



Increasing tree cover on cereal farms in England: The role of farmers' values





Increasing tree cover on cereal farms in England: The role of farmers' values

Research Report

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Executive summary

This Research Report explores the issues that matter to cereal farmers in England regarding trees and increasing tree cover on farms. It looks beyond financial considerations to explore the other factors which guide and shape farmer attitudes and behaviours in this area. Understanding the range of values held by farmers in relation to trees allows us to learn how, when, and where farmers may embrace having trees on their land. This will better enable those working to design policies, incentives, tools, advice, or other communications to do so in ways which are more likely to succeed in delivering enduring tree cover expansion on farms. Having focused research on dairy farmers in 2022, cereal farmers were selected as the focus for this stage of the research. This decision was based in part on an initial survey finding that 59% of cereal farmers said that they were likely or extremely likely to plant trees in the next five years.

This research is informed by qualitative research conducted in 2022 which identified 30 values that may influence farmers' behaviour in relation to trees. The research was based on interviews with 33 farmers that covered a variety of farm types, demographic characteristics, and regions. The values identified were mapped across seven domains: farm business, social influence, food production, farm health, environmental values, landscape relationship, and farming identity. The domains formed our values map (Figure 1), which provided a structure for considering the range of values that matter to farmers in relation to growing trees on farms.

For this report, 10 cereal farmers were interviewed in late 2023 using a semi-structured interview guide which was devised to explore the seven value domains with each participant. Participants were sampled to ensure that the pool represented a range in terms of age, time farming, region, farm size, tenure status, and those with and without involvement in agri-environment schemes. Interview transcripts were analysed deductively and thematically in NVivo (data analysis software), using the values map as a conceptual framework. The values most and least aligned with increasing tree cover for these participants were identified. A spreadsheet was then created which enabled insights to be summarised and for illustrative quotes to be identified from the preceding analysis.

We also drew on the results of an initial survey with a sample of 393 farmers across England. From this sample we only considered responses relating to the 70 respondents who identified as farming 'cereals and combinable crops'. The survey focused on 20 of the original 30 values, spread

across the seven value domains which our earlier research had suggested to be particularly important to farmers in general. The survey sought to explore the relative importance of these 20 values and the extent to which values under the seven domains might influence tree cover expansion.

Through our interviews we found that a broad range of issues pertaining to trees matter to these cereal farmers. These issues were particularly concentrated within the value domains of farm business, food production, farm health, environmental values, and farmers' relationship with the landscape. The cereal farmers we interviewed identified strongly as food producers and custodians of the land, demonstrating a concern for the sustainability of the farm business as well as the health and resilience of the farmed landscape. While some cereal farmers could see how growing trees could complement their farming operations, most expressed uncertainty about the relative benefits and disbenefits associated with integrating trees into a cereal farming context. They felt that this set them apart from other farm types in which trees were perceived to be less disruptive to the farm business and their benefits more direct or obvious (e.g. providing shade and shelter for animals). Despite this uncertainty, the farmers we interviewed valued the existing trees on their land for a range of reasons. Many were open to growing or planting more trees but saw opportunities for this as largely limited to areas of unproductive land where they would not interfere with crop yields.

Our research found that the planting, establishment, and maintenance of trees is likely to have greater permanence and volume if aligned with cereal farmers' existing values. We identified several opportunities for appealing to interrelated values when seeking to increase tree cover on cereal farms. Cereal farmers are deeply invested in the health of their soil and crops. Given the centrality of soil and crop health to the farm business, appealing to this value as part of any proposal to increase tree cover may be a successful strategy (e.g. highlighting the shelter, shade, natural flood management, pest management, and nutrient enrichment potential). The cereal farmers we spoke to value supporting wildlife, being custodians of the land, and creating a resilient farming environment, and they see tree cover as contributing positively towards these aims. The cereal farmers sought and acted upon advice from trusted sources including Farmer Cluster groups, agronomists, and independent trial data. Cereal farmers' willingness to change their practices based on advice

demonstrates that they may be persuaded to increase tree cover on their land if information on its benefits for their farming business comes from sources they trust. The cereal farmers also cared about trees as part of a visually pleasing landscape. They valued trees for their historical and aesthetic character and felt that removing them would be wrong, even when they caused disruption to farming operations in-field. While farmers may not increase tree cover on a large scale because of these aesthetic and historical values, they may be encouraged to replace lost trees or plant trees as part of a succession plan in order to preserve the landscape aesthetic.

Cereal farmers' investment in soil and crop health, their care for the environment, and their identification as custodians of the farmed landscape offer avenues for trees to be incorporated as complementary entities within the cereal farming context. While cereal farmers value trees, most do not currently see the potential interconnected value of trees for their business. Targeting trusted sources of advice with information on how trees can support farmers' values and contribute to their cereal farming business may increase willingness to grow trees among cereal farmers, offering a long-term solution to the need for increased tree cover.

However, even where farmers' values align with increasing tree cover, various factors limit their ability to act. These include financial constraints, uncertainty and knowledge gaps, and concerns over the time and labour costs associated with planting and maintaining trees. Strategies to increase tree cover on cereal farmland need to provide enough certainty around the benefits of trees for crop health and must consider how tree planting and maintenance can be made a sustainable endeavour for cereal farmers already often short on time and labour.

Introduction

Project background

This report forms part of a [project](#) exploring how farmers' values may impact ambitions to increase tree cover on agricultural land in England. The project seeks to understand what matters to farmers in England, looking beyond financial considerations to explore which other factors guide and shape farmer attitudes and behaviours in relation to trees. Developing an understanding of the range of values held by farmers in relation to trees enables us to learn how, when, and where farmers may embrace having trees on

their land. This will better enable those working to design policies, incentives, tools, advice, or other communications to do so in ways which are more likely to succeed in delivering enduring tree cover expansion on farms.

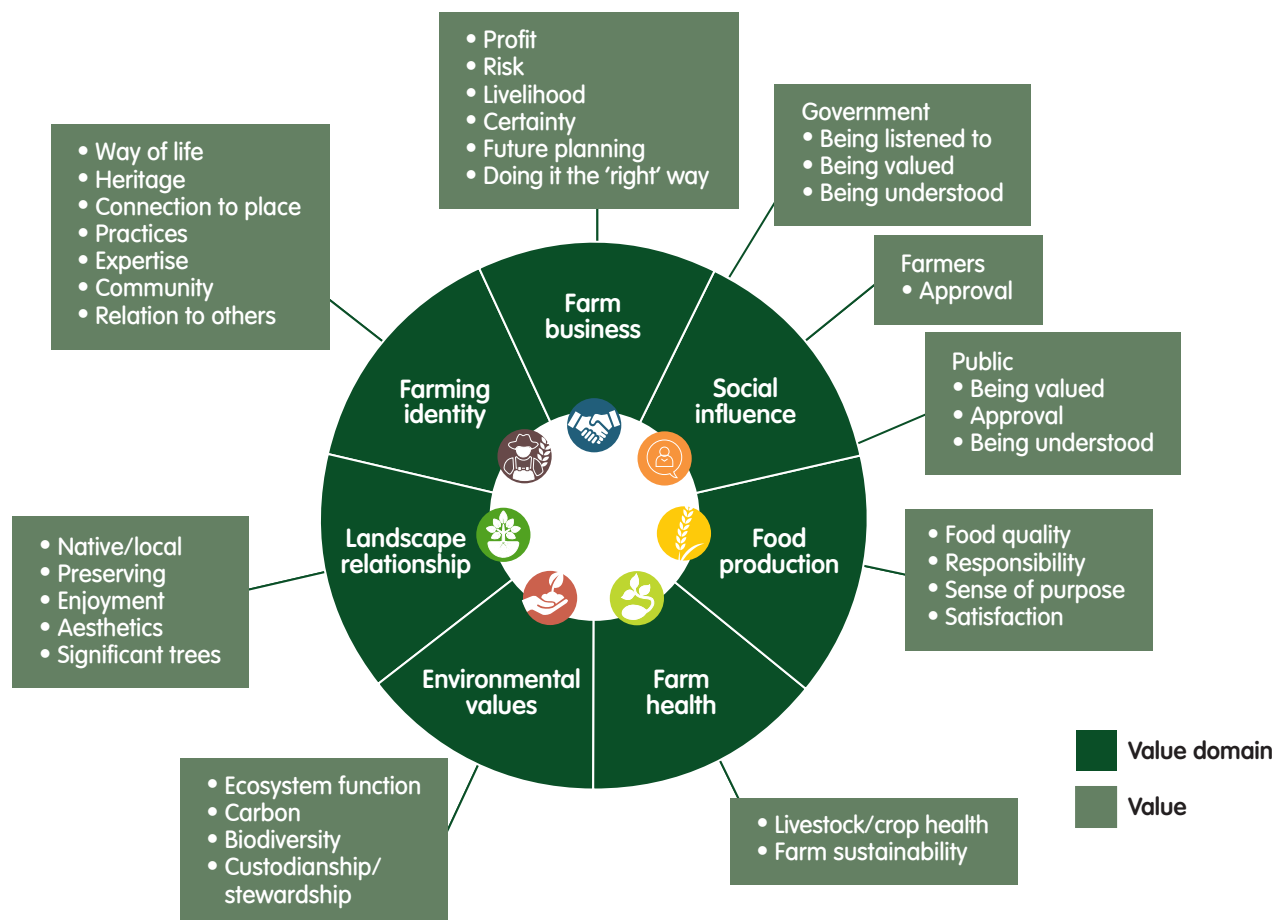
This report specifically considers the cereal farming context, focusing on outlining where cereal farmers' values present opportunities for, or barriers to, tree cover expansion. We first describe a map of farmers' values which guides and informs the research and has been developed as part of this project. We then explain the decision to focus on cereal farming and provide a brief overview of the industry in England. The methods section follows, before we present and discuss the findings of the research.

A map of farmers' values

Through qualitative research conducted in 2022, we identified values which may influence farmers' behaviour in relation to trees (McConnachie *et al.*, 2022). The research was based on interviews with 33 farmers from a variety of farm types, demographics, and regions. One identified as a cereal farmer, while a further four had current or previous experience in broader arable farming (horticulture, general cropping). Figure 1 maps these values across seven domains: farm business, social influence, food production, farm health, environmental values, landscape relationship, and farming identity. The values map provides a structure for considering the range of values that matter to farmers. The value domains are not discrete: values interlink and overlap extensively. Not all farmers will place value on every area on the map, and where they do they may value them in different ways. For example, running the farm business in the 'right' way may mean something very different to each farmer.

We believe a productive use of the values map is to continue to use it to inform research focused on groups of farmers, allowing for the development of group-specific insights and recommendations and cross-group comparisons. In 2023, the values map was used to successfully guide and inform research on dairy farmers (Pearson and McConnachie 2023).

Figure 1 Map of farmers' values in relation to trees



Focus on cereal farming

Following positive feedback from our stakeholder advisory group on the value of exploring specific farm business types in this project, we turned our focus to cereal farming¹. Cereals account for 71% of the total arable crop area in the UK, covering almost 3.1 million hectares (ha) in 2023 (Defra, 2023). A survey (report forthcoming²) carried out earlier in this project found that of 70 cereal farmers, 59% said they were likely or extremely likely to plant trees in the next five years. Together with the scale of land devoted to cereal farming, this indication of tree-planting behaviour demonstrates the importance of exploring how these farmers' values align, or don't align, with growing trees on their land more broadly. Additionally, exploring farmers' values in an arable context provides a useful counterpoint to the previous research focus on livestock farming (Pearson and McConnachie 2023).

Cereal farming in England

The cereal farming industry, and the agricultural sector in England more widely, is experiencing a period of uncertainty as it moves through the Agricultural Transition Plan (Defra, 2020). In 2023, there were 17 399 farm holdings in England classified by Defra as cereal farms. The total farmed area on these holdings was 3032 394 ha, making cereals the largest farm type in England (Defra, 2024a). Of the total farmed area on cereal farms, 131 268 ha were classified as 'farm woodland' (Defra, 2024a)³. This means that around 4% of the total farmed area on cereal farms is covered by farm woodland, which is a higher proportion than dairy (2%) but lower than other arable farm types of general cropping and horticulture (both 7%) (Table 1). The proportion of woodland on cereal farms has increased from 3% in 2010 (Defra, 2024a).

¹ The stakeholder group composition varies and includes representatives from Defra, the Forestry Commission, and Natural England.

² This will be available on the project [webpage](#).

³ 'Farm woodland' includes woodland used for grazing and land in a woodland scheme but excludes orchards (and orchards used for grazing) and short rotation coppice (definition sourced by email from the Defra Farm Surveys Team).

Table 1 Farm woodland areas compared to total farmed areas by farm type using Defra June Survey of Agriculture data (2022)

Farm type	Total farmed area (ha)	Farm woodland area (ha)	Farm woodland proportion
Cereals	3 032 394	131 268	0.04
General cropping	1 527 420	105 754	0.07
Horticulture	171 595	12 028	0.07
Specialist pigs	78 182	2 144	0.03
Specialist poultry	85 655	3 339	0.04
Dairy	742 974	16 995	0.02
Grazing livestock (-LFA)	1 239 192	31 322	0.03
Grazing livestock (Lowland)	1 284 936	60 578	0.05
Mixed	830 087	32 982	0.04

Note: farm woodland proportions have been calculated based on Defra data.

A breakdown of farm business income provided by Defra (2024b) shows that cereal farms have a relatively high average income from agriculture, second only to dairy farming (Figure 2). Compared with dairy farms, cereal farms are more reliant on the UK Government's Basic Payment Scheme (BPS), more engaged in agri-environment schemes (AES) and significantly more likely to pursue diversification (Figure 3). In the year 2022/23, the income cereal farms received from AES activities was almost double that of the previous year. Income from diversification increased by 11% and income from the BPS fell by 9% (Defra, 2024b).

Methods

The research design was informed by our earlier interviews with farmers and by the results of a farmer survey, which is detailed later in this section. In this paper, we report primarily on findings drawn from new interviews with cereal farmers and on results from the survey for additional context. The key insights are presented and illustrated in 'General findings' and by two subsequent sections, 'Opportunities to align tree cover expansion and cereal farming' and 'Barriers to tree cover expansion on cereal farms'. Insights are supported throughout by direct quotes drawn from the 10 interviews. All participants have been anonymised and pseudonyms are used throughout.

Sample and recruitment

We interviewed 10 cereal farmers in late 2023, selected from a list of survey participants who had consented to be contacted about further research. While all the participants in this additional research identified cereal farming as their primary operation, several had grown or were growing other types of arable crops and tended to identify their industry using the term 'arable' as opposed to 'cereal' farming. The 10 participants were purposively sampled to ensure interviewees covered a range of ages, time farming, regions, farm sizes, tenure status, and those with and without involvement in AES. Despite pursuing several recruitment routes, we were unable to interview any female farmers and were only able to recruit one participant who had no experience of participation in AES. Further details of participants are provided in Table 2.

Table 2 Characteristics of cereal farmers from 2023 interviews

Pseudonym	Age	Gender	Time farming	AES	Farm size	Tenure	Region
Callum	35–50	M	<5 years	N	201–500 ha	Owned	West Midlands
Aaron	50+	M	>30 years	Y	101–200 ha	Mixed	East Midlands
Niall	35–50	M	20–30 years	Y	101–200 ha	Mixed	South-West
Albert	50+	M	>30 years	Y	51–100 ha	Owned	East
Jeremy	50+	M	5–10 years	Y	201–500 ha	Owned	South-East
Paul	Up to 34	M	10–20 years	Y	201–500 ha	Mixed	South-West
John	50+	M	>30 years	Y	501+ ha	Rented	East
Murray	35–50	M	10–20 years	Y	201–500 ha	Mixed	South-East
Arthur	50+	M	>30 years	Y	101–200 ha	Owned	East
Harry	50+	M	>30 years	y	201–500 ha	Owned	East

Figure 2 Cost centre breakdown for farm business income by farm type in England, 2022/23 (reproduced from Defra, 2024b)

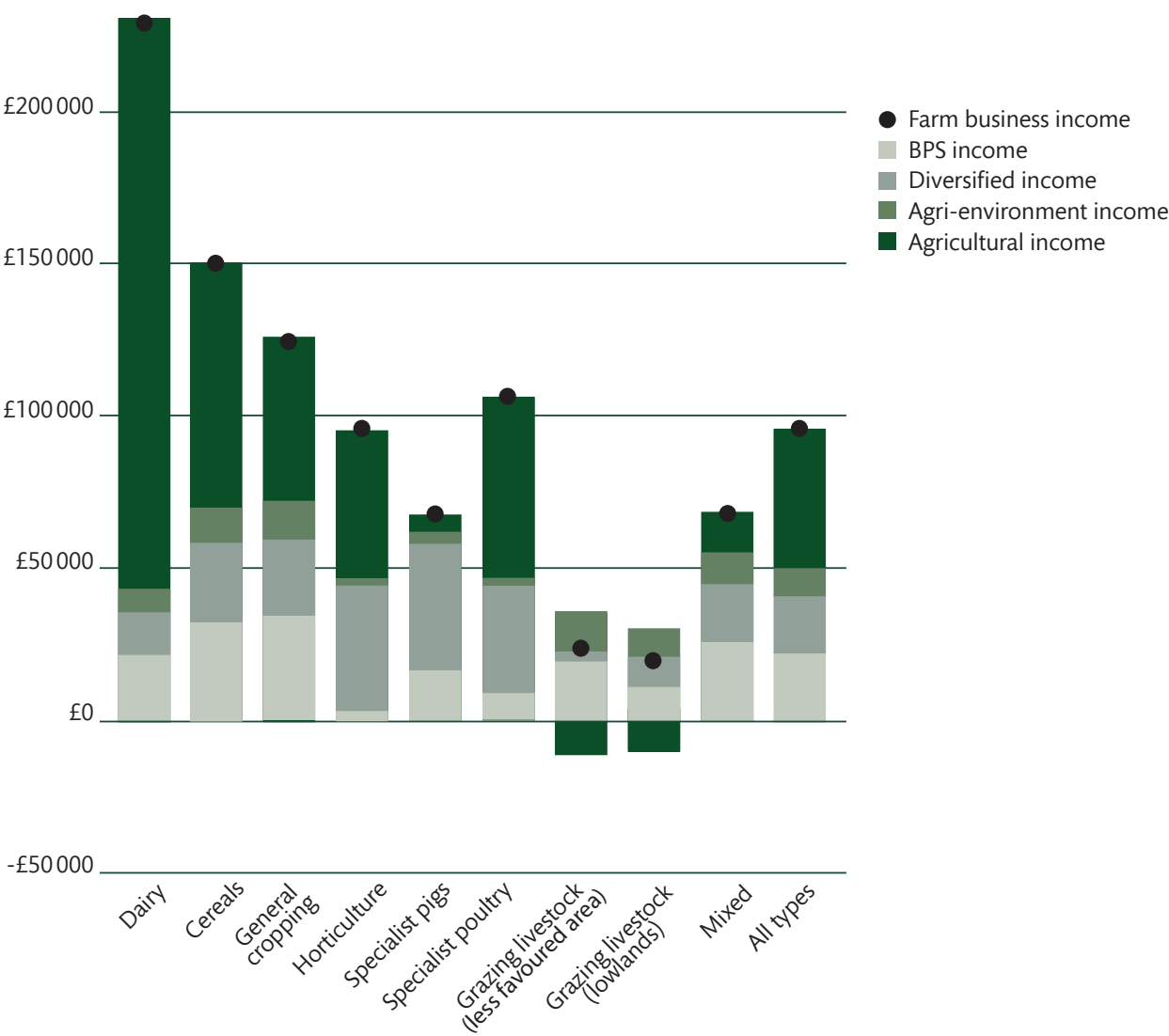
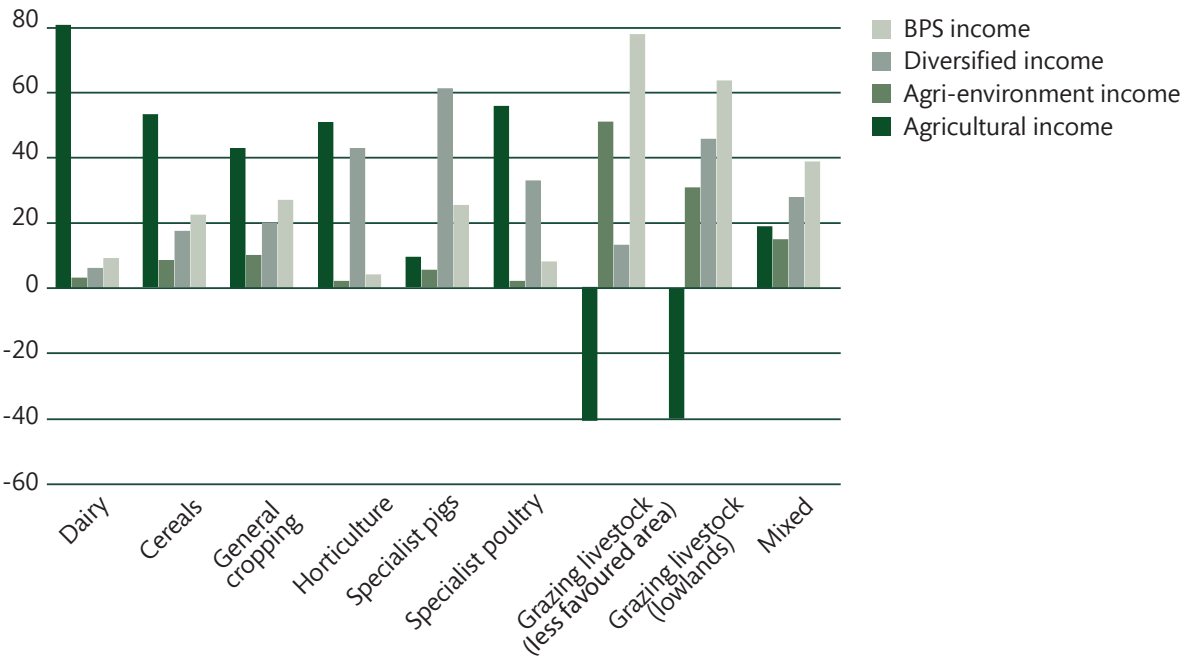


Figure 3 Proportions of income from different cost centres by farm type in England, 2022/23 (reproduced from Defra, 2024b)



Interviewees were predominantly based in the eastern regions of England, which is reflective of the geographic concentration of cereal farming in England. All but one of the cereal farms included in the sample ranged in size from 100 to 500 ha. In 2023, roughly half of cereal farm holdings were below 100 ha (Defra, 2024a), so the insights from our sample are reflective of medium and large cereal farms, as opposed to smaller farms.

Interview protocol and analysis

Two researchers developed a semi-structured interview guide (Appendix 1) focused around the seven value domains in Figure 1. Questions were devised to validate and elicit deeper understanding of the value domains and particular values that had emerged in the interviews and survey in 2022 as being important to cereal farmers (McConnachie *et al.*, 2022). Interviews were conducted by video or telephone call with one of the two researchers, while ensuring similar interview approaches, and lasted between 30 and 70 minutes.

Interview transcripts were deductively and thematically analysed against the values map by the two researchers using NVivo. Researchers initially analysed three transcripts then met to discuss and agree consistent coding, ensuring inter-coder reliability. The researchers identified the values most aligned to increasing tree cover (presented as opportunities), and those where they did not align (presented as barriers). A spreadsheet was then created, with the researchers summarising insights and drawing out illustrative quotes from the analysis. Following this two-stage process of analysis, the research project team came together to discuss and deliberate the insights in order to reach the final reported findings.

Survey

In autumn 2022 we surveyed a sample of 393 farmers across England. Of these farmers, the results presented here relate only to the 70 respondents who identified as primarily cereal farmers. To balance brevity with comprehensiveness, the research team selected 20 of the original 30 values, spread across the seven value domains, which our earlier research had suggested to be particularly important to farmers in general. The survey sought to explore: a) the relative importance of these 20 values, and b) the extent to which values under the seven domains might influence tree planting.

We asked about the values in two main ways, each using an 11-point likert scale (where 0 = 'not important at all' and 10 = 'extremely important'). One question aimed to explore the potential influence that values may have on tree planting: each value domain was presented as a consideration, such as 'the ongoing sustainability and functionality of the farm', and participants were asked to rate how important they felt this would be to them when considering tree planting on their land. The wording for each value domain is presented in Table 3.

The other question sought to explore the relative importance of the 20 values by asking participants to score them 'in terms of how important they are to you as a farmer'. The wording for selected values is provided in Table 4. Further details regarding the survey can be found in a forthcoming report, *Trees and farmers' values. Findings from a survey of agricultural land managers in England*⁴.

Results

In this section, key insights from the interviews and survey are presented. Firstly, they are presented in terms of how they relate to cereal farmers' values in general. This is followed by findings which relate to opportunities for and barriers to increasing tree cover on agricultural land used for cereal cropping.

General findings

Here we report our findings relating to cereal farmer values in general. We draw together survey scores and excerpts from the 10 interview participants.

A broad range of things matter to cereal farmers

A broad range of things matter to cereal farmers. This is demonstrated by the relatively high survey scores across the value domains shown in Table 3. The table shows the mean scores that cereal farmer survey respondents assigned to the seven value domains when considering tree planting (on a scale of 0–10).

⁴ This will be available on the project [webpage](#).

Table 3 Mean scores cereal farmers assigned to value domains when considering tree planting

Value domain	Survey wording	Score
Farm health	The ongoing sustainability and functionality of the farm	8.8
Farm business	Running a good business	8.1
Food production	Producing food	8.1
Environmental values	Concern for the state of the wider environment	7.8
Landscape relationship	How the landscape looks and feels and how it should look and feel	7.5
Farming identity	The farming way of life, being part of a farming community, respecting tradition and ways of doing things	7
Social influence	Caring what others think, feeling valued, being listened to	5.7

When it comes to tree planting, all seven domains were shown to be important to participant cereal farmers. Farm health, farm business, and food production were scored particularly highly (all above 8 points), with environmental values and landscape relationship close behind (7.8 and 7.5 respectively). While farming identity and social influence were scored as comparatively less important than other domains, they evidently still exert an influence over participant cereal farmers. It would be expedient to explicitly consider all these values when seeking opportunities to increase tree cover on cereal farms. Developing policy, mechanisms, messaging, and advice which speaks to cereal farmers' existing values is likely to lead to more successful interventions.

Cereal farmers value their role as custodians of the land

'We're thinking several generations ahead because we want our children, our grandchildren, to be able to do the same job that we're doing and if we've destroyed it, there's not much for them to do. We feel like we're custodians and we own it, or we rent it, but we're custodians of the land.' **John**

All of the cereal farmers we interviewed valued their role as custodians of their land. Most emphasised that being a custodian means looking after the long-term health of the farm in order to pass it on to the next generation. In particular, they consistently identified soil health as essential to a sustainable business. While some farmers explicitly identified the role that trees can play in soil health, most saw them as contributing to a more holistic idea of farm health in terms of their habitat and biodiversity value. Interviewees expressed a desire to create what Murray describes as a

'healthy, thriving landscape with good biodiversity as opposed to a wasteland of over-intensively farmed fields with nothing in-between'. However, they also emphasised needing to balance these environmental values with the demands of the farm business and their role as food producers.

Related values



Farm health: crop health, farm sustainability



Farm business: livelihood, future planning



Environmental values: custodianship, biodiversity

The cereal farmers we interviewed highlight that farming is a livelihood, and that custodianship also means sustaining a viable business now and for future generations. Arthur describes his role as a farmer as 'to try and leave something for the grandsons now and somehow to create enough income for them to be able to keep it'. Most of the farmers expressed a tension between making enough money and measures supporting environmental sustainability, like growing trees: 'If you don't make money, then you can't sustain things for too long' (Albert). However, they also emphasised that investing in measures that promote soil health, and a resilient farming environment more broadly, is in their business interest. As John describes: 'Obviously, we try to look after the land because that's where our income is. It's in our interest to look after our land because we want to be here forever'.

Most of the farmers saw themselves as custodians of the farmed landscape and value existing trees as habitats for wildlife and insects. Many, like Murray, drew connections between biodiversity and the health of the farm in a holistic sense: 'I like having the areas of trees, I think it's good for wildlife, it just enhances the area in general'. While farmers value trees for these reasons, they didn't see them as an integrated part of the farm business. Describing a farm woodland, Callum explains: 'It's part of the farm, so we would think of it as a farm asset. But it isn't integrated, really, in any way'. In a similar vein, Murray describes his motivation to have trees on his farm: 'It's less financial probably and more just, yeah, for the good of the community and the good of me and my family'.

The cereal farmers we spoke with want to live and work in a healthy environment, to run a sustainable business, and to leave a positive legacy by doing these things well. While they may not directly link trees to the farm business, they do see growing trees on farms as a way of improving farm health in a holistic sense, as well as contributing to a sense of wellbeing and pleasure in the landscape. Many of the farmers expressed an awareness of the growing impacts of climate change and the need to create a resilient farm environment, as well as a desire to contribute to broader mitigation measures. These farmers extended their understanding of custodianship to a broader sense of social and environmental responsibility, within which trees are perceived to play a key role in managing the land in a way that ‘enhances’ the environment:

‘Leaving land uncropped goes against some older people, but they are now having less influence on farming. So I hope the next generation will be much much much more aware of the need to enhance the environment, because it’s all around us, the problems we see, global warming is everywhere, isn’t it?’ **Aaron**

Cereal farmers value having trees on their land, but prefer them to be in the margins

‘Where we’ve had a couple down with the ash dieback, it has changed the skyline. I’ve now known those trees there all of my life, and now they’re not [there]. So, I don’t like not seeing them. I just think there’s the right place for them.’ **Niall**

The cereal farmers we interviewed valued trees for a range of reasons, including their biodiversity benefits, ecosystem services, personal significance, and aesthetic beauty or historic interest. In our survey⁵ of 70 cereal farmers, 59% said they were likely or extremely likely to plant trees in the next five years. However, interviewees repeatedly expressed that the ‘right place’ for trees on arable land is in field boundaries, margins, corners, or unproductive land. Compared to other farm types, on arable land there are limited opportunities for growing and planting trees that do not disrupt in-field operations in some way. Because of this, tree planting was often viewed as likely to incur financial loss or to be lacking in financial benefit:

‘When you start putting strips of trees in across fields, whether you have them 24 m or 36 m wide arable strips in amongst rows of trees, that’s quite a jump for a lot of arable farmers... are they going to compensate for the loss of the farmland underneath them?’ **Murray**

Related values



Farm business: profit



Environmental values: ecosystem function, biodiversity



Food production



Landscape relationship: aesthetics, enjoyment

It follows that potential locations for growing and planting trees are a particularly important consideration for cereal farmers – especially in relation to the viability of in-field trees. Paul advised that any policy encouraging the growing of trees on arable land should be ‘realistic in where to introduce and increase in-field trees’.

While cereal farmers emphasised the challenges posed by in-field trees in particular, none of those interviewed had actively removed any in-field trees from their land. Several had adapted their farming practices to work around these trees, which they identified as having aesthetic, personal, or historic value. Many farmers identified existing trees on their land (including in-field trees) as ‘part of our heritage’ (Aaron) – features of the landscape which are there for a reason and reflect the knowledge and practices of previous generations:

‘That’s what I have inherited, all the trees and hedges, that’s the package if you like. They’re here, they’ve always been here, and we would be disappointed if they weren’t here. But whether we should have more or not, I’m not sure that... again, that’s a difficult question because everything is financially linked to everything else.’ **John**

These aesthetic and historical values are an important part of how cereal farmers viewed trees. However, as John articulates above, these values are not necessarily directly conducive to growing and planting trees on a larger scale, or outside of acceptable places (e.g. margins, hedges). While farmers referenced replacing trees lost to disease, or ‘filling in gaps’ in hedges, none expressed a coordinated, active plan for succession of these valued trees.

⁵ This will be available on the project [webpage](#).

Opportunities to align tree cover expansion and cereal farming

Our research highlighted three notable opportunities for farmers' values to align with attempts to increase tree cover on farmland. This section will explore these opportunities.

Soil health is key to cereal farmers' understandings of farm health

'There's got to be some thought for the long-term future, especially looking after soil, it's the old thing, we all survive because of six inches of soil and the fact that it rains... we all need to be protective of the soil as much as we can, if not for ourselves, for our next generation and the generation after that.' **Murray**

Most of the interviewed cereal farmers emphasised that farm health is underpinned by soil health: 'A healthy farm is a farm that has good organic matter in the soil... no erosion from the soil' (John). In terms of the benefits that trees could bring to arable farming, Albert described how, compared to other farm types, cereal farming is 'more to do with what goes on under the soil'. Several cereal farmers reflected on the damage caused to soil health by post-war policies that promoted intensive agricultural production, including the extensive use of pesticides: 'There is no doubt that cheap food has cost the earth' (Aaron).

Related values



Farm health: crop health, farm sustainability



Farm business: future planning

Most farmers we spoke with had experimented to various degrees with ways to improve soil health including organic farming, longer rotations, reducing tillage and inputs, growing cover crops, and bringing animals onto the land for manure. Niall described how, by incorporating organic matter and overwinter cover crops, 'we're trying to keep things healthier'. In the same vein, Paul, who tries to reduce inputs where he can, expressed: 'Soil health is a big thing... [we're] constantly looking to improve soil health'.

Given that cereal farmers recognise the importance of soil health to the farm business, the benefits trees can bring to soil provide an opportunity to encourage farmers to increase tree cover on their land. Albert, who has an interest

in agroforestry, explained: 'I'm getting into the chemistry and all the rest of the microbial activity under the ground, the root systems. The trees are all part of that'. Others identified the role trees can play in providing shelter from the elements and protecting against soil erosion: 'We had actually lost two acres of sugar beet to windblow. I mean, hedgerows are one of those things that helps break the wind up, and trees' (Arthur). Likewise, Murray noticed that in a year of heavy rains 'I think the trees have actually protected the soil underneath a little bit and it hasn't allowed the rain to hammer the soil down quite so hard and the crops have actually come up better underneath the trees'.

While some farmers we interviewed identified benefits of trees to soil health, these advantages did not appear to be motivating them to plant more trees at the present time. Farmers tended to see these benefits as 'indirect', and not sufficiently tangible in terms of economic value to be worth the potential disbenefits (e.g. loss of productive land, maintenance costs, issues navigating machinery). Soil health can be an area of opportunity for increasing tree cover on cereal farmers' land, but this would require the value of trees for soil health both now and in the future to be communicated through clear, easily accessible information. This is particularly important regarding microbial processes where the benefits of trees to soil health are not easily visualised. Quantifying the value of trees to soil health in terms of financial benefit may also help to advocate for increasing tree cover on farms (e.g. the likely financial cost of crops lost to windblow of soils without increased tree cover, and with increased tree cover).

Cereal farmers see trees as a way of providing and connecting habitats

'The margins around the fields are intensively managed for wildlife, whether that's birds, bees, insects, whatever. So we put the same attention to detail in the environmental stuff as we do in the cropping... it's a good synergy.' **Aaron**

Most of the farmers we spoke to saw a healthy farm as one with wildlife present. While farmers did not always see the benefits of trees as an integrated part of the farm business, they often recognised the beneficial role they can play in providing and connecting habitats for the wildlife they want to see on their farms. Farmers highlight that trees are particularly valuable habitats for insects that act as pollinators and predate on pests: 'The wildlife can be useful in the sense that you can get ladybirds and other hover flies that eat the aphids that we always find annoying and have to spray with masses of insecticides' (Albert).

Callum saw trees playing a larger-scale role in the future of his farm business through integrated pest management. He described his plans to plant hedges as a way to 'connect the wood to the rest of the farm'. By growing more trees, he hopes to encourage wildlife and predation on pests, which in turn would reduce his reliance on insecticides that damage the soil: 'I think enhancing the pathways and the habitats that we have will help beneficials and, hopefully, be part of the reason why we can use less insecticides'. This links to cereal farmers' concern for soil health and a broader desire shared among the interviewees of 'getting away from chemical farming' (Albert).

Related values



Farm health: crop health



Environmental values: ecosystem function, biodiversity



Landscape relationship: enjoyment

Several farmers highlighted that the presence of wildlife contributes to an enjoyable place to live and work, with some interviewees directly linking this to their own wellbeing: 'Walking around seeing flocks of songbirds, hares... is great. It just makes you smile, it's good for you' (Aaron). Others expressed a sense of respect and awe for the ability of trees to support wildlife. They described having to weigh up and, in some instances, choose to prioritise these environmental values, even where doing so means keeping in-field trees that are considered to be 'in the way' of farming operations:

'When I'm at work, drilling or spraying and I'm fiddling around the tree and I curse them and I think, "I'm just going to chop you down." Then I stand back and look at it and I go, "Well, it's a very nice looking tree." I think, "Well actually, what's it supporting, how much wildlife is it supporting? Probably more than the mind can fathom."' **Paul**

Given these cereal farmers' care for soil health and enthusiasm for wildlife, presenting trees as a way of connecting existing habitats and encouraging beneficial insects onto the farm could be an opportunity to promote growing and planting trees. As Niall explains: 'It's thinking how you can link bits of habitat together... how do you make them work together?' Some farmers described connecting the areas of woodland or hedges they have as a 'good place to start', and in some instances this could provide a prompt for putting more areas of adjacent land into AES.

However, farmers may be dissuaded from acting on this opportunity by their perception of a time lag between planting trees and trees reaching a stage of maturity where they can be relied upon to provide such benefits: 'Given that the trees are two years old, there isn't really a benefit just at this very second in time' (Callum).

To overcome this concern, it may be helpful for farmers to be provided with reliable information on the habitat and environmental benefits of saplings and young trees and their ability to support insects that predate on crop pests.

Cereal farmers are open to changing practices when advised or informed by trusted sources

'We are using independent agronomists which is expensive, but I think we need that help because we are doing things a different way. We're going back to school.' **John**

Most of the cereal farmers we spoke to expressed a willingness to engage with advice and information on how to manage their farm and improve their farming practices. This reflected a sense among many of the farmers that 'there are big changes coming' (Harry) in farming, with help needed to navigate issues around sustaining a profitable business, increasing resilience to climate change, and better preserving the environment. How cereal farmers seek advice, and from whom, varied across the interviewees: agronomists, business consultants, other farmers, independent trial results, and social media were all included in responses.

Farmer Cluster groups had been important to Albert in providing information on managing the wider farm environment in a more regenerative way. He was enthused to try elements of a regenerative approach having visited a neighbouring farmer who was pioneering agroforestry. He explained: 'We used to go and see what he'd established and see barn owls flying around. It just made you realise, you know, too many chemicals, the wildlife don't like that'. Albert had also participated in AES and was influenced by his farm advisor to consider how trees might be part of the farm's future even where he does not feel he wants to incorporate them currently:

'The lady who helped us do the Countryside Stewardship wanted us to put a beetle bank in a line of trees halfway through. Running big machines around, you know, was a bit of a no-no. But actually, I think the way things are going, it probably would be the way of things to come with avenues of trees.' **Albert**

Related values



Farm health: crop health, farm sustainability



Environmental values



Social influence



Farming identity: practices, expertise

Arthur described joining a Farmer Cluster group which he felt had reduced his sense of isolation and has led to a situation whereby 'there's more openness amongst us'. He explained that 'the group of us have actually paid for an advisor or someone to coordinate us. That's where I'm getting the main information from'. John, who heavily relies on his agronomist for advice, also felt influenced by other farmers and described an ongoing process of communication: 'I think we're all talking all the time about what's happening and not happening. What should happen, what shouldn't happen. Yes, I think we influence each other a lot'. In terms of increased communication, Niall mentioned the growing influence and role of social media: 'There's all sorts of social media people are talking on or videos and stuff... 30 years ago, all you could do was read... but now, there's information everywhere, isn't there?'

Given that cereal farmers are open to acting on advice and information ascertained through trusted sources, these interactions could be opportune routes for sharing information on how trees can help farmers mitigate some of their current challenges (e.g. maintaining soil health in a changing climate). However, some advisors may not be willing to encourage cereal farmers to move away from more conventional farming practices. Callum described his agronomist as 'the only one external party that (has) a big influence' on the direction of his farm. He anticipates that the agronomist will not support his plans to move towards integrated pest management because the agronomist tends to be more 'conventionally minded'. Thus, policy attention may need to focus on agronomists and advisors, trying to ensure that they understand and communicate the benefits of trees to the farmers they work with. Policymakers may also want to consider targeting Farmer Clusters or other such groups where farmers discuss these issues among themselves.

Barriers to tree cover expansion on cereal farms

Having outlined opportunities for tree cover expansion to align with cereal farmers' values, we now turn to barriers to tree cover expansion on cereal farmers' land. These include instances where cereal farmers' strongly held values do not align with tree cover expansion. Additionally, we explore some of the structural determinants that may limit cereal farmers' ability to increase tree cover, even where they might wish to do so.

Trees 'get in the way' of arable farming operations and food production

'To put an extra tree in, it just makes it harder work for everyone. And you get more wastage around [trees]. It's better to have a tree on a boundary than in the middle of a field for us.' **Niall**

Related values



Farm business: profit, risk



Food production



Farming identity: practices

As discussed, the farmers we spoke with want to retain their existing tree cover but are uncertain about the trade-offs of increasing trees on their farms – particularly in-field on productive land. Producing food is an important part of cereal farmers' identity as well as being their livelihood. Farmers described a sense of 'duty' and responsibility in relation to producing food, and pointed out that growing trees can be in tension with this: 'I do like trees, but I still think as landowners of good arable land, we have a moral obligation to produce food' (Murray). Trees were perceived to 'get in the way' of food production in terms of being a physical inconvenience to farming operations and a potential loss of productive land. This perception of trees as 'getting in the way' of food production and farming operations presents a barrier to increasing tree cover on cereal farms.

As Murray voices above, many of the farmers argued that it was wrong to plant trees on productive land, particularly if it means an increased reliance on importing food from elsewhere: 'Yeah, trees do an amazing job, but if we're then importing it from miles and miles away, it's certainly going to be taking some of that benefit away' (Niall). Niall then reflected on the changing expectations of farmers, and described how producing food is a 'mindset' as well as a financial necessity: 'Quite hard to get out of the mindset that you've been brought up to produce food. And now, people are saying "No we don't want food. You've just got to look after the environment"'.

As discussed in the 'General findings' section of this report, the farmers we spoke with thought that the 'right place' for trees on arable land is in field boundaries, margins, corners, or unproductive land. In-field trees were widely perceived and experienced to lead to issues with navigating machinery and using technology. Farmers pointed out that modern farming machinery has grown in size and requires more space for manoeuvring, in turn making in-field trees more problematic to navigate around: 'Modern machines now, they're so big, they don't turn on a sixpence, they need half an acre to turn round sometimes' (Albert). Other farmers, like Paul, had experienced trees disrupting satellite navigation technology: 'They shadow technology. If you drive under it with your sat nav for your tractor, it cuts out' (Paul).

Further to this, and given the rising costs of modern machinery, some farmers were concerned that debris from trees might damage farm equipment. Callum described the extra time and labour involved in having lots of mature oaks on the farm: 'There's a lot of boughs fall, so it's a case of having to walk underneath ahead of the combine so that you're not combining great chunks of wood or running the risk and having a breakdown'. Other farmers, like Aaron, pointed out that trees might be damaged by farming operations: 'Trees in a big, arable field are a hindrance and they will get damaged by in-field operations'.

For some cereal farmers, the geography of their farm rendered these issues more acute: 'I would think most people in the south-west would be of a fairly similar mindset, that, given field size, in-field trees are good, but we don't want any more' (Paul). Running a farm made up of many small fields can make trees more problematic to farming operations than they might be on a farm with larger fields. Spatial considerations may thus further contribute to the sense that growing and planting trees is best kept separate to farming business on cereal farms.

If cereal farmers are to increase tree cover on their land, they will need to feel assured that this can be done in a way that does not negatively impact the functioning of farm machinery. They may need to be convinced that the benefits of having increased tree cover on their farmland (e.g. for soil health) outweigh the perceived drawbacks, particularly disruption to food production. The relationship between trees and food production will need to be approached in a sensitive manner, acknowledging the ways in which trees can complement, and not replace, production of food.

Trees are in conflict with crop health

'For most arable farmers, a big tree is usually a bit of a pain because it casts a shadow on your field, it causes uneven ripening, and it causes birds to then sit in the tree and then graze your corn when it's nearly ripe.' Niall

Related values



Farm health: crop health



Farm business: profit



Food production

Crop health is central to the business of cereal farmers. Murray explained that 'we think about crop health a lot, it underpins everything we do basically'. Despite our participants recognising the value of trees for increasing soil health, several thought trees could negatively impact crop health. Some felt that trees could have a potentially negative impact through competing for sunlight and over-shadowing crops and thus preventing growth and ripening. Callum explained, 'Often the crops aren't ripe underneath or around the trees, or they're flat underneath or around the trees', while Paul said, 'Hedgerow trees are great but as they come out over the field they shadow the crop'.

Others expressed concern that trees bring greater numbers of wildlife such as birds onto the farm, which can graze corn and thus reduce yields. Further, Callum reflected that trees could be a habitat both for beneficial insects and for insects that can be vectors of diseases that threaten crop health: 'On the flipside, it's probably a habitat for aphids, which are a vector for a lot of diseases'.

Some cereal farmers, like Arthur, thought that trees could compete with crops for water and were uncertain about the impacts this could have on crop health. Like others, Arthur was also uncertain about the relative pros and cons of trees shading crops.

'Unless you get enough rainfall at the peak rainfall period or whatever on the crop, I don't know quite what the yields will be like because the trees are going to take quite a lot of water. Normally, you find that wheat under trees is actually stunted because you have a lot of root under the ground, and that's taking the moisture.' **Arthur**

While concerns that trees might threaten crop health act as a barrier to cereal farmers increasing tree cover, there is potential to tap into the uncertainty expressed by some of those same farmers. Farmers need to be presented with accessible information about the benefits of trees on cereal farms that takes into account their areas of concern.

Trees take time, money, and effort to establish and maintain

'It's been quite a lot of work trying to keep them alive the last two years.' **Callum**

As discussed, the cereal farmers we spoke with tended to see trees as either a financial loss or of no direct financial benefit to their farm business. In addition to this, some of the cereal farmers found the various costs and risks associated with tree planting to be prohibitive. Participants noted the economic costs including the time, labour, and capital of sourcing and planting trees, as well as the related cost of taking land out of agricultural production. These costs form an additional barrier to increasing tree cover on cereal farms.

Related values



Farm business: profit



Food production



Farming identity: practices

'The upfront cost was more significant than I imagined and the ongoing management costs. I didn't have enough ground that I felt was poor enough to take out of agricultural production to grow trees, to make it financially sensible to go down the trees and forestry route.' **Paul**

Our interviewees also noted the ongoing costs. Some cereal farmers felt that an intense 'coaxing along' (Albert) period of establishing trees was limited to the first few years, and felt that tree maintenance has become less, rather than more, time consuming. However, Niall, whose neighbour runs a plantation, expressed: 'It's not just throw them in and (not) spend any money on them for the next 30, 40 years. It's definitely not all profit, which I think people see it as'. Other farmers, like Arthur, found that older trees can cause additional maintenance problems around safety, increasing associated time costs:

'Some of them are quite a nuisance because they keep dropping. And trees, actually, when they get old, are not low maintenance. They are quite high maintenance. You have to keep an eye on them because if they're overhanging highways, etc., you're always getting questions about whether they are safe.' **Arthur**

Some cereal farmers we spoke to had concerns over return on investment where they had planted trees as part of a farm business strategy. Those farmers felt that tree planting for timber was not a profitable endeavour, or not as profitable an endeavour as expected. Harry describes how the income from wood 'comes to more than the cost of felling the wood, but sometimes not a lot more. If you then look at replanting and everything, woods don't actually make us any money'.

Cereal farmers also discussed the potential cost of losses on their investments. Some had experienced trees succumbing to disease or drought. Others had experienced trees failing to grow into mature trees due to grazing pressure from deer: 'We've now got a lot of deer that we didn't used to have before. And so, planting up woods becomes really difficult, because obviously, the deer tend to take the young trees, and then they never grow' (Harry).

Niall highlights that the trade-offs between tree planting and business considerations are perceived as riskier by those in a less financially secure position, or with smaller farms:

'We're not a very big farm. So, to lose stuff to trees long term, you know, if you haven't got enough acres, you've got a job to make the figures stack up for investment into machinery and stuff.' **Niall**

If cereal farmers are to be persuaded to increase tree cover on their land, they need to feel certain that they will not lose money on their investment, and they will need to feel sure that they have the ongoing labour power to maintain trees and to manage issues with disease and deer pressure.

Discussion

Key values relating to cereal farmers and trees

Through the evidence presented above, several values emerge as being particularly important when looking to increase tree cover on cereal farms. We have listed in Table 4 those values that appear of greatest importance (mean score of 8 and above) and include the relevant mean scores from the survey, which generally support their importance. Note that the survey asked participants to rate the importance of these values (as worded in the table) to them 'as a farmer'.

Values relating to farm health, the farm business, the environment, and farmers' relationship with the landscape appear to be most prominent. Because of this, appealing to these values can offer the most promising opportunities for those looking to expand tree cover on cereal farms.

Consideration of each value typically highlights both opportunities for increasing tree cover and barriers to doing so. For example, the value of farm health may encourage farmers to plant trees if they believe trees will benefit soil and crop health or may dissuade them from doing so if they do not. The high score given to food production, however, is only likely to highlight barriers as tree cover expansion is often seen in direct opposition to efforts to produce food and none of the farmers saw food production opportunities from trees as a serious consideration.

Table 4 Selected important values and corresponding survey scores

Value	Value domain	Survey wording	Score
Crop health	Farm health	The health of my livestock or crops	9
Profit	Farm business	Making a profit	8.9
Farm sustainability	Farm health	The sustainability of the farm	8.5
Food production	Food production	Producing food	8.6
Custodianship/stewardship	Environmental values	Being a steward or custodian of the land and environment	8.6
Aesthetics	Landscape relationship	What the landscape looks like	8.3
Future planning	Farm business	Planning for the future, either for myself or for future generations	8.2
Biodiversity	Environmental values	Supporting wildlife and biodiversity	8

Farmers cannot always act in line with their values

'If I have to make a decision on, "Do I do something that is the most environmentally friendly and will lose me a lot of money, or do I do something that looks the right thing to do financially, but it's not the most beneficial to the environment?" then I have to take the second option.'

Harry

All of the farmers we spoke with valued trees for a range of reasons, but particularly for their contributions to biodiversity and ecosystem services. However, farmers did not always feel like they were in a financial position to act on these environmental values. There was a sense that in an arable farming context, the trade-offs between food production and expanding tree cover are riskier because trees are harder to integrate into the farm environment without disrupting in-field operations. As Harry describes above, many farmers perceived this as a trade-off between environmental benefits and doing what is right for the business.

Some farmers expressed a desire to plant trees but couldn't due to lack of funding, or the existence of funding requirements they could not meet. For example, John describes how 'it would be nice if we could protect the waterways by having strips along the side of all the waterways, but because they pay so little money I can't afford to do it'. Some interviewees predicted that larger

government payments for a wider variety of environmentally friendly practices are on the horizon and feel they will be more likely to prioritise environmental sustainability when this happens. Others expressed uncertainty and frustration with what they perceived as a proliferation of inconsistent grant schemes and legislation:

'There's so much legislation, you've now got to try and comply with everyone's requirements. But the problem is everyone doesn't know what each other's requirements are, and there's such a cross over between requirements.' **Arthur**

Arthur went on to describe how this uncertainty has impacted his decision making around which schemes to apply for: 'There's no point in signing up for something now for 30 years where a scheme could be better that has not been finalised'. Likewise, Callum described weighing up whether he should 'hang out and hold out to see if (tree planting) can be an income stream directly in itself' with new grants becoming available down the line.

As Niall explains, it is important to consider the trade-offs of tree planting relative to the financial situation of each farmer: 'There's all this sustainability and regenerative farming and stuff, [but] it's a business and we have to make some money to survive and to carry on what we're doing'. If cereal farmers are to increase tree cover they will need to feel certain that they can do so while maintaining their livelihood.

Cereal farmers are uncertain about the benefits of trees in an arable context

'We think of the environment more in the margins, like, literally, the margins and don't really consider it in what we're doing in-field. But it's probably a more logical progression if you're not going to go whole hog straight away to enhance the margins and then work in.' **Callum**

The cereal farmers we interviewed appeared to be weighing up the trade-offs between what they perceive as the potential benefits and disbenefits of increasing tree cover for their arable farming businesses. In many cases, these deliberations led farmers to feel further uncertainty. For example, while some farmers identified ecosystem services that trees might provide, including habitats for beneficial insects, improving soil health, and shelter and shade for crops, these did not serve as a primary motivator for tree planting. Farmers remained concerned that trees might at the same time draw nutrients and water away from crops and disrupt farming machinery. Thus, some cereal farmers remain unsure that increasing tree cover will positively contribute to farming operations. Some farmers

pointed to the fact that, compared to livestock farms, for example, the benefits of trees in an arable context are less direct: 'They're great to see, but there's not a straight-line benefit, I don't think, for an arable farmer' (Niall).

The uncertainty that farmers express about the beneficial aspects of trees to soil and farm health forms an area of opportunity for communicating the benefits of tree planting for soil and farm health more clearly. Cereal farmers need to feel certain that the long-term benefits of trees for the health of their soil, and thus farm, outweigh the disbenefits they perceive, such as upfront costs, length of time to reach maturity, disruption of farm machinery and technology, and potential impact on crop health through competition for sunlight and water. While opportunities for planting in an arable context pose particular challenges, farmers (as Callum describes above) may see the margins as a good place to start with tree planting, which could lead to a more integrated approach with in-field operations down the line.

Farmers want to create a resilient farming environment

'Our goal is to make the farm more resilient, whether that be with the soils, to make them capable of withstanding higher temperatures [and] greater rain events that we haven't seen before.' **Aaron**

Most of the farmers we spoke with wanted to create resilient, sustainable farms and acknowledged the role that trees can play within that. Resilience was framed in relation to growing awareness of the impacts of a changing climate and the need to respond via land management choices: 'I mean a huge factor is farming through climate change and being resilient to that and cropping choices' (Paul). Farmers recognised the role that trees can play in protecting crops and soil from heavy rain, windblow, and extreme heat. They also recognised the benefits of creating a healthy, biodiverse landscape as a form of mitigation against habitat and nature loss, as well as a way of sequestering carbon:

'What do we farmers manage, 70% of the land in the country? So I think it would be a bit tone deaf to not acknowledge that we have a major role in doing good, enhancing habitat or trying to fix carbon or undo some of what has been done... I think it's just the right thing to do, really.' **Callum**

All of the farmers we spoke with want to live and work in a healthy environment. Some, like Callum and Murray, connected this to a broader sense of social and environmental responsibility: 'Every farmer recognises that we have an impact on the environment and every farmer

wants to reduce that. Because we live here, it's our environment' (Murray). Like many of the farmers we spoke with, Murray went on to emphasise a sense of personal responsibility to the next generation, and his children in particular:

'I don't want my children in 20 years' time saying, "Why didn't you try and do something about this Dad? What did you do? Why didn't we plant some trees, why didn't we try and create some habitat, why didn't we try and reduce some of this biodiversity loss?" **Murray**

Concerns over climate change and the need to manage land in ways sympathetic to the environment has meant some participants are reluctant to remove any trees from their land: 'It just doesn't seem right to take them down, especially when they're wanting to plant more trees' (Paul). However, as discussed, holding the environmental values related to these concerns does not necessarily mean cereal farmers feel able to plant more trees. Highlighting how trees can contribute to a resilient farm environment could be an important part of any strategy which seeks to communicate the benefits of trees for soil and crop health.

Conclusion

This research has demonstrated the range of values which are important to cereal farmers. We have suggested that attending to these values is important when seeking to expand tree cover on cereal farms over the long term. The research has highlighted values which are more likely to be met positively in conversations with cereal farmers about expanding tree cover, including farm health, environmental values, and farmers' relationship with the land. These values are closely intertwined and understanding this is important. The interconnections can both amplify the power of a given value (e.g. farm health is valued for a variety of reasons including business concerns, environmental values, and landscape relationship), and help us to understand where values may be in tension.

Cereal farmers are not a homogeneous group: while this research presents some broad opportunities and barriers that emerged from our sample, this should not be taken to represent the views of all cereal farmers. Our research indicates that there is an opportunity to work with some cereal farmers to explore their openness to adding trees to their farms. However, the conversations and communications should focus on how this will complement their farming activities, rather than offer an alternative livelihood strategy.

Finally, holding values does not necessarily mean they will be acted upon. Recognising and understanding the things that matter to farmers is important and it appears that several of these values would align well with expanding tree cover. However, cereal farmers may need help to ensure they are able to act upon these values.

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Appendix 1 – interview guide

Preamble

Thank you for talking with me today. I'll just start by giving an overview of the project, talking through the consent process, and answering any questions you may have before we begin.

Project overview:

- This project builds on **existing work looking into the values of farmers (survey and interviews)** – in relation to their practices, relationships, and the landscapes where they farm. We're interested in what really matters to farmers.
- As you may know, the UK Government is aiming to increase tree cover in the coming years. To meet these tree-planting targets, it is likely that more trees will need to be planted on agricultural land. As part of this programme, Defra have funded this research. However, I'd like to highlight that Forest Research is neutral – **our aim is to understand and present the perspectives of farmers. Our role is to provide evidence.**
- In this interview we want to focus on how cereal farmers value trees on their land – **particularly non-woodland trees** (i.e. not just forestry and woodland creation). Some of the questions may not be directly about trees – this is because we're interested in what matters to you more broadly.

- By understanding how farmers value trees, we will be able to make recommendations to the government around policy design and communication with farmers.
- Any questions?

Consent:

*Note to researcher: Make sure you have checked their consent answers

- Review and reconfirm informed consent.
 - Check they have read the information sheet.
 - Check they are happy for recording.
 - Encourage to speak as openly and honestly as feel comfortable. No obligation to answer anything. No right or wrong answers.
- Explain interview.
 - Up to 60 minutes – aware that your time is valuable, so we may condense bits of the interview or I may steer us back on track if we go a bit off topic.

Questions

Section 1 - Introduction (5 minutes)	
Farming system	<p>Can you tell me a bit about yourself and how you run your farm?</p> <p>*Researcher can use table of survey answers as prompt if required:</p> <p>PROBES:</p> <ul style="list-style-type: none">– Types of crops and what they do with them (inc. farming methods – tillage, rotation, soil health, sowing methods, harvesting, intercropping)– Other land uses and income-generating activities– AES participation– Geography, layout and size of farm (inc. types of boundaries)– Tenure– How farm changes year to year– Sources of advice/information <p>Can you tell me about the trees on your farm?</p>

Section 2 – Values framework questions (20 – 40 minutes – about 5 minutes per domain)

1. Landscape relationship	<p>Can you tell me about the landscape where your farm is located?</p> <p>How do you see your role as a farmer in this landscape? What about this landscape matters to you? How do you think trees do or should fit into this landscape? – Why/why not?</p>
2. Farm business	<p>What are the most important considerations to you in terms of your farm business?</p> <p>How do trees figure in how you run your farm business? Prompt: How do they affect how you run the business?</p> <p>Do you think there is a ‘right’ way to do cereal farming?</p> <p>Or is there a wrong way? How can you tell if a way is right or wrong? Can you give me an example?</p>
2.1 Future planning	<p>On what timescales are you thinking when you are making decisions about how to run the farm?</p> <p>Prompt: For example, are you thinking just about the current or coming season, or planning several years in advance, or thinking longer term? Can you give an example of this?</p>
3. Farm health	<p>Does it mean anything to you to talk about the health of the farm?</p> <p>If no: How does (a concern about) crop health impact your decision making on the farm? How, if at all, does sustainability impact your decision making on the farm?</p> <p>If yes: Can you explain what it means to you? (Then go back to the ‘if no’ questions.)</p> <p>Do trees affect your decision making in terms of crop health and the sustainability of your farm? How?</p>
4. Farming identity	<p>What does it mean to you to be a cereal farmer?</p> <p>Do you think there are differences between cereal farmers and other farmers? What do you value about being a cereal farmer? How do trees figure in what it means to be a cereal farmer?</p>

Section 2 – Values framework questions (20 – 40 minutes – about 5 minutes per domain)

5. Social influence – public and other farmers	<p>Does the public have any influence on your farming? Can you give an example of how?</p> <p>Do other farmers have any influence on your farming? Can you give an example of how?</p> <p>Other than the public and other farmers, is there anyone else who influences the decisions you make? Can you give an example of how?</p> <p>Has anyone/anything influenced how you feel about trees in relation to your farming? – Has this changed over time in any way?</p>
6. Environmental values	<p>How do you think about the environment in relation to your farming practices?</p> <p>How do you see your role in relation to the environment? – How do trees fit with this?</p>
7. Food production	<p>In your opinion, what is the relationship between trees and food production?</p>

Section 3 – Barriers (10 minutes)

	<p>We have talked so far about a number of things that matter to you as a cereal farmer and with specific regard to trees. That being said, we know that we can't always act in line with the things that matter to us the most.</p> <p>Can you think of anything that prevents you from farming in the way you want to, or in line with the things that matter most to you?</p> <p>Prompt: Things like time, space, money, legalities, etc. Probe further in relation to trees</p> <p>Is there anything else you would like to tell us?</p> <p>Do you have any questions for us?</p>
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Thank you and close

This Research Report explores the issues that matter to cereal farmers in England regarding trees and increasing tree cover on farms. It draws on 10 interviews with cereal farmers and a farmer survey which included 70 cereal farmers, to build on a map of values developed in prior research. The report looks beyond financial considerations to explore the other factors which guide and shape farmer attitudes and behaviours in this area. Understanding the range of values held by farmers in relation to trees allows us to learn how, when, and where farmers may embrace having trees on their land. This will better enable those working to design policies, incentives, tools, advice, or other communications to do so in ways which are more likely to succeed in delivering enduring tree cover expansion on farms.