors, knowledge systems, and land-use practices are legitimised or marginalised. Regenerative agriculture is particularly significant in this regard as a site where competing narratives about livestock are brought together and selectively stabilised into claims about what constitutes sustainable agriculture. The study presented in this paper builds on existing discursive methodologies and insights and examines how livestock grazing interacts with land-use decisions, subsidy dependence, and ecological trade-offs under post-Brexit environmental schemes.

3. Methodology and data

Data for this paper was collected through two independent studies: one examining food supply chain dynamics, and the other focusing on resilience-building strategies. While analytically distinct, both studies sought to understand how stakeholders perceive key parameters shaping food system transformation. In both studies, RA was not predefined as an analytical category but emerged inductively across interviews as a recurring discursive frame through which stakeholders articulated visions for the food system. For the study presented in this paper, we selected interviews in which RA was substantively discussed, amounting to 20 semi-structured interviews conducted in 2022 and 2023 with a diverse range of stakeholders involved in the food system. Participants included farmers, agricultural consultants, sustainability managers, and representatives from organisations associated with food production, certification, and retail, all based in the UK, most of which represent small- and medium sized organisations. 13 of these participants were interviewed on supply chain dynamics, seven on resilience-building strategies.

Both interview guides included general questions about food system challenges and potential solutions. The interviews on supply chain dynamics focussed on drawing out pathways and challenges towards localised food supply chains. Themes included supply chain power dynamics, diversification, environmental sustainability, and questions of equity, exploring policies, practices, and infrastructure such as storage, processing and transport facilities, as well as market structures affecting primary and smaller-scale producers. Interviews on resilience-building strategies sought to elicit stakeholders' understandings of how to change practices of suppliers, retailers, and consumers in order to make the food supply in the UK more resilient to disturbances. Participants were asked to define resilience, describe supply chain threats, disruptions, and performed adaptations as well as desired behaviour changes, future scenarios, and policies towards resilience.

Each interview was scheduled for approximately 60 min, although some were shorter or longer depending on the flow of conversation. Of all interviewees, only two were female. For consistency and inclusivity, all participants will be referred to using the gender-neutral pronoun 'they'. Table 1 provides an overview of their affiliation and backgrounds.

An iterative, interpretive approach informed by critical discourse analysis (Fairclough, 2013; Slemmon, 2025) was employed to explore how references to livestock are invoked by food system stakeholders in discussions about RA.

Drawing directly on Foucault's understanding of discourse as a historically contingent system of power and knowledge, critical discourse analysis attends not only to what is said but to what is rendered unsayable, treating absences and silences as constitutive of meaning because dominant discourses emerge precisely by excluding alternative

Table 1
Interview participants.

No.	Occupation/Self-designation	Interview context
1	Farmer - organic regenerative arable	Supply chain dynamics
2	Farmer - regenerative beef	Supply chain dynamics
3	Farmer - extensive with aim to be sustainable, rejecting regenerative label	Supply chain dynamics
4	Farmer - industrial, incorporating regenerative principles	Supply chain dynamics
5	Farmer and multiple food entrepreneur	Supply chain dynamics
6	Farmer - premium rare breed mutton	Supply chain dynamics
7	Communications professional in countryside advocacy organisation	Supply chain dynamics
8	Entrepreneur/Manufacturer	Supply chain dynamics
9	Consultant in farm business management	Supply chain dynamics
10	Farmer - mixed, operating on circular principles	Supply chain dynamics
11	Farming programme professional in national park authority	Supply chain dynamics
12	Farmer - organic regenerative arable	Supply chain dynamics
13	Supply chain manager in sustainable livestock advocacy group	Supply chain dynamics
14	Large retailer sustainability manager	Resilience-building strategies
15	Certification body manager	Resilience-building strategies
16	Entrepreneur/Manufacturer	Resilience-building strategies
17	International wholesale sustainability manager	Resilience-building strategies
18	Global dairy co-operative sustainability manager	Resilience-building strategies
19	Farmer - regenerative	Resilience-building strategies
20	Organic dairy farmer	Resilience-building strategies

statements and possibilities (Foucault, 1972; Fairclough, 2013; Slemon, 2025). In the analysis underpinning this study, discourse denotes the broader structuring field of meaning, within which multiple narratives (understood as particular stories, visions or positions) are articulated, while framings refer to the situated and selective ways in which these narratives are emphasised in practice. By uncovering the implicit assumptions and naturalisations in discourse, this study is designed to shed light on how these narratives influence the perceived feasibility and purpose of RA, to illuminate pathways for rethinking policies, practices, and debates surrounding farming systems and livestock in the broader context of creating sustainable food futures (Ehgartner, 2021).

Interviews are thus not primarily considered as sources of individual experience or attitude, but as sites where broader discursive repertoires are enacted and negotiated, enabling analysis of how meaning is constructed in context (Hammersley, 2014; Talja, 1999). This method allowed us to identify shared cultural assumptions, norms, and power dynamics that shape these conversations - the underlying 'common sense' knowledge that stakeholders draw upon to define possibilities, constraints, and priorities within the food system. As such, the methodological approach enabled analysis beyond individual intentions.

Three distinct but interrelated discursive constructions of livestock were identified. These narratives differ in how they position livestock in relation to farming practices, landscapes, and food systems, operating across micro (farm), meso (landscape), and macro (societal) levels. Alternative articulations were present but appeared as internal tensions within these narratives, where livestock is simultaneously justified and problematised, for example, as both labour-saving and labour-intensive, as supporting biodiversity while reflecting cultural landscape preferences, and as essential for food security despite ongoing climate and food system sustainability critiques.

In terms of limitations of this study, it needs to be noted that aside from three multinationals, the study primarily reflects small-to medium-scale UK businesses, meaning perspectives from large corporate actors are largely absent. Further, no interviews were conducted with horticultural farmers or their representatives. The latter represents a constrain in terms of coverage of breath in terms of professional background and specialisation, however, given the comparatively marginal scale of vegetable production or other forms of land use the overwhelming dominance of livestock, and to a lesser extent, arable farming, means the sample remains broadly indicative of the distribution of agricultural practices in terms of land use, economic influence, and policy relevance. The label 'regenerative' is primarily applied by arable and livestock farmers, with horticultural producers rarely adopting it, though exceptions exist (e.g., in stock-free organic growing: Kassam and Kassam, 2024). Including horticultural, mixed, or larger-scale operations might have added nuance, but is unlikely to alter the central finding as to how RA livestock discourses shape ideas of sustainable land management.

4. Regenerative agriculture narratives

4.1. Ambivalences in defining regenerative agriculture

Across interviews, food system stakeholders generally position RA as a prominent framework for navigating intersecting crises in food systems and land management. 'Regeneration' is invoked in discussions of food system challenges as a morally and culturally reassuring vision, commonly articulated in the context of disillusionment with industrial agriculture and sustainability approaches, which are considered not getting far enough. As a farming consultant explained:

"(...) sustainability is not enough anymore. You're seeking to maintain something which is degraded. It is not the answer. We need to really improve it. So, we need to regenerate that. So, that applies to soil health, hedgerows, waterways, flood plains, pastures (...) but

is also sensitive to the natural environment and the other species that live alongside us. That's my strong opinion." (Interviewee 9)

Taking a regenerative approach, farmers, and other stakeholders would improve the land whilst producing food while distancing themselves from narratives that blame them for environmental harm. RA would allow them for more agency, responsibility, and opportunities within contested socio-ecological contexts. RA would put farming, as highlighted by a representative of a civil society organisation "in a very unique position where it does contribute towards greenhouse gas emissions and climate change, but (...) it's got the space for the trees, and it's got the soil to be able to reverse that as well" (Interviewee 15)

A key feature highlighted in this context is RA's flexibility: its lack of a strict definition allows farmers to experiment, adapt, and self-organise their practices, without constraints of rigid certification schemes. RA would be, as a manufacturer puts it in the interview:

"very forward thinking, as regenerative farming as a term doesn't have these sets of standards like organic does and (...) reassurance is in that they are passionate about what they do but have sort of self-policed themselves to come up with kind of code of what that regenerative farming actually is" (Interviewee 8).

This openness, however, also carries risks, as several interviewees highlighted. Its lack of quantification and auditing was noted by another manufacturer: "It's not actually audited, it's not measured, as such" (Interviewee 16). A wholesaler similarly observed that, due to the absence of proper certification, accreditation, or assessment methodology, "we can't really say for sure how many of our farmers are using regenerative farming practices" (Interviewee 17). Others emphasised the potential for misuse of the term. For example, an artisan cheese producer, even though acknowledging that their practices could fit within RA and indicating openness to adopting the label in the future, explicitly dissociating their business from the regenerative label: "I don't like the term regenerative. We don't know what it means. I think it's very open to abuse. It's open to greenwashing. (...) People have described me as a regenerative farmer and what we do here, I'm not comfortable with that" (Interviewee 3).

Despite concerns over its lack of definition, interviewees were unambiguous about the need for regeneration. RA serves as a moral, practical, and strategic narrative that allows farmers and stakeholders to reimagine the roles of farmers, their landscapes, and their livelihoods amid uncertainty. The following section presents three narratives identified in stakeholders' accounts of RA, highlighting how livestock is framed and mobilised. Rather than representing discrete or stable stakeholder positions, the three narratives should be understood as analytically derived discursive patterns that cut across the dataset, capturing recurring logics of justification and tension.

4.2. Narratives of livestock in regenerative agriculture

4.2.1. Livestock as labourers (micro-level: farm)

A recurring way in which livestock is imagined within RA positions ruminants as agricultural labourers, as agents whose presence is essential to the functioning of the farm system. Being referred to in the micro-context of the individual farm enterprise, ruminants (cattle or sheep when explicitly mentioned) are portrayed as tools or non-human labourers who through their grazing patterns help enhance nutrient cycling, improve soil fertility, and suppress pests and weeds, thereby aiding the maintenance of various farm businesses as well as helping to reduce the reliance on human labour and synthetic inputs such as fertilisers, pesticides, and fossil fuels more broadly.

On this basis, grazing livestock are framed as economically efficient, cost-saving assets. As Interviewee 7 asserts, farmers practicing RA with livestock, would benefit because they "(...) don't have to buy in anything (...) they don't use antibiotics and such like. So, it's cost saving for them". Interviewee 13 similarly notes: "by nature they're making what they

produce not as expensive, they're not paying for expensive fertiliser and they're not [using] expensive sprays, they're utilising grass a lot more, so they're not having to buy expensive feed and move it around." With a strong emphasis on cost savings and broader resource savings afforded through the work done by livestock, these respondents reinforce the notion that livestock, other (synthetic) input and (machine or human) labour, is well 'designed' to perform productive work on the field.

This utilitarian framing positions animals as central to what interviewees describe as a 'balanced' or 'functional' farming system, linking livestock's labour with ecological and economic objectives. While the practice of regenerative livestock holding is framed as economically advantageous (less spending, less labour effort for the farmer and better 'product' outcomes), the argumentation is mixed with references to how livestock restores ecologically integrated farm systems (improving field health, wildlife, animal welfare, and food quality). The following quote taken from Interviewee 6, a farmer reflecting on their own practice as a producer of premium mutton from rare breed sheep, illustrates this in more detail:

"I have very much taken on sort of regenerative farming - that's pretty much how I work because it's cheaper and easier and better for the fields. It's better for the animals, which produce a better product. (...) I don't have to spray pesticides, which are expensive. I don't have to go and spend any time getting rid of them and the sheep are better fed, and I get more biomass in my fields (...). When you look at it like that, it's less effort and less money, better outcomes, and better wildlife - why not?"

This trope of livestock performing essential labour on the farm circulates across stakeholder accounts of RA, including among arable farmers, who understand animals as a 'gold standard' for functional farming systems. While explicitly recognising the broader productive and 'input' contributions of livestock, some excuse the lack of livestock on their fields on pragmatic grounds such as infrastructure and personal capacity. Others contemplate compromises, even if they highlight that the prospect of managing livestock remains overwhelming.

Interviewee 1, an organic arable farmer who stands at the beginning of adopting regenerative production methods, reflects this tension by acknowledging that managing livestock is burdensome and daunting. They however make a case for livestock as a natural substitute for human labour and mechanised tasks such as mowing, also reducing the need for fuel-intensive machinery, emphasising also the anticipation of good revenue to be derived from animals as "products" (i.e. marketable commodities leaving the farm, thus collapsing the line between nonhuman labour and final 'output', overall). Livestock is presented as the way forward for the future of their farm, as a means to ease farm labour and enhance productivity, in order to contribute to both the economic and ecological soundness of the farm enterprise. All of this is framed within a calculative logic in which livestock are positioned as a multifunctional resource, substituting for mechanical labour, reducing input costs, and generating marketable outputs, while also raised as something that must be carefully scaled to avoid becoming unmanageable within the farm system:

"(...) a large part of having livestock comes into this kind of circular system in that we don't have to spend money to actually mow the crop. And we don't have to pollute with fossil fuels. But instead, we can sort of mow it and stop it flowering by using animals, and then also be generating some kind of revenue on that product as well. (...) So as to kind of take that out of productivity and just be a constant cost in terms of mowing, mowing, doesn't really seem like the right thing to do. So, I think, yeah, the sooner we get livestock that are able to do that job, for us, I think that sort of shifts the balance quite a lot in terms of overall profitability of the farm. (...) I think it's probably more efficient for us to have cows. (...) I think in terms of the amount that they're able to eat, if we're just employing them as mowers, really, yeah, cows are obviously going to eat a lot

more than sheep. So there'll be fewer animals to look after. But just fewer bigger animals. And I think that's probably easier than the sort of keeping track of, you know, we'd need hundreds and hundreds of sheep keep on top of the grass clover. I think I'd rather have, 50,60 cows (...). Just fewer individual things to look after, isn't it? (...)"

This account is consistent with a broader tendency among interviewees to treat livestock as a normalised and scalable feature of farm systems, with relatively little expressed doubt or caution about their expansion. Livestock, as nonhuman agents in the production process, are positioned as both productive inputs and active labourers, 'employed' in place of machinery. The positioning of livestock as holding a 'natural' place on the farm, and being, through grazing, more effective labourers than farmers operating machinery or relying on purchased inputs, is recurring across interviews. In this way, livestock are constructed not only as efficient substitutes for mechanised labour but also as agents whose work underpins both the economic and ecological integrity of any farming enterprise.

4.2.2. Livestock as landscape managers (meso-level: landscapes)

Another recurrent narrative of livestock within accounts of RA positions livestock as landscape managers. This role extends beyond the farm gate to the aesthetics, heritage, and cultural identity of the British countryside with grazing animals are taken as essential custodians of the rural cultural landscape, particularly in upland and marginal areas which are largely deemed unsuitable for arable cultivation (Defra, 2024). Livestock are understood as maintaining open hillsides, preventing scrub encroachment, and sustaining the visual and ecological character of 'traditional' farming landscapes. Crucially, this imaginary of 'tradition' reinforces the idea of grass-cover as the only legitimate form of land use. This trope is deeply entrenched in agricultural and conservation discourses on the British Isles, where livestock are symbolically linked to national heritage and rural tradition. Putting an emphasis on active vegetation management and soil health, RA discourse reinforces and rearticulates this long-standing narrative, with links to contemporary sustainability practices to heritage, tradition, and the visual identity of rural Britain.

Across interviews, livestock are not only framed as custodians of valued rural landscapes but are also re-situated within RA discourse as functional components of soil-centred system management. Traditional ideas of grazing as landscape maintenance are rearticulated through RA logics of soil health, root biomass, and ecological cycling, which lend new technical legitimacy to long-established cultural narratives of pastoral land use. The excerpt below from interviewee 5 illustrates this convergence of heritage-based and regenerative rationalities, as they position their sheep as land- and landscape managers on upland and marginal land unsuitable for arable cultivation:

"(...) because we have a lot of dale sides and chalk valleys which we can't get anything else to [grow on], actually we grow, we run sheep on those as well to manage the grasses and that sort of thing. (...) As we go more down this route of regenerative farming, the root mass from grass and having sheep on them really helps that soil health."

Similarly, Interviewee 11, reflecting on their observations and experience at the UK's largest RA event, Groundswell, refers to George Monbiot, a journalist, author, and environmental and political activist, who stands for a vision of rewilding British landscapes, as being positioned in an 'extreme' or 'utopian' place, as antagonist who stimulated the debate. In the context of such framing, livestock-based management is casted as pragmatic and 'common-sense' middle ground between industrial agriculture and rewilding visions. Grazing livestock thereby becomes the reasonable option:

"And interestingly, George Monbiot was there (...) There was a full tent of farmers listening to what George Monbiot had to say (...) he's on the extreme side, and I think you need extremists to bring people into the middle, but yeah. (...) And I think he talks rubbish, but

[laughs] (...) he has a vision of this utopia where there're no livestock in the hills and kind of and everything rewilds, and you can introduce large predators, and you can- you can have this kind of vision of a world that used to be, but in reality, that's not the case." (...)

The interviewee continues to explain why Monbiot's vision is not a desirable one, drawing on the example of the Lake District to argue how the removal of grazing animals would rapidly alter these landscapes, leading to dense scrub and loss of wildflowers. They describe this loss using the term 'understorey', which in ecological terms usually refers to vegetation beneath a forest canopy, but here conveys grassland flora, emphasising a view of pastures as biodiverse and regrown woody areas as undesirable, even unimaginable, presenting succession as a threat to the scenic and cultural value of the landscape.

"(...) the Lake District and places like that are international centres of culture because of how they look and that look, the look of all our hills, has been shaped by livestock. If you were to just take all of the livestock and the large herb- and any herbivores off of the land (...), if you allow secession to happen, then within 20 years, tourists will be walking through bracken this height, and eventually they won't be able to get through the blackthorn and the scrub because of the thorns, and then they'll be walking through a forest of trees where you can't see anything, and people go for the views, and they go to climb the mountains and have a look around, so it will have a massive impact on all of that and things would change and I think some of the things you've also gotta think about is, a lot of the most protected landscapes that we have in the country are protected because they're grazed. If you stop grazing them then you would have a monoculture of bracken, then a monoculture of blackthorn, and then maybe a bit more diversity of trees. You'd have no understorey, your wildflowers; and all those things would disappear because they would be outcompeted by everything around."

Compared to established 'livestock as landscape managers' framings that rely mainly on aesthetics or tradition, RA livestock framing allows grazing to be positioned as a necessary intervention in ecological processes as well as a soil-health and biodiversity-protecting practice more appropriate than rewilding. Livestock, more than maintaining cultural landscapes, becomes a management tool to prevent 'degradation'.

4.2.3. Livestock as food security stewards (macro-level: society)

A third prominent discursive trope in respondents' accounts of RA positions livestock as stewards of food security at the macro scale, fundamental to the resilience and productivity of agricultural systems. Within this framing, grazing animals are represented as key integrative actors within a holistic system that is imagined to harmonise livestock- and crop production with natural ecosystems. Grazing livestock are understood as stabilising agents within the ecosystem, credited for the restoration of ecological health and the functioning and productivity of both arable and pastoral systems. Crucially, they are positioned not only as sources of meat and dairy, but as integral to the production of food more broadly.

In some articulations, this logic is embedded in food security crisis narratives, drawing on risks of population growth, climate change and geopolitical instability. Interviewee 19, a regenerative farmer, provides an example of this, not merely defending their own farming practice, but actively reconfiguring livestock from being part problem (e.g. through climate impacts, overconsumption of meat) to being the solution. In doing so, they draw on widely circulated food security narratives prominent in policy and public discourse, associated with concerns about population growth and global crises, framing questions related to agriculture in relation to an urgent need to increase food production. In this context, agriculture's central challenge is framed as the need to produce ever greater quantities of food, with livestock positioned as essential to achieving this objective, linking natural fertilisation with

manure to global food security:

"I'm not sure how people think we are just going to grow plants on fields everywhere (...) if we don't have animals producing manure, that then gets put back on the land to help with the nutrients, then we're going to have to artificially fertilise the land (...) the world needs, a lot of food, and we have to acknowledge that fact and balance it".

Similarly, Interviewee 1 illustrates how livestock are discursively constructed as multifunctional agents, simultaneously contributing to cereal production and the delivery of ecological functions. As an organic arable farmer, they refer to soil samples taken from a field adjacent to their wheat fields, which is currently in a regenerative pasture phase designed to rebuild soil health and support nutrient cycling through cover crops and livestock grazing rather than produce a harvest. They use this example to illustrate how grazing animals are positioned as contributing to soil fertility within a regenerative rotation:

"And interestingly, some of the recent soil analysis that we've done shows that when you take a soil sample in this kind of situation, so grass clover, it's been there about two and a half years, the sheep had been grazing on it, it actually had something like 100 kilos of available nitrogen."

They then go on to explain how the amount of nitrogen fixed would, hypothetically, enable the production of wheat of sufficient grain size, yield, and protein quality for human consumption: "Which I'm sort of told by the people that do grow milling wheats conventionally that's as much nitrogen really as you might need anyway."

While highlighting both the practical and ecological benefits of integrating grazing livestock into arable rotation, the farmer also implicitly draws on a structural tension in mixed regenerative systems: cereals are often fed to livestock (including ruminants) rather than entering human food supply directly (e.g. bread). Fodder cereals not only contradict the RA ambition for "100% grass fed beef", but also, more broadly, the ambition of mixed farming leading to a diversity of foods for human consumption being produced, not just meat and dairy. This is also reflected in other interviews, with wheat production being described as occurring on fields recovering from pasture or cover crops. The focus of cereal production is thus oriented toward supporting soil health rather than achieving premium grain quality, with the quantity of milling-quality wheat correspondingly limited.

Across the interviews, wheat produced for direct human consumption appeared only in accounts from arable-specialist farmers, or where such farmers were explicitly referenced. On mixed or livestock-focused farms, cereals were instead primarily produced for use or sale as animal feed. Within livestock-centred regenerative mixed farming systems, therefore, the production of plant-based consumer crops appears less as an established practice than as a potential future pathway. This was evident in Interviewee 1's account above and is further illustrated by Interviewee 10 below. While describing the farm as already organised around a circular livestock-based system, Interviewee 10 considers extending this approach through the inclusion of plant-based consumer crops, such as legumes and pulses, alongside companion cropping, to support soil fertility and diversify farm outputs:

"So we need straw for bedding for the dairy cows in the winter, so we have crops and the straw from those crops goes into that, so that's good. But in general, I think [what] we should be growing more here is crops for direct human consumption, instead of animal feed. And it would be good to grow more legumes, pulses, beans, peas - that kind of thing. And I definitely can see those becoming more a part of our system. (...)"

While the above quote reflects a pragmatic awareness of the trade-off between growing crops for livestock versus direct human consumption, the following, taken from Interviewee 2, a beef farmer, frames livestock as normatively central to arable farming and, by extension, to broader

food system resilience. Reflecting on wheat grown within a collective of regenerative beef farmers, they state:

“(…) although we don’t market it as grain, as yet, we feel as part of a regenerative solution, whatever you are farming, the mixed farming system is important and having livestock in a grain system is paramount to any regenerative system.”

Their account of the role of livestock echoes the framing presented by Interviewee 1 quoted earlier, portraying livestock as enablers of ‘completeness’ within agricultural and ecological systems. As opposed to Interviewee 1, however, Interviewee 2 explicitly advocates for animal-based products, depicting root and tuber crops as problematic in an effort to maintain land regeneration and food security. Referring to soil compaction and erosion caused by repeated potato and root vegetable cropping, the interviewee frames regeneratively raised livestock as beneficial for offsetting the negative impacts on the soil caused by growing these crops. They somewhat regretfully point out that despite their in their view soil-disturbing nature, potatoes still need to be produced to meet consumer expectations and market realities. Putting the focus on soil and implicitly drawing on the ‘no-till’ regenerative principle, they subvert the prevailing policy and public narrative that positions reduced meat consumption as essential. Instead, they portray grazing livestock as capable ecological agents that make the cultivation of root and tuber crops such as potatoes tolerable thanks to the regenerative effect of rotational practices. The animals, they argue, make up for the soil damage caused by tubers and root vegetables and in this way enable sustainable ecological health and fertility of the farmland. As such, this example illustrates an ecological framing in the RA discourse, in which soil health and farm productivity efficiency, rather than broader environmental health and land use efficiency, become the primary metric guiding agricultural decisions:

“The potatoes and carrots one is a difficult one, it is something that we probably struggled with because they are probably two of the most damaging things to soil, yet, I don’t think we can discount them yet. I think, if a farmer is having a regenerative rotation, they might say, well, yes, the potatoes or the carrots in that rotation are damaging, but hopefully, he [sic!] is repairing the land when that land is back into grass or something else (...). So, in an eight or ten-year rotation, he [sic!] is making improvements within their farming system (...). Just the practices of how they’re planted, it pretty much messes the soil structure up and it’s very degenerative. We are where we are, there is no point in just dismissing them as regenerative farmers because they grow that. Even for our customers who want beef, everyone wants chips with them, so, we’ve got to be realistic in what we’re dealing with.”

The underlying logic here is that in a crop-only system, cover crops are ploughed back into the soil to add nutrients and protect soil health. In a mixed crop-livestock system, however, animals graze the cover crops, producing food while returning nutrients as manure, giving both soil and farm additional productivity benefits, instead of the biomass just staying in the field as green manure; as Interviewee 10 puts it: “The beef animals that we have [...] graze the pastures on the farm and become beef at the end and great, they convert grass into beef, super.”

These framings exemplify how livestock narratives in the regenerative farming discourse, while promoting a more ecosystem and farm-resilience friendly mixed-farming practice, crucially position livestock as necessary across diverse farm types. Rather than challenging the overall current scale of land being allocated to livestock already or advocating for systemic reductions to free land for alternative cropping or mixed-farm arrangements, livestock is reframed as being essential to the production of all food. In the following, we discuss how this narrative, in combination with narratives of livestock as labourer and livestock as landscape manager, both challenge and reinforce established ideas of farming and sustainable land management, thereby narrowing the range of perceived viable land use transformation pathways.

5. Discussion

The identified narratives cumulatively reinforce dominant structures within the agri-food system. The following subsections elaborate not only on findings, but also explore how these reflect broader literature on RA and livestock’s role in a sustainable food system. We discuss how the identified narratives operate, the tensions and silences they produce, and the implications for both the legitimisation of RA through livestock and the persistence of industrial agri-food system logics.

5.1. Rural empowerment and resilience against the industrialised agri-food system

Interviewees acknowledge that farmers are increasingly affected by disruptions and uncertainties through volatile global commodity markets, ecological crises, and changes to the farm subsidies system in the UK. Rather than expressing a unified ‘regenerative’ position, the analysis reveals a range of overlapping and context-dependent rationales for livestock integration. This reflects heterogeneity in how regenerative agriculture is enacted in practice – but also how it is justified.

Against this background, our respondents provided rationales for livestock integration in RA as a practice to recreate economic resilience and ecological balance at the scale of individual farms as well as broader land management: Grazing livestock would allow farm enterprises to reduce their dependence on expensive purchased feed, fertilisers, and fuel. Further, livestock would enhance the ecological resilience of regenerative farm businesses’ land, while they would also benefit from agri-environmental payments, while contributing to food security. This finding is of multiple benefits from farm businesses is broadly consistent with previous studies which identified the economic, emotional, and environmental appeal attached to RA (Beacham et al., 2023; Cusworth et al., 2021, see also Bless et al., 2025 for the context of Australia), where relational values and care coexist with instrumental framings of animals as tools (Hargreaves-Méndez et al., 2025). In the data analysed, it is in particular the utilitarian narrative of livestock as labourers that reinforces the idea of rural empowerment, with three interrelated qualities that manifest as follows:

Economic appeal: The RA practice of livestock integration is articulated as working for both livestock holding and stockless, arable enterprises. To ‘become regenerative’, existing livestock-centric farm businesses utilise on-farm resources such as residues from grass and crops as animal feed, whereas arable farmers achieve ‘regenerative success’ through on-field integration of grazing animals. Economically, all farm businesses would reduce reliance on purchased inputs (feed, fertiliser, fuel), and former arable farmers would be enabled to generate additional revenue from livestock products, such as meat and milk. This argumentation of RA livestock contributing to both cost savings and wider resource efficiency for farm businesses aligns with claims by private-sector governance networks and consultancies (Deloitte, 2025; McKinsey, 2025).

Emotional appeal: For both livestock- and arable-centric farmers, grazing livestock as an RA practice is constructed as a means of empowerment, linked to notions of control and self-determination. Shifting to utilising livestock as input, they would gain independence from broader economic and political forces such as increased fertilizer prices and energy costs. In this way, normative and material articulations of livestock in RA also function as a means to reclaim agency by developing resource-efficient farm businesses, which is highlighted in opposition to following the rule of a highly corporatised and regulated agri-food system. By evoking mixed farming with grazing livestock as a foundational model, this discourse constructs a need to reverse historical shifts in UK and global agri-food systems, where farmers’ decision-making has been progressively displaced by governance through globalised supply chains, market imperatives, regulatory frameworks, and technologically mediated advice (Hamilton, 2024). Thus, livestock, in particular in its narration as labourer, takes a crucial role in the framing

of RA as a farmer-led movement that opposes the top-down implementation of sustainable models for future land use (Gordon et al., 2025; Caruso et al., 2025).

Environmental appeal: In response to decades of agrarian restructuring, amid shifting national policies and subsidy regimes as well as volatile global supply chains (House of Commons, 2019), livestock comes to represent the key ‘ingredient’ to a self-sustained, circular farm-unit system within RA, where practical, locally grounded, experience-based, embodied knowledge becomes central once again, to enable an ecological balance across both the individual farm and its surrounding landscape. These ideas of resource efficiency and a return to farmers self-determination are coupled with references to ecological indicators that can be observed on-farm. This framing also implicitly marginalises other land-use logics, including stock-free systems and input-intensive fertiliser-based production, by positioning livestock as the primary mechanism through which soil fertility and ecological balance are achieved. The observed return of the wildlife serves as tangible evidence for a system that works, for example in opposition to the lack of biodiversity in fields managed conventionally or ‘only’ with the idea of ‘sustainable’, rather than ‘regenerative’ agriculture.

At scales beyond the farm, the discourse of RA as a means of sustainable land management extends responsible stewardship to wider landscapes and food security concerns, with livestock playing a critical role:

Appeal to productivity: Hillside and so-called LFAs are depicted as areas which cannot be utilised for large-scale arable farming and framed as requiring livestock if they are to remain productive agricultural land. This argument is reinforced through ‘post-productivist’ references (Evans and Yarwood, 2000) being made to the resilience of rural economies and cultural landscapes in which grazing is deemed necessary to maintain traditional pastoral land where cropping is impractical. This supports local economies in which narratives of continuity and heritage anchor post-productivist sources of income such as tourism and hospitality. While post-productivist policy largely focused on habitats and landscape features, rather than on livestock, livestock narratives in the RA discourse contribute to more recent counter discourses (Evans and Yarwood, 2000; Ó Murchú, 2023), reinterpreting upland areas as spaces where grazing is central to ecological regeneration, positioning livestock as practical agent in sustaining ecosystems of traditional pastoral land. Within these narratives, livestock are imagined as maintaining open hillside, preventing scrub encroachment, alongside of sustaining the visual and ecological character of ‘traditional’ farming landscapes, reinforcing a long-standing rural imaginary in which grazing is naturalised as the legitimate form of land use (Jones, 2013; Duggan and Peeren, 2020; Ó Murchú, 2023). The RA discourse thus rearticulates these established narratives through an emphasis on vegetation management and soil health, repositioning livestock as active ecological managers of upland and marginal landscapes. Thus, through the ways in which the role of livestock is narrated in the RA discourse, upland areas are constructed as places that never fully succumbed to the logics of industrial intensification and thus ‘naturally’ represent a more regenerative mode of land use, while disregarding the environmental degradation that has taken place, including in uplands, as part of national efforts for intensification (Bardgett et al., 1995; Midmore et al., 1998, 2001).

Appeal to heritage and continuity: Livestock grazing is further depicted as essential to sustaining the interdependence of upland communities and rural economies more broadly. The practice of upland farming is becoming increasingly precarious due to shifting subsidy regimes, economic pressures, and policy changes over land use which focus on environmental outcomes, ecosystem services, and land stewardship, and in particular rewilding. Visions of rewilding, such as those popularised by George Monbiot, are, as shown in the data, positioned as a contrasting threat, highlighting the potential loss of tradition, local knowledge and identity. This framing reinforces livestock's centrality to notions of responsible (up-)land stewardship. Under post-Brexit

agricultural reforms, it gains renewed traction: the transition from the EU's Common Agricultural Policy (CAP) to the Environmental Land Management (ELM) system, and the Sustainable Farming Incentive (SFI) in particular, links public payments to environmental outcomes rather than food production, intensifying uncertainties over farm viability and diminishing the degree of control farmers retain over their land (Dewally et al., 2025).

Appeal to public goods delivery and food security: In the context of UK land management policies being increasingly oriented towards public goods such as carbon storage, biodiversity, and landscape stewardship, RA represents a practice of aligned benefits – integral to delivering both, ecological restoration and national food security. RA is thereby contrasted with industrial, monoculture-based systems, which are framed as working against public goods delivery and food security. The UK Government Food Strategy (2022: 16–17), for example, reflects this framing too. It expresses optimism under the heading “maximising growth opportunities” that “regenerative farming will also provide a more sustainable production of traditional protein sources,” and that “using livestock to benefit the environment in balance with food production is already being championed by many small-scale farmers.” Building on an analysis of the green rebranding of livestock within regenerative agriculture (Cusworth et al., 2022), which shows how livestock are reframed from environmental problems to ecological solutions through appeals to nature, soil, and pastoral pasts, this study demonstrates how UK food system stakeholders actively perform this logic in discursive practice. Framings of crisis are mobilised around food security and the provision of public goods, in conjunction with references to ongoing changes to agricultural policy and subsidy regimes. These framings stabilise livestock as indispensable to ecological restoration as well as agricultural productivity in the broadest sense (i.e. not for animal-based commodities only but for the production of all foods). In doing so, RA discourse reworks the opposition between nature restoration and food production as competing land-use logics.

5.2. Dominant structures reinforced: logics of the modern industrialised agri-food system

From aspects articulated affirmatively, this section turns to tensions that remain largely implicit or unspoken within the RA discourse. Silences obscure the broader structural conditions within which regenerative practices remain embedded, particularly their continued entanglement with the logics of the industrial agri-food system. This embeddedness becomes visible when examining what is not directly problematised in stakeholders' accounts, most notably questions of inputs, outputs, and subsidy regimes.

Inputs: herbicides – At the farm level, regenerative practices are frequently described in circular terms, with livestock positioned as substitutes for external inputs such as fertilisers or soil amendments. Notably, a defining feature of RA is its openness in relation to diverse inputs and practices; unlike organic farming, it does not follow a fixed prescription (Cusworth et al., 2022; Garbisu et al., 2025). This is echoed in interviewees' accounts, where RA is articulated simultaneously as flexible and loosely defined. RA does not prohibit the use of synthetic chemicals, allowing their application when considered necessary. This reveals a tension between the rhetorical emphasis on ‘working with nature’ and the relative silence around chemical inputs in the RA discourse. In Beacham et al. (2023), farmers described trade-offs in practice, including continued recourse to herbicides like glyphosate to manage weeds under low- or no-plough systems, where deemed necessary to secure acceptable yields, highlighting how practical constraints limit the scope of transformative actions aligned with values. Rather than seen as a contradiction, this flexibility in terms of practice is central to RA, lowering barriers for conventional farmers to adopt or experiment with regenerative practices (Kallio and LaFleur, 2023). At the same time, however, this openness suggests that, rather than a departure from environmentally challenging input practices prevalent in industrial

agri-food systems, RA may constitute a modest reconfiguration of existing practices in material terms.

Outputs: meat, dairy & feed crops – As shown in the interview data, farm outputs and income remain embedded in existing agri-food chains. Farm income continues to depend largely on livestock as a market commodity, whether through meat, dairy, or breeding stock. While livestock narratives in the context of RA (re-)legitimise nature-based farming practices, particularly grass-based livestock systems and rotational grazing, in contrast to industrialised indoor production systems, they also position livestock as the economic and organisational node that connects these farms to the wider agri-food system. In RA, farmers strengthen their farm-economy by adapting their input to become less reliant on farm-external sources. However, livestock farmers also remain reliant, and arable farmers *additionally become* reliant on producing livestock-based outputs, which are rewarded in the economic logic of the modern industrialised system. As shown in the interviews, when rotations are incorporated, plant-based outputs, such as cereals, are often used or sold as livestock feed, rather than as food for human consumption – a practice which sustains the same feed-livestock chain that RA ostensibly seeks to move beyond through its emphasis on grass-fed, grazing-only systems. This reflects structural and practical constraints: small-scale or experimental RA farms rarely produce sufficient volumes or qualities of what would be considered suitable for milling wheat in conventional supply chains (i.e. to produce bread), while local and more flexible processing facilities are often absent. Even if organically certified, much of the produced grain thus still ends up as fodder for organic-certified livestock farms. Thus, livestock, while enabling stakeholders to highlight several multi-layered benefits, also remains the central economic and organisational anchor. It legitimises mixed, nature-based practices while sustaining industrial agri-food chains and limiting the redirection of plant-based outputs toward human consumption. Farming incomes generated through RA with livestock integration thus remain embedded in broader economic and policy structures of the agri-food system that the RA movement seeks to overcome.

Subsidy regimes – RA discourse risks maintaining the material status quo of livestock systems by re-legitimising historically subsidy-dependent practices through new ecological and multifunctional framings, rather than fundamentally reconfiguring livestock numbers or land-use relations. The historical context of CAP payments (as introduced in 2.1), which were made per hectare of land farmed, regardless of environmental outcomes, mediated the viability of uplands and LFAs and encouraged attempts to modernise through intensified inputs and increased sheep numbers. These efforts often had limited success due to thin soils, harsh climates, steep terrain, and adverse ecological outcomes of intensification. Under the emergent subsidy regime, income diversification is encouraged and traditional sheep farming on its own becomes economically even more marginal. New incentives emphasise carbon sequestration, soil health, and habitat recovery. Overall, this highlights the need and push for lower stocking densities or change to stock-free land recovery practices. While farmer dependence on subsidies remains, the criteria to qualify for these change radically and compromise the commodity-based incomes relied on so far. Depicting livestock as both ecological actors and contributors to resilient food systems, the RA discourse provides narratives through which practices developed under the previous CAP regime can be legitimised and sustained.

5.3. Livestock and the limits of land management imagination

Linking livestock with positive environmental, economic, and social outcomes deflects attention from issues of stocking density, positioning current levels of production as acceptable or inevitable. This framing counters understandings of meat production and consumption as major drivers of climate change, deforestation, and biodiversity loss, shifting the focus from livestock as inherently resource-intensive systems to questions of management and efficiency. This is particularly evident in assumptions that treat animal production as an optimisable system,

despite its biophysical constraints: thermodynamic limits mean that only a fraction of feed energy is converted into edible output, with the remainder lost through metabolic processes (e.g. feed conversion ratios of 18.5:1 for beef; [de Ruiter et al., 2017](#)), underscoring the “woefully poor energetic efficiency” of animal foods ([Greenhalgh, 1976: 1](#)). Producing such ‘commonsense’ assumptions that position grazing animals nonetheless as necessary, or even the default solution to multiple crises and challenges, also constrains critical engagement with alternative land use which could reduce reliance on livestock while still achieving ecological and social goals.

Building on [Cusworth et al.'s \(2022\)](#) analysis of RA's restorative narratives, which seek value in a pastoral past while undermining appeals for plant-based futures, our study shows how this logic is actively reproduced in UK food-system stakeholders' accounts. RA narratives consistently project futures in which livestock-centric farms remain livestock-centric, and arable farms incorporate livestock rather than transitioning away from them. In doing so, the discourse surrounding RA maintains the territorial legitimacy of livestock across diverse forms of food production and ecosystem restoration, narrowing the range of land-use futures that are rendered thinkable or legitimate. Even where livestock grazing can improve soil health at the local scale, its broader land-use implications remain significant. Around 85% of UK farmland is currently used for grazing or feed production ([Defra, 2024](#)), constraining land availability for food crops or ecosystem restoration. In England, lowland grazing is more than twice as prevalent as upland grazing ([Defra, 2025](#)), highlighting the extent to which livestock systems currently shape national land-use patterns and foregrounding the potential for reallocation of land towards crop production or ecosystem restoration. Within RA discourse potential is identified with focus on the optimisation of grazing systems rather than a substitution or reduction of livestock-based land use.

In such discursive space, alternative configurations, such as low-livestock, crop-based, agroforestry, or rewilded systems, become less thinkable or legitimate. This narrows the imaginative space for both separate and integrated land-use arrangements, which could distribute ecological functions more strategically across landscapes. For instance, maintaining grazing livestock at lower densities in selected upland areas could coexist with large-scale tree planting, peatland restoration, or rewilding elsewhere, while lowland arable regions could largely focus on organic cereal and vegetable production for direct human consumption. Such diversification would allow different land to be used for multiple ecological and productive purposes without relying on the universal presence of grazing animals.

Further, within more integrated systems, livestock need not dominate, and non-ruminant livestock can also play important roles in farmland management. For example, livestock and trees can be integrated into silvopastoral systems ([Muschler, 2016](#)), or small numbers of animals, such as chickens or pigs in orchards or mixed cropping systems, can support nutrient cycling, soil fertility, weed and pest management, and crop residue processing, without becoming the central organising principle of production ([Hilimire et al., 2013](#)). Such diversification would allow land to be used for multiple ecological and productive purposes without relying on the universal presence of grazing animals.

Stock-free methods, such as green manures, cover crops, crop rotations, mulching, and targeted mineral supplementation, can further enhance soil health and productivity without animal inputs ([Raveloaritiana and Wanger, 2024; Wittwer et al., 2017](#)). Veganic agriculture similarly claims to maintain soil fertility without domesticated animals ([Hirth, 2021; Seymour and Utter, 2021](#)). However, the emphasis on grazing livestock within the RA discourse risks diverting attention, in both practice and research, away from the development and maintenance of soil fertility through these alternative approaches.

Moreover, while RA can be understood as a response to recent trajectories of intensification in livestock systems, including increasing input dependence and the expansion of large-scale indoor dairy production ([The Bureau of Investigative Journalism, 2026](#)), its emphasis on

grazing as a corrective to industrial or input-intensive approaches can nevertheless render adaptation appear more transformative than it is, given grazing has long been central to UK land management (March et al., 2014; Reijs et al., 2013). The emphasis on positions RA rhetorically as 'innovative' while overlooking its continuity with existing livestock practices. Relabelling conventional dairy or livestock farming as regenerative may require only minor changes, allowing farms to claim regenerative status and sustainability without substantially altering production systems, particularly given the lack of clear boundaries around stocking densities, grazing duration, or the specific types of grazing practices that qualify as regenerative.

6. Conclusion

Situating our findings within broader debates on regenerative agriculture and the role of livestock in sustainable food systems, we find that in times of systemic uncertainty driven by climate change, volatile fertiliser prices, geopolitical tensions, trade disruptions, and post-Brexit policy changes, RA can be seen as a framework that empowers farmers and rural communities: Re-centring the focus on mixed farming that is both restorative and productive, it offers a means to navigate instability and restore a sense of farmer agency over production. Grazing livestock is thereby understood to hold not only economic but also a moral and ecological significance, supporting farm resilience, restoring nature on fields, maintaining landscapes and heritage, and contributing to local and national food supply. Through this framing, however, RA also reinforces the historical centrality of livestock in UK agriculture and legitimises dominant land management practices. Livestock functions thereby as an economic and organisational anchor, stabilising the broader socio-economic structures of modern industrial agriculture that it opposes. Existing hierarchies in land-use priorities, markets and subsidy dependencies are reproduced alongside framings of innovation and empowerment, while obscuring alternative configurations of sustainable land management, such as lower-density livestock systems, stock-free rotations, agroforestry, or crop-focused rotations.

Arising from its openness, experimental practices, and the emphasis on farmer agency, RA demonstrates potential for diverse pathways in sustainable land management. If rooted in established organic principles, and creating space for alternative ecological and productive practices, including low- or no-livestock systems, agroforestry, and other innovative regenerative approaches, it holds possibilities for shaping more ecologically and socially just futures. This, however, will require the explicit recognition and careful consideration of livestock density and scale alongside measures to ensure that crops can be retained in human food chains. Without active delimitation of livestock's role, RA's growing traction in policy, research, and industry risks entrenching livestock-centred practices, stabilising existing agri-food structures, and constraining more experimental or low-livestock regenerative pathways.

CRedit authorship contribution statement

Ulrike Ehgartner: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Writing – original draft, Writing – review & editing. **Steffen Hirth:** Conceptualization, Data curation, Formal analysis, Investigation, Writing – original draft, Writing – review & editing.

Declaration of competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Data availability

The authors do not have permission to share data.

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