

Trees and farmers' values: Findings from a survey of agricultural land managers in England

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Executive Summary

This report presents findings from a survey of 393 farmers in England, nationally representative by farm business type, tenure, and age. It forms part of a <u>project</u> exploring how farmers' values (what they consider good or important in life) can impact their willingness or ability to grow trees. Previous research had identified 32 relevant social, cultural, and moral factors and had grouped these into seven value themes: farm health, food production, farming identity, landscape relationship, farm health, environmental values, and farm business. The survey explored:

- i. How important are the identified factors to a nationally representative sample of farmers in England?
- ii. How influential are the value themes in relation to farmers' decisions about planting trees on their farms?
- iii. How likely are farmers to plant trees in different farm contexts?

Participants were recruited directly by a market research company with access to a farmer panel and through sharing a link with relevant networks. Two hundred and seventy-four participants completed the survey through a telephone interview, while the remaining 119 did so through a self-led online survey questionnaire.

Participants were asked to score the importance of 20 of the social, cultural, and moral factors. Most scored highly, with five receiving median scores of ten (on a scale of 0-10 where 0='not important at all' and 10='extremely important'). These factors were 'profit', 'livestock/crop health', 'food production', 'farm sustainability', and 'doing it the "right" way'. The two factors within the farm health theme were both in the top five rated, while factors related to food production and landscape relationship also scored highly.

When asking about the importance of the seven value themes when specifically thinking about tree planting, all themes had a median score above six. Three themes scored particularly highly (with median scores of nine) – farm health, farm business, and food production. Statistical analysis found that three variables had a

significant association with the importance farmers attribute to different value themes: farm business type, tenure type, and prior planting experience.

In terms of previous tree cover expansion, more respondents had either planted trees (49%) or allowed them to expand their range naturally on their land (46%) than had not done either (34%). Hedgerows were the most frequent locations for both planting trees and allowing them to expand naturally. The most common reason respondents had expanded tree cover was to benefit wildlife (n=56), with hedgerow expansion the second most common reason (n=43).

In relation to plans for future tree planting, most participants said they were likely to plant trees in the future. Exploring the likelihood of planting in specific farm contexts revealed that farmers with certain farm types were more likely to plant along boundaries (arable and livestock farmers), on unproductive land (arable and livestock farmers), and in unused edges (livestock farmers).

In relation to barriers and enablers, our results suggest that attempts to increase tree cover on farms need to properly consider the costs of the planting and maintenance, as well as the impact of restrictions and requirements associated with grants for planting, ensuring flexibility where possible.

Introduction

Project background

This report forms part of a project exploring how farmers' values can impact their willingness or ability to grow trees, with a view to better understanding the opportunities and barriers to farmers contributing to government afforestation targets in England. Values can be understood as an expression of what matters to people, or what they consider to be good and important in life; research suggests that the values people hold can influence how they act. The project overall seeks to understand what matters to farmers in England, looking beyond financial considerations to explore which other factors affect whether they may expand tree cover on their farms. It focuses on things farmers value for social, cultural, or moral reasons. From 28 farmer interviews and an evidence review (all conducted between October 2021 and July 2022), the research team identified 32 of these social, cultural, and moral factors, which we grouped into seven broad themes.

This report presents results from a questionnaire survey which sought to evaluate the importance of 20 of these social, cultural, and moral factors and the seven overarching themes (Figure 1) across a nationally representative sample of the farming population in England, both in general and in the context of tree planting on their farms. The report is guided by the following research questions:

- 1. How important are the identified factors to a nationally representative sample of farmers in England?
- 2. How influential are the value themes in relation to farmers' decisions about planting trees on their farms?
- 3. How likely are farmers to plant trees in different farm contexts?

See the project <u>webpage</u> for further information about and publications from the project.



Figure 1 – Seven value themes and 20 associated values, reflecting what matters to farmers in relation to trees on farm

Methodology

Sampling approach

A stratified quota sample approach was employed to ensure representation of different farmer types. A prior evidence review (unpublished; 23 references used; search terms provided in Appendix 4) indicated that three key characteristics which are likely to influence farmers' relationships with trees are tenure type, farmer age, and farm business type. The sampling strategy therefore focused on achieving a representative sample in respect to each of these characteristics. Survey

recruitment was undertaken by a market research company with access to a farmer panel and network of farmers. The survey approach chosen was computer assisted telephone interviews (Kelly 2008), whereby a researcher called farmers using contact information stored in their panel database and read and completed the survey questionnaire on the telephone. The survey questionnaire was also made available online for self-completion; the link was emailed directly to a series of market research company farmer panels and databases and was distributed within a network of agricultural newsletters and on farming forums.

Survey design

The survey questionnaire had sections collecting information on farm characteristics, demographic characteristics, factor importance in relation to farming generally, value theme importance in relation to tree planting, and on-farm tree cover expansion behaviour. The complete questionnaire is provided in Appendix C.

The farm characteristics section collected information on tenure and farm business type, alongside farm location (region), how long the respondent has farmed, farming generation, farm size, types of farm boundaries (e.g. hedgerows, watercourses), and whether the respondent had ever been involved in agri-environment schemes. Information collected on participant demographics included age, gender, and education.

Two sets of questions explored the importance of the previously identified values to participants. The first set asked respondents to rate on a scale of 0-10 (0='not important at all' and 10='extremely important') the importance of each individual social, cultural, or moral factor to them **as farmers generally**. To reduce respondent fatigue, we tested a sample of 20 of the total 32 factors. We did this by assessing each factor's suitability for translation into a closed-response question (i.e., some were too abstract), including a maximum of five factors per value theme, and ensuring they were sufficiently distinct. As described above (Figure 1),

each factor relates to a particular value theme. Table 1 shows the factors, the

relevant value theme, and the corresponding survey questionnaire wording.

Table 1 – Presentation of factors in survey questionnaire. The question was 'On a scale of 0-10, please rate the following group of factors in terms of how important they are to you as a farmer, with 0 meaning not important at all and 10 meaning extremely important'.

Survey questionnaire wording	Factor	Value theme
Supporting wildlife and biodiversity	Biodiversity	Environmental values
Managing my carbon footprint	Carbon	Environmental values
Certainty or predictability in relation	Certainty	Farm business
to running the business		
Running the farm business in the	Doing it the 'right'	Farm business
way that I believe is right and	way	
proper		
Planning for the future, either for	Future planning	Farm business
Making a profit	Drofit	Farm business
The sustainability of the farm	Fronc Farm custainability	Farm hoalth
The boolth of my livesteck or group		Farm health
	health	Failli fiediui
Being part of the farming	Community	Farming identity
community		
Enjoying being in the landscape	Enjoyment	Farming identity
Feeling that I have appropriate	Expertise	Farming identity
expertise for a task or project		
Heritage – respecting tradition and	Heritage	Farming identity
historic ways of doing things		
The farming way of life	Way of life	Farming identity
Producing food	Food production	Food production
What the landscape looks like	Aesthetics	Landscape
		relationship
Preserving the character of the	Preserving	Landscape
landscape		relationship
Being a steward or custodian of the	Stewardship/	Landscape
land and environment	custodianship	relationship
What the Government think of me	What government think	Social influence
What other farmers think of me	What other	Social influence
What the public think of me	What nublic think	Social influence

The second set of questions about values asked respondents to rate on a scale of 0-10 (0='not important at all' and 10='extremely important') the importance of seven considerations **when thinking about planting trees on their land**. These considerations were based on the value themes, as shown in Table 2. We decided to ask about themes only (rather than ask about all 20 factors) to reduce respondent fatigue.

Table 2 – Presentation of considerations in survey questionnaire. The question was 'When thinking about planting trees on your land, how important would each of the following considerations be to you? Please rate on a scale from 0-10, where 0 means not important at all and 10 means extremely important'.

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

In the section regarding tree cover expansion behaviour, we asked participants: whether they had planted trees and/or allowed them to grow naturally within the last five years; if yes, where and why; how likely they would be to plant trees in the next five years, both generally and in specific contexts on their farm (productive and unproductive land; spatial contexts such as unused edges of fields, within fields (while keeping them in production), and along boundaries; and to grow food crops); and what they perceived to be barriers and enablers to tree planting on their land.

Data analysis

Farm characteristics (e.g., farm business type) and farmer demographics (e.g., farmer age) were summarised using descriptive statistics. The pre-identified key characteristics (farmer age, tenure, and farm business type) were additionally compared with available national statistics to assess the representativeness of our sample.

How important are the identified factors to a nationally representative sample of farmers in England?

To explore overall patterns in the importance scores farmers attributed to the various factors, the individual ratings were summarised using descriptive statistics. These scores were explored both generally and in relation to different farm characteristics and farmer demographics (See Appendix B, Table 7 for farm type groupings used).

How influential are the value themes in relation to farmers' decisions about planting trees on their farms?

To identify whether and which farm and farmer characteristics (variables) were associated with the scores given to the value themes, we fitted linear regression models and carried out model selection. Our process involved including a range of variables that could associate with the importance scores in an initial 'global' model. We used the R package 'MuMIn' (Bartoń, 2016) to calculate the second order Akaike information criterion (AIC) for all possible nested models (i.e., combinations of variables) through data dredging. We used the sample size corrected Akaike information criterion (AICc) to account for the small sample size. The best models were those that had the lowest AICc values.

How likely are farmers to plant trees in different farm contexts?

To identify whether and which farm and farmer characteristics and ratings of value theme importance were associated with the likelihood farmers would plant trees in different farm contexts we fitted ordinal regression models, again including all potentially important variables, and examined the effect sizes and statistical significance of these to determine which variables showed associations with farmers' stated likelihood to plant trees in different farm contexts.

Prior to carrying out the analyses above, we used the R package 'car' (Fox and Weisberg 2019) to screen the explanatory variables for multicollinearity by checking that the variance inflator factor (VIF) of all the chosen variables was <3 (Zuur, Ieno, and Elphick 2010) and removing any that had a VIF >3.

Results

Sample description

A total sample of 393 responses was obtained. Two hundred and seventy-four participants completed the survey through a telephone interview, while the remaining 119 did so through a self-led online survey questionnaire. To account for this difference, 'response mode' was included as a variable in all models and reported where it was significantly associated with differences in responses. We do not know why response mode had an effect on some of the responses. Our sample was primarily male (80%) with just under a fifth (19%) female, and 1% preferring not to say. In terms of education, the most common formal educational attainment was university or college (58%), while the least common last level of formal education was primary school (<1%). Our sample showed some geographic variation, with the East of England (28%) and South West (25%) being the most common regions where respondents were based. The majority of respondents had spent more than 30 years farming (59%), with only 4% having farmed for less than five years. A large majority (81%) of respondents reported coming from a farming family, with the rest being first generation farmers. A variety of farm sizes were represented, with the largest portion being those with farms between 51-100 ha (23%) and the lowest proportion being those with over 500 ha (13%). Sixty percent of respondents had participated in an agri-environment scheme at some

point, and a variety of schemes were represented in our sample, including Countryside Stewardship (30%) and tree planting schemes (12%). Most farmers had hedgerows on their farm (94%), with watercourses (51%) and fences (49%) being the other common boundary types. Breakdowns of our sample by these categories are provided as figures in Appendix A.

Sample representativeness across key demographics

Tables 3-5 show the breakdown of our sample alongside national figures for comparison. By tenure type (Table 3), our sample broadly reflects national figures. It should be noted that survey respondents were able to pick more than one tenure type for the land they farmed.

Table 3 – Sample broken down by tenure type, with comparison to national figures on holdings
(Defra 2019, p5, source notes that 'it is not possible to classify all farms', therefore total = 98%).

Tenure type	England holdings (2017)	%	Our survey sample	%
Wholly tenanted	14,000	13	64	16
Mixed tenure	36,000	34	145	37
Solely owner occupied	54,000	51	184	47
Total	104,000	98*	393	100

Our methodology for assigning farm business type differed from that of Defra. We asked participants to select their 'main' sources of income. They could select multiple options, so whereas the Defra figures are mutually exclusive ours are not. Our figures show the proportion of the total sample who selected a given farm type as one of their 'main' sources of income. This means we cannot offer a direct comparison; however, Table 4 gives a sense of how our sample compares with the farm business type breakdown according to Defra's methodology. Where we report results relating to farm business types, we have followed this self-reported 'main' type.

Table 4 – Sample broken down by farm business type, with comparison to national figures (Defra 2024). The survey allowed participants to select multiple farm types, therefore the total n sums to over 393 and the total % sums to over 100.

Farm business type	England holdings (2022)	%	Our survey sample	%
Cereals	17,339	17	175	45
General cropping	22,440	21	55	17
Horticulture	3,396	3	30	8
Specialist pigs	1,789	2	14	4
Specialist poultry	2,337	2	22	6
Dairy	5,337	5	66	17
Grazing livestock (Less Favoured Area)	12,218	12	40	10
Grazing livestock (lowland)	31,356	30	130	33
Mixed	7,180	7	145	37
Other / Unclassified	1,084	1	66	18
Total	104,476	100	n=393	

By farmer age (Table 5), we sampled a higher proportion of farmers under 36 and a lower proportion of farmers over 55 than national figures. Our sample size was sufficient to explore differences between age-groups.

Table 5 – Sample broken down by age ranges, with comparison to national figures (Defra 2022, Table 2.6). Proportions have been rounded to the nearest whole number.

Defra age range	UK farmers % (2016)	Survey age range	Our survey sample	%
Under 35	3	Under 36	57	15
35-54	32	36-55	153	39
55+	65	56+	181	46
		No response	2	0
Total	100	Total	393	100

Factor and theme importance

Factor importance in relation to farming generally

Here we explore the importance given by farmers to the 20 different social, cultural, or moral factors within their general farming practice. Figure 2 summarises the scores (also presented in Table 8 in Appendix B). Most factors scored highly, with five receiving median scores of ten ('profit', 'livestock/crop health', 'food production', 'farm sustainability', and 'doing it the "right" way'). The two factors within the farm health theme were both in the top five rated, while factors related to food production and landscape relationship also scored highly. Factors within the social influence theme scored relatively low, with the importance of 'what government think' scoring the lowest. However, the ranges of scores for the factors associated with the social influence theme were particularly broad, indicating that the importance of this theme differs widely across the farming community. Breakdowns of the relationships between farm type, tenure type and age group and factor importance scores aggregated by value theme are presented in Appendix A.



Figure 2 – Farmers' ratings of factor importance, showing median importance (thick coloured line), interquartile ranges (boxes), and ranges (whiskers). n=393

Value theme importance in relation to tree planting

Farmers were asked about the importance of different value themes when specifically thinking about tree planting. Figure 3 summarises the scores across all respondents. All themes had a median score above six. Three themes scored particularly highly (with median scores of nine) – farm health, farm business, and food production. In general, respondents rated social influence as least important relative to the others (median seven).



Figure 3 – Farmers' ratings of value theme importance when thinking about planting trees, showing median importance (thick coloured line), interquartile ranges (boxes), and ranges (whiskers). n=393

The statistical analysis indicated that previous planting behaviour, tenure status, farm business type, and response mode (telephone or online) were associated with how important farmers considered each value theme in the context of them thinking about planting trees (Figure 4). In other words, these are the variables which appear to be most important to whether farmers consider planting trees. Farmers who had previously planted trees were more likely to rate landscape relationship and environmental values more highly than those who had not planted trees before. Those who owned land were more likely to rate environmental values and landscape relationship lower than those who did not own land. Respondents whose farm business type was arable were more likely to rate food production more highly than those whose farm business type was not (arable). Those who had answered the survey via phone were more likely to rate the importance of every theme, other than farm health, higher than those who completed the survey online.



Figure 4 – Model output showing the odds ratios (with confidence intervals) for variables with either a positive or negative association with respondents' rating of value theme importance as considerations when planting trees. The dotted line indicates an odds ratio of 1. As an odds ratio increases (above or below one) so does the likelihood of effect, i.e., the odds ratio for having planted trees is 1.5, meaning that those who have planted trees are 1.5 times more likely to rate environmental values as more important than those who have not.

Farmers' tree cover expansion behaviour

Previous tree cover expansion

More respondents had either planted trees (49%) or allowed them to expand their range naturally on their land (46%) than had not done either (34%) (sums to more than 100% as some respondents may have both planted trees and allowed them to expand their range naturally). Respondents tended to plant trees rather than allow them to expand their range naturally. This was true no matter what spatial context (part of the farm) was asked about. Hedgerows were the most frequent locations

for planting trees (61% of those who had planted trees), followed by field corners or margins (57%). Hedgerows were the most frequent locations for allowing tree cover to expand naturally (83% of those who had allowed tree cover to expand naturally), followed by new or existing woodland (72%) (Figure 5).





Figure 6 shows the reasons respondents planted trees or allowed them to expand their cover naturally on their land in the last five years, and their assessment of the scale of tree cover expansion. Respondents were allowed to pick more than one reason. The most common reason respondents had expanded tree cover was to benefit wildlife (n=56), with hedgerow expansion the second most common reason (n=43).



Figure 6 – Farmers' reasons for planting trees or allowing natural tree cover expansion on their land within the last five years, grouped by the subjective amount of tree cover expansion (colours). n=77

Future tree planting

Overall, 63% (n=247) of respondents stated they were likely or extremely likely to plant trees on their land within the next five years, with 19% (n=74) saying they were unlikely or extremely unlikely to do so and the remainder (18%, n=72) were neutral. Table 6 shows the farmers' stated likelihood to plant in the next five years across farm business type, age range, and tenure status. It shows greater variation of intention across farm business types than age range or tenure status. I.e. differences in tenure and age do not seem to affect intention to plant trees. Less Favoured Area livestock farmers are least likely to plant trees and dairy and lowland livestock farmers are most likely to plant trees. Table 6 – Likelihood different groups of respondents will plant trees in the next five years. ('n' shows sub-sample size for selected groups. Groups with sample sizes below 30 or for 'mixed' farm type or 'mixed' tenure not shown. The total for age sums to 391 due to two participants declining to provide this information.)

Farmer group	% 'likely' or 'extremely likely'	% 'unlikely' or 'extremely unlikely'	n
All respondents	63	19	393
Cereals	59	20	175
General cropping	64	16	55
Horticulture	53	17	30
Dairy	68	12	66
Grazing livestock	48	25	40
(Less Favoured Area)			
Grazing livestock	68	18	120
(Lowland)			
Under 35	61	26	57
35-54	71	13	153
55+	56	22	181
Wholly tenanted	62	20	64
Solely owner occupied	63	19	184

Figure 7 shows the stated likelihood farmers would consider planting trees in different farm contexts. Farmers were more likely to consider planting trees along boundaries, along unused edges or corners of their fields, and on unproductive land than on productive land or in fields. Just over a third responded that they would be likely to consider planting trees for food crops.



Figure 7 – Respondents' reported likelihood of planting in a variety of spatial contexts ('n' varies slightly due to response rate).

The statistical analysis indicated that several variables were associated with how likely farmers were to plant trees in different farm contexts (Figure 8). These were: the importance farmers attributed to environmental values; farm tenure; whether they had planted trees and/or allowed tree cover to expand naturally in the past; if they primarily farmed arable or livestock; and response mode (online or telephone).



Figure 8 – Model output showing associations between respondents' likelihood of planting and a variety of farm contexts. The dotted line indicates an odds ratio of 1. As an odds ratio increases (above or below one) so does the likelihood of effect, i.e., the odds ratio for having planted trees is 1.5, meaning that those who have planted trees are 1.5 times more likely to rate environmental values as more important than those who have not.

Farmers who rented some of their land or had previous experience planting trees were less likely to plant on unproductive land, unused edges, or along boundaries than those who did not rent land or have planting experience respectively. Farmers whose business type was livestock or arable were more likely to plant on unproductive land, along boundaries and to plant trees to grow food crops than those whose business type was neither; with livestock farmers also more likely to plant in unused edges or corners of fields. Farmers who rated environmental values as highly important when thinking about planting trees were less likely to plant trees on unproductive land than those who scored it as less important. Farmers who responded by telephone were more likely to plant on unproductive land or in unused edges.

Barriers and enablers to tree cover expansion

The barriers to tree cover expansion most frequently cited by farmers were cost of planting (51%) followed by grant schemes being too rigid and prescriptive (41%) (Figure 9). The least frequently cited barriers were not having enough expertise and age preventing them from realising the benefits (i.e. they will not be around to appreciate mature trees) (both 4%).



Figure 9 – Reported barriers to planting trees on farmland. n=393

When asked what would encourage them to increase the numbers of trees on their farm, the most frequent response was improved grant funding (79%), followed by

clarity on grant schemes / funding (57%) (Figure 10). The least frequent response was seeing other farms benefitting from doing so (3%). Nine percent stated that nothing would encourage them to increase the number of trees on their land.



Enablers of planting trees



Discussion

Values relate to what people consider to be good or important in life. Research suggests there are links between intention to act and the values people hold. It is therefore useful to consider and work with what farmers value when seeking to enable and encourage expansion of tree cover on farms. This report set out to examine how important different values are to farmers across England, with a particular focus on how these influence farmers' likelihood to grow trees. The survey questionnaire presented farmers with sets of 'factors' and 'considerations' which reflect the types of values the researchers identified earlier in the project as being of potential importance.

In relation to our first two research questions ('How important are the identified factors to a nationally representative sample of farmers in England?; and 'How influential are the value themes in relation to farmers' decisions about planting trees on their farms?'), our results confirm the findings from our earlier interviews and evidence review that our identified factors and value themes are, in general, highly valued by farmers in England. Quantifying these values allowed us to compare their relative importance. The findings indicate that farmers value three themes (farm health, food production, and farm business) most highly, both when considered in relation to the management of their farms in general and specifically in relation to planting trees. Our findings suggest that these three themes are likely to be the most important ones influencing whether farmers elect to grow trees on their farms.

In relation to tree planting specifically, the statistical analyses revealed that only three farm or farmer characteristics had a significant association with the importance farmers attribute to different value themes: farm business type, tenure type, and prior planting experience. Those with an arable farm were likely to rate food production as more important than those from other farm types. Farmers who did not own the land they farmed were less likely to rate environmental values and farm business as highly important than those who did. The survey does not provide insights into the reasons for these differences. Farmers with experience of planting trees on their farm within the last five years were more likely to give higher scores for importance of environmental values and relationship to the landscape. The nature of the relationship between these higher values scores and previous tree planting is not clear - i.e. does tree planting foster stronger environmental or landscape relationship values, or do these pre-existing values lead farmers to plant trees? Here, the survey findings offer some clues. For example, the most common reasons for previous tree cover expansion (planting and allowing natural expansion) were to benefit wildlife and for hedgerow expansion. These reasons are closely linked with the environmental values, landscape relationship, and farm health

themes, which may go some way to explaining how these themes were consistently considered highly important.

Regarding the third research question ('How likely are farmers to plant trees in different farm contexts?'), almost two-thirds of participants said they were likely to plant trees in the future. Greater differences in intention are evident across farm business types than between tenure or age groupings. Therefore, attention to farm type is important when considering how best to enable and encourage tree planting. For example, 68% of lowland grazing livestock and dairy farmers indicated a likelihood to plant trees in the next five years, while only 48% of Less Favoured Area grazing livestock farmers did so.

Exploring the likelihood of planting in specific farm contexts revealed that farmers with certain farm types were more likely to plant along boundaries (arable and livestock farmers), on unproductive land (arable and livestock farmers), and in unused edges (livestock farmers). Although these categories are broad, the patterns revealed suggest that those who are neither arable nor livestock farmers may be more likely to plant across a broader variety of farm contexts. Interestingly, having previously planted trees and renting part of their land appeared to reduce the likelihood of planting again along boundaries, on unproductive land and unused edges. This could be related to the lack of available land, either as it had already been planted with trees, or they were not able to plant due to their tenancy agreements. Farmers who rated the environmental values theme as of high importance were less likely to plant trees on unproductive land. This appears contradictory and highlights the need for further research to unpick how values influence tree planting decisions.

How values interact and their influence on behaviour is complex. These survey results tell part of the story. While this survey quantifies the importance of a range of values to farmers in England, these importance scores do not fully account for differences in how these values are conceptualised or enacted across farmer groups; i.e., a given value theme can have a similar score across different farmers, but this does not fully explain what that value means to different farmers. Providing average scores, as we have done here, also hides differences between individuals (as is particularly evident in the social influence theme where there was a particularly broad spectrum of scores). Further, farmers are not always able to farm in ways that align with their values. In other parts of this project, the research team have been exploring farmers' values through a range of in-depth, qualitative research methods, suited to teasing out and explaining this complexity. Our other publications (available on the webpage) further explore the value themes, the interaction between these, how values and behaviour interact over time, and how farmers' values relate to tree cover expansion within different farm business types.

The survey does offer some insights into the barriers or enablers farmers experience in relation to growing trees. Exploring the barriers revealed that the cost (of planting and maintenance) and grant scheme rigidity were perceived to limit farmers' ability to plant. Conversely, knowledge of tree planting or the availability of suitable land were not commonly cited as barriers to planting. It is worth noting that our sample had a high proportion of respondents that had or were currently engaged with a tree planting grant scheme. Regarding enablers to planting, respondents sought improved grant schemes both in terms of funding and clarity on how they will be rolled out (it is worth noting the new Environmental Land Management schemes were still being designed when the survey was live). There was little support for the idea that knowledge that other farmers benefit from tree planting would act as an enabler to planting. Few farmers believed there are no enablers to planting. These results suggest that attempts to increase tree cover on farms need to properly consider the costs of the planting and maintenance, as well as the impact of restrictions and requirements associated with grants for planting, ensuring flexibility where possible. Although these barriers and enablers are not specifically related to farmers' values, they are nevertheless important to consider

as they affect the extent to which farmers are able to farm in line with the things that matter to them.

Conclusions

These survey results provide an overview of the importance farmers in England attribute to various value-related factors and considerations, particularly in relation to growing trees. The high importance scores for several of the value themes and factors (in particular those related to environmental values, farm health, and the farm business) indicate opportunities for more informed engagement with farmers around growing trees on their farms. If farmers see trees contributing positively to these theme areas, they may be more likely to grow trees.

Further, understanding whether certain attributes, such as farm type, tenure, age, and previous tree expansion activity, are likely to lead to the expression of certain values can help us optimise our approaches to advice, development of grants and other policy tools, and our communication with different farming groups. Aside from a few exceptions, the importance scores differed relatively little across farm business types, tenure and selected demographics. However, stated likelihood to plant trees showed more variation, indicating the importance of other (non-value) factors which influence tree growing behaviour. These might include suitability of land, financial situations, stage in business life cycle, expertise, or the ease with which trees integrate within a given farming system. It is important to consider how these other factors impact farmers' ability to farm in ways aligned to their values.

Overall, these findings will be of greatest value when considered alongside the qualitative research in the project (see the project <u>webpage</u>), which explores the nuance within values, how they relate to attitudes and behaviour, and how these differ across farmer groups and farm contexts.

Author contributions

Harry Marshall and Stephen McConnachie conceived and designed the methodology together with input from the other authors; Harry Marshall and Altea Lorenzo-Arribas analysed the data; Harry Marshall and Stephen McConnachie led the writing of the report with Bianca Ambrose-Oji and Beth Brockett contributing critically to the report creation. The authors would like to acknowledge the input of Katy Spencer, Maddy Pearson, and Toni Clarke to the survey design. Katy and Toni have both now left Forest Research.

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Appendix A – Supporting Figures



Figure 11 – Highest levels of education of respondents. n=393



Figure 12 – Regional distribution of respondents. n=393



Figure 13 – Length of time farming of respondents. n=393



Figure 14 – Size of respondents' farms. n=393



Figure 15 – Respondents' experience with agri-environment schemes. n=393



Figure 16 – Farm boundaries on respondents' farms (Respondents could select multiple

options). n=393

Appendix B – Supporting Tables

Table 7 – Farm business type categories used in analysis

Farm business type presented in survey	Farm business type category used in analysis
Cereals	Arabla
General cropping	Alable
Specialist pigs	
Specialist poultry	
Dairy	
Grazing livestock	Livestock
(Less Favoured Area)	
Grazing livestock	
(lowland)	
Horticulture	
Mixed	Other
Other / Unclassified	

Table 8 – Farmers' ratings of factor importance, showing number of responses (n), median importance scores (Med), interquartile ranges (IQR), mean importance scores (M) and standard deviation (SD).

Value Theme	Factor	n	Med	IQR	М	SD
	Carbon	393	7	4	6.9	2.4
Values	Biodiversity	393	9	2	8.5	1.5
	Stewardship/custodianship	393	9	2	8.8	1.6
	Certainty	393	8	2	7.9	1.8
Farm Business	Future planning	393	9	2	8.7	1.8
	Doing it the 'right' way	393	10	2	9.1	1.4
	Profit	393	10	1	9.2	1.5
Farm Health	Farm sustainability	393	10	1	9.1	1.6
	Livestock/crop health	393	10	1	9.6	1
Farming Identity	Heritage	393	7	3	6.9	2.4
	Community	393	8	2	7.7	2.2
-	Expertise	393	8	2	8	1.6

	Way of life	393	9	3	8.2	2.1
Food Production	Food production	393	10	2	8.7	2.1
Landscape Relationship	Aesthetics	393	9	2	8.7	1.5
	Enjoyment	393	9	2	9	1.4
	Preserving	393	9	2	8.5	1.6
Social Influence	What government think	393	5	5	4.9	2.9
	What other farmers think	393	7	3	6.2	2.7
	What public think	393	7	4	6.7	2.6

Table 9 – Farmers' ratings of value theme importance (taken as the mean score across the values within a given theme) by farm type, showing number of responses (n), median importance scores (Med), interquartile ranges (IQR), mean importance scores (M) and standard deviation (SD).

Value Theme	Farm Type	n	Med	IQR	м	SD
	Cereals and combinable crops	175	8	3	8.0	2.0
	Dairy	66	8	2	8.0	1.7
Environmental	General cropping (e.g. sugar beet/potatoes/etc)	55	9	3	8.2	2.0
values	Horticulture	30	9	2	7.9	2.6
	Lowland grazing livestock	130	9	3	8.1	2.1
	Upland/LFA grazing livestock	40	8	2	7.7	2.4
	Cereals and combinable crops	175	9	2	8.8	1.6
	Dairy	66	9	2	8.8	1.4
Form business	General cropping (e.g. sugar beet/potatoes/etc)	55	10	2	8.8	1.6
	Horticulture	30	9	2	8.5	1.8
	Lowland grazing livestock	130	10	2	8.8	1.7
	Upland/LFA grazing livestock	40	9	2	8.8	1.5
	Cereals and combinable crops	175	10	1	9.3	1.4
Farm health	Dairy	66	10	1	9.4	1.1
	General cropping (e.g. sugar beet/potatoes/etc)	55	10	1	9.2	1.4

Value Theme	Farm Type	n	Med	IQR	М	SD
	Horticulture	30	10	1	9.1	1.7
	Lowland grazing livestock	130	10	0	9.4	1.4
	Upland/LFA grazing livestock	40	10	0	9.6	0.9
	Cereals and combinable crops	175	8	2	7.8	2.0
	Dairy	66	8	2	7.5	2.0
Farming	General cropping (e.g. sugar beet/potatoes/etc)	55	8	2	7.7	2.2
identity	Horticulture	30	8	3.25	6.9	2.5
	Lowland grazing livestock	130	8	3	8.0	2.2
	Upland/LFA grazing livestock	40	8	3	7.9	2.0
	Cereals and combinable crops	175	10	1.5	9.1	1.6
	Dairy	66	10	1	9.2	1.3
Food	General cropping (e.g. sugar beet/potatoes/etc)	55	10	1	9.2	1.1
production	Horticulture	30	9	2.75	7.9	2.9
	Lowland grazing livestock	130	10	1	8.9	2.0
	Upland/LFA grazing livestock	40	10	1	9.2	1.6
	Cereals and combinable crops	175	9	2	8.7	1.5
relationship	Dairy	66	9	2	8.7	1.5
	General cropping (e.g. sugar beet/potatoes/etc)	55	9	2	8.6	1.6
	Horticulture	30	9	1.75	8.5	1.3
	Lowland grazing livestock	130	10	2	9.0	1.3
	Upland/LFA grazing livestock	40	9	2	8.7	1.6
	Cereals and combinable crops	175	7	3	6.1	2.6
	Dairy	66	7	3	6.2	2.6
Social	General cropping (e.g. sugar beet/potatoes/etc)	55	6	4	5.8	2.8
Influence	Horticulture	30	5	7	5.0	3.4
	Lowland grazing livestock	130	6	4	6.0	2.9
	Upland/LFA grazing livestock	40	7	3.25	6.1	2.9

Table 10 – Farmers' ratings of value theme importance by age group, showing number of responses (n), median importance scores (Med), interquartile ranges (IQR), mean importance scores (M) and standard deviation (SD).

Value Theme	Age group	N	Med	IQR	м	SD
	35 and under	57	8	2.5	7.6	2.3
	36-45	60	8	2.25	8.0	1.9
Environmental	46-55	93	9	2	8.2	1.9
values	56-65	126	8	3	8.0	2.2
	66 and over	55	9	2	8.3	2.0
	Prefer not to say	2	9	4.25	8.0	2.4
	35 and under	57	9	2	8.6	1.9
	36-45	60	9	2	8.7	1.6
	46-55	93	9	2	8.8	1.6
Farm Dusiness	56-65	126	9	2	8.7	1.7
	66 and over	55	9	2	8.7	1.8
	Prefer not to say	2	10	0.25	9.3	1.8
	35 and under	57	10	1	9.2	1.6
	36-45	60	10	1	9.5	0.8
	46-55	93	10	1	9.4	1.1
Farm nealth	56-65	126	10	1	9.3	1.4
	66 and over	55	10	1	9.1	1.8
	Prefer not to say	2	10	0	10.0	0.0
	35 and under	57	8	4	7.1	2.5
	36-45	60	8	3	7.6	2.0
Farming	46-55	93	8	3	8.0	1.9
identity	56-65	126	8	2	7.7	2.2
	66 and over	55	8	2	7.8	2.2
	Prefer not to say	2	6	2	6.0	3.2
	35 and under	57	10	2	8.8	1.8
	36-45	60	9	2	8.9	1.6
Food	46-55	93	10	1	8.8	2.3
production	56-65	126	10	2	8.7	2.0
	66 and over	55	9	2	8.2	2.9
	Prefer not to say	2	9	1	9.0	1.4
	35 and under	57	9	3	8.4	1.9
	36-45	60	9	2	8.6	1.4
Landscape	46-55	93	9	2	8.9	1.2
relationship	56-65	126	9	2	8.8	1.4
	66 and over	55	9	2	8.8	1.5
	Prefer not to say	2	7	4.25	7.3	2.3

Value Theme	Age group	N	Med	IQR	м	SD
Social influence	35 and under	57	6	4	5.7	3.0
	36-45	60	6	4	5.7	2.7
	46-55	93	7	3	6.2	2.8
	56-65	126	6	4	5.9	2.8
	66 and over	55	7	3	6.0	2.8
	Prefer not to say	2	3	3.75	3.3	3.4

Table 11 – Farmers' ratings of value theme importance by tenure type, showing number of responses (n), median importance scores (Med), interquartile ranges (IQR), mean importance scores (M) and standard deviation (SD).

Value Theme	Tenure	n	Med	IQR	М	SD
	Mixed tenure	145	8	3	7.9	2.1
Environmental values	Owner occupied	184	8	3	8.0	2.1
	Wholly tenanted	64	9	2	8.5	1.8
	Mixed tenure	145	9	2	8.7	1.7
Farm business	Owner occupied	184	9	2	8.7	1.7
	Wholly tenanted	64	10	2	8.8	1.6
	Mixed tenure	145	10	1	9.3	1.5
Farm health	Owner occupied	184	10	1	9.3	1.3
	Wholly tenanted	64	10	1	9.4	1.2
	Mixed tenure	145	8	2	7.6	2.1
Farming identity	Owner occupied	184	8	2	7.6	2.3
	Wholly tenanted	64	8	3	8.0	2.0
	Mixed tenure	145	10	1	9.0	1.8
Food production	Owner occupied	184	9	2	8.5	2.2
•••••••	Wholly tenanted	64	10	1	8.6	2.6
	Mixed tenure	145	9	2	8.7	1.5
Landscape relationship	Owner occupied	184	9	2	8.7	1.6
	Wholly tenanted	64	9.5	2	9.0	1.3

Value Theme	Tenure	n	Med	IQR	Μ	SD
Social influence	Mixed tenure	145	6	4	6.0	2.7
	Owner occupied	184	6	4	5.8	2.9
	Wholly tenanted	64	7	3	6.2	2.8

Table 12 – Farmers' ratings of value theme importance when thinking about planting trees by farm type, showing number of responses (n), median importance scores (Med), interquartile ranges (IQR), mean importance scores (M) and standard deviation (SD).

Value Theme	Farm type	n	Med	IQR	М	SD
	Cereals and combinable crops	175	8	1	8.1	1.9
	Dairy	66	8	1	8.2	1.1
Environmental	General cropping (e.g. sugar beet/potatoes/etc)	55	8	1.5	8.2	1.7
values	Horticulture	30	9	1	8.2	1.7
	Lowland grazing livestock	130	9	2	8.4	1.7
	Upland/LFA grazing livestock	40	8	1	8.0	1.7
	Cereals and combinable crops	175	9	2	8.6	1.7
	Dairy	66	9	2.75	8.4	1.7
Farm business	General cropping (e.g. sugar beet/potatoes/etc)	55	9	2	8.9	1.5
	Horticulture	30	9	2	8.8	1.5
	Lowland grazing livestock	130	9	2	8.6	1.7
	Upland/LFA grazing livestock	40	9	3	8.3	1.9
	Cereals and combinable crops	174	9.5	2	8.9	1.5
	Dairy	66	9	2	8.6	1.7
Farm health	General cropping (e.g. sugar beet/potatoes/etc)	55	10	1	9.1	1.4
	Horticulture	30	9	2	8.4	2.3
	Lowland grazing livestock	130	10	2	8.9	1.7
	Upland/LFA grazing livestock	40	9.5	1.25	8.8	2.2
	Cereals and combinable crops	175	8	3	7.2	2.4
	Dairy	66	8	3	7.2	2.5
Farming	General cropping (e.g. sugar beet/potatoes/etc)	55	8	2.5	7.6	2.4
identity	Horticulture	30	7	4	6.2	2.9
	Lowland grazing livestock	130	8	4	7.4	2.5
	Upland/LFA grazing livestock	40	8	2.25	7.8	2.2
Food	Cereals and combinable crops	175	9	2	8.5	2.3
production	Dairy	66	9	2.75	7.8	2.8

Value Theme	Farm type	n	Med	IQR	м	SD
	General cropping (e.g. sugar beet/potatoes/etc)	55	9	2	8.5	2.1
	Horticulture	30	9	3	8.1	2.5
	Lowland grazing livestock	130	9	2	8.3	2.3
	Upland/LFA grazing livestock	40	9	2	8.2	2.6
	Cereals and combinable crops	175	8	2	7.8	1.9
Landscape	Dairy	66	8	1	8.1	1.4
	General cropping (e.g. sugar beet/potatoes/etc)	55	8	1.5	8.2	1.6
relationship	Horticulture	30	8	2	8.1	1.6
	Lowland grazing livestock	130	8	2.75	8.1	1.6
	Upland/LFA grazing livestock	40	8	2	7.8	2.1
	Cereals and combinable crops	175	6	3	6.1	2.4
	Dairy	66	7	2.75	6.8	2.3
Social	General cropping (e.g. sugar beet/potatoes/etc)	55	6	3	6.2	2.4
influence	Horticulture	30	5.5	4	5.6	2.9
	Lowland grazing livestock	130	7	3	6.4	2.6
	Upland/LFA grazing livestock	40	7	2.25	6.4	2.9

Table 13 – Farmers' ratings of value theme importance when thinking about planting trees by tenure type, showing number of responses (n), median importance scores (Med), interquartile ranges (IQR), mean importance scores (M) and standard deviation (SD).

Value Theme	Tenure type	n	Med	IQR	Μ	SD
	Mixed tenure	145	8	1	8.1	1.9
Environmental values	Owner occupied	184	8	1	8.2	1.6
	Wholly tenanted	64	9	2	8.6	1.6
	Mixed tenure	145	9	2	8.4	1.9
Farm business	Owner occupied	184	9	2	8.4	1.9
	Wholly tenanted	64	9	2	8.9	1.3
Farm health	Mixed tenure	145	9.5	2	8.8	1.8
	Owner occupied	184	9	2	8.8	1.7
	Wholly tenanted	64	9.5	1.25	9.1	1.2

Value Theme	Tenure type	n	Med	IQR	М	SD
	Mixed tenure	145	8	3	7.2	2.5
Farming identity	Owner occupied	184	8	4	7.0	2.6
	Wholly tenanted	64	8	3	7.5	2.2
Food production	Mixed tenure	145	9	2	8.3	2.5
	Owner occupied	184	9	3	7.7	2.9
	Wholly tenanted	64	9	2	8.5	2.2
	Mixed tenure	145	8	2	7.9	1.9
Landscape relationship	Owner occupied	184	8	2.25	8.0	1.8
	Wholly tenanted	64	8	1.5	8.3	1.7
Social influence	Mixed tenure	145	7	3	6.2	2.5
	Owner occupied	184	7	3	6.2	2.5
	Wholly tenanted	64	6	3.25	6.2	2.7

Table 14 – Farmers' ratings of value theme importance when thinking about planting trees by age group, showing number of responses (n), median importance scores (Med), interquartile ranges (IQR), mean importance scores (M) and standard deviation (SD).

Value Theme	Age group	n	Med	IQR	М	SD
	35 and under	57	9	3	8.2	1.8
	36-45	60	8.5	2	8.2	2.0
Environmental	46-55	93	8	1	8.3	1.3
values	56-65	126	8	2	8.2	1.8
	66 and over	55	9	2	8.2	1.8
	Prefer not to say	2	6	1	6.0	1.4
	35 and under	57	9	2	8.4	2.0
	36-45	60	9	2	8.4	1.7
Form business	46-55	93	9	2	8.5	1.8
raini business	56-65	126	9	2	8.6	1.8
	66 and over	55	9	2.5	8.4	1.9
	Prefer not to say	2	7.5	2.5	7.5	3.5
Form boolth	35 and under	57	10	1	8.9	1.9
Farm health	36-45	60	10	2	9.2	1.2

Value Theme	Age group	n	Med	IQR	М	SD
	46-55	93	9	2	8.9	1.4
	56-65	126	9	2	8.8	1.6
	66 and over	55	9	2	8.5	2.3
	Prefer not to say	2	7.5	2.5	7.5	3.5
	35 and under	57	7	4	6.8	2.7
	36-45	60	8	3	7.1	2.8
Farming	46-55	93	8	3	7.4	2.3
identity	56-65	126	8	3	7.2	2.5
	66 and over	55	8	2.5	7.3	2.4
	Prefer not to say	2	5.5	1.5	5.5	2.1
	35 and under	57	9	2	8.5	2.0
	36-45	60	9	3	8.0	2.6
Food	46-55	93	9	2	8.1	2.6
production	56-65	126	9	3	7.9	2.7
	66 and over	55	9	2.5	7.8	3.1
	Prefer not to say	2	7.5	2.5	7.5	3.5
	35 and under	57	8	2	7.6	2.0
	36-45	60	8	1.25	8.1	1.6
Landscape	46-55	93	8	2	8.2	1.6
relationship	56-65	126	8	3	8.0	1.9
	66 and over	55	8	2	7.7	2.0
	Prefer not to say	2	8.5	1.5	8.5	2.1
	35 and under	57	7	3	6.2	2.6
	36-45	60	6	3	6.0	2.6
Social	46-55	93	7	3	6.4	2.5
influence	56-65	126	6	3	6.0	2.5
	66 and over	55	7	4	6.6	2.7
	Prefer not to say	2	4	1	4.0	1.4

Appendix C – Survey Questions

Forest Research - Farmer survey - Post Pilot

Q1 Forest Research is Great Britain's principal organisation for forestry and treerelated research, and is internationally renowned for providing evidence and scientific services to support sustainable forestry.

Working closely with **Defra**, the team at Forest Research are keen to understand farmers' opinions on trees as part of the farming landscape. This will help them to ensure that **your views are reflected in any policies that are put in place**, **and that they fit the needs of farmers as closely as possible**.

All respondents will be entered into a prize draw to win one of 5 £100 vouchers.

Please take a few minutes to let us know your thoughts on trees as part of the farming landscape, as well as your appetite for an increase in the number of trees on agricultural land, to have your views heard by key decision makers in this time of change for the industry.

Q2 Keeping your data safe

We take data protection very seriously. This survey is conducted in accordance with the Market Research Society Code of Conduct, and information you provide will be treated in accordance with applicable data protection laws. All data will be anonymised prior to presentation to Forest Research, and you will not be identifiable in any reports produced by Forest Research based on this survey unless you provide consent to be contacted by Forest Research in regard to taking part in future studies on this subject.

By proceeding with this survey you are giving your consent for us to process your

data in accordance with our <u>policy</u>. By clicking the 'next' arrow, you agree to allowing us to collect and process the information you provide.

Q3 In what part of the UK is your farming operation based?

- \bigcirc North East England (1)
- \bigcirc North West England (2)
- \bigcirc Yorkshire and the Humber (3)
- \bigcirc East Midlands (4)
- West Midlands (5)
- East of England (6)
- \bigcirc London (7)
- \bigcirc South East England (8)
- \bigcirc South West England (18)
- \bigcirc Scotland (9)
- \bigcirc Wales (15)
- Northern Ireland (17)

Q4 How long have you been farming?

- \bigcirc Less than 5 years (1)
- 5-10 years (2)
- 10-20 years (3)
- 20-30 years (4)
- \bigcirc 30 years + (5)

Q5 Which option best describes you?

- \bigcirc I am a first-generation farmer. (1)
- \bigcirc I come from a farming family. (2)

Q6 What is the size of area you farm?

- < 50ha (1)
- 51-100ha (2)
- 0 101-200ha (4)
- 201-500ha (5)
- 501+ ha (6)

Q7 What is the **main** source of income on your farm? Please tick all that apply if income generation is equally split between different farming activities.

	Cereals and combinable crops (1)
	General cropping (e.g. sugar beet/potatoes/etc.) (2)
	Horticulture (3)
	Specialist pigs (4)
	Poultry (12)
	Dairy (5)
	Lowland grazing livestock (6)
	Upland/LFA grazing livestock (10)
	Woodland (8)
enterpri	Non-agricultural (e.g. agri-environment schemes/diversification ses) (9)
	Other (please state) (13)
Carry Forw	ard Unselected Choices from "Q7"
Q8 Are the	re any other activities that provide income on your farm?
	N/A (1)

	Cereals and combinable crops (2)						
	General cropping (e.g. sugar beet/potatoes/etc.) (3)						
	Horticulture (4)						
	Specialist pigs (5)						
	Poultry (6)						
	Dairy (7)						
	Lowland grazing livestock (8)						
	Upland/LFA grazing livestock (9)						
	Woodland (10)						
enterpri	Non-agricultural (e.g. agri-environment schemes/diversification erprises) (11)						
	Other (please state) (12)						
Q9 What is	your farm tenure? Please tick all that apply.						
	Owned land (1)						
	Full Agricultural Tenancy (2)						
	Farm Business Tenancy (3)						
	Seasonal Agreements (e.g. for grazing) (4)						
	Other (please specify where applicable) (5)						
Display Thi	s Question:						
If If Wh a://OID12/	at is your farm tenure? Please tick all that apply. SelectedChoicesCount Is Greater Than 1						
Carry Forw	ard Selected Choices from "09"						

Q10 Which type of tenure makes up the **main** proportion of your farm?

 \bigcirc Owned land (1)

 \bigcirc Full Agricultural Tenancy (2)

- \bigcirc Farm Business Tenancy (3)
- \bigcirc Seasonal Agreements (e.g. for grazing) (4)
- \bigcirc Other (please specify where applicable) (5)

Q11 Have you participated/are you participating in any of the following agrienvironment schemes? (Please select all that apply).

Entry Level Stewardship (ELS) (1)
Organic Entry Level Stewardship (OELS) (2)
Upland Entry Level Stewardship (UELS) (3)
Higher Level Stewardship (HLS) (4)
Countryside Stewardship (CS) (5)
Farming in Protected Landscapes (6)
Tree planting schemes (7)
Other agri-environment schemes (please specify) (8)
\otimes I haven't participated in any agri-environment scheme. (9)

Q12 What types of boundaries do you have on your farm? (Please select all that apply).

Hedgerows (1)
Walls (2)	
Fences (3)	
Watercourses	(4)



Footpaths/field margins (5)

Other (please specify) (6)

End of Block: Farm Information

Start of Block: What is important to farmers?

Q13 On a scale of 0-10, please rate the following group of factors in terms of how important they are to you as a farmer, with 0 meaning not important at all and 10 meaning extremely important.



Q14 On a scale of 0-10, please rate the following group of factors in terms of how important they are to you as a farmer, with 0 meaning not important at all and 10 meaning extremely important.

	0	1	2	3	4	5	6	7	8	9	10
What the Government think of me. ()						J					
Being part of the farming community. ()						J					
Certainty or predictability in relation to running the business. ()						J					
Planning for the future, either for myself or for future generations. ()				_	_	J	_	_	_		
Feeling that I have appropriate expertise for a task or project. ()						J					
Preserving the character of the landscape. ()						J					

Q15 On a scale of 0-10, please rate the following group of factors in terms of how important they are to you as a farmer, with 0 meaning not important at all and 10 meaning extremely important.

	0	1	2	3	4	5	6	7	8	9	10
What other farmers think of me. ()											
Being a steward or custodian of the land and environment. ()											
Running the farm business in the way that I believe is right and proper. ()						J					
The health of my livestock or crops. ()						J			_		
What the landscape looks like. ()			_								
Enjoying being in the landscape. ()											
Heritage - respecting tradition and historic ways of doing things. ()				_	_		_	_			

Q16 Of all 20 factors you have just rated, please pick one which is really **IMPORTANT** to you.

- \bigcirc What the landscape looks like. (1)
- \bigcirc Preserving the character of the landscape. (2)
- \bigcirc Enjoying being in the landscape. (3)
- \bigcirc Managing my carbon footprint. (4)
- \bigcirc The sustainability of the farm. (5)
- \bigcirc Being a steward or custodian of the land and environment. (6)
- \bigcirc Supporting wildlife and biodiversity. (7)
- \bigcirc Certainty or predictability in relation to running the business. (8)
- \bigcirc Running the farm business in the way that I believe is right and proper. (9)
- \bigcirc Making a profit. (10)
- \bigcirc Planning for the future, either for myself or for future generations. (11)
- \bigcirc The health of my livestock or crops. (12)
- \bigcirc Producing food. (13)
- \bigcirc What the public think of me. (14)
- \bigcirc What the Government think of me. (15)
- \bigcirc What other farmers think of me. (16)
- \bigcirc Feeling that I have appropriate expertise for a task or project. (17)
- \bigcirc The farming way of life. (18)
- \bigcirc Being part of the farming community. (19)
- \bigcirc Heritage respecting tradition and historic ways of doing things. (20)

Q17 Please explain, in your own words, why you chose this factor as being really important to you?

Q18 Of all 20 factors you have just rated, please pick one which is really **<u>UN</u>IMPORTANT** to you

- \bigcirc What the landscape looks like. (1)
- \bigcirc Preserving the character of the landscape. (2)
- \bigcirc Enjoying being in the landscape. (3)
- \bigcirc Managing my carbon footprint. (4)
- \bigcirc The sustainability of the farm. (5)
- \bigcirc Being a steward or custodian of the land and environment. (6)
- \bigcirc Supporting wildlife and biodiversity. (7)
- \bigcirc Certainty or predictability in relation to running the business. (8)
- \bigcirc Running the farm business in the way that I believe is right and proper. (9)
- \bigcirc Making a profit. (10)
- \bigcirc Planning for the future, either for myself or for future generations. (11)
- \bigcirc The health of my livestock or crops. (12)
- \bigcirc Producing food. (13)
- \bigcirc What the public think of me. (14)
- \bigcirc What the Government think of me. (15)
- \bigcirc What other farmers think of me. (16)
- \bigcirc Feeling that I have appropriate expertise for a task or project. (17)
- \bigcirc The farming way of life. (18)
- \bigcirc Being part of the farming community. (19)
- \bigcirc Heritage respecting tradition and historic ways of doing things. (20)

Q19 Please explain, in your own words, why you chose this factor as being really unimportant to you?

End of Block: What is important to farmers?

Start of Block: Scenarios

Q20 In general, how likely would you be to consider planting trees in each of the following areas on your farmland?

	Extremely unlikely (97)	Somewhat unlikely (98)	Neither likely nor unlikely (99)	Somewhat likely (100)	Extremely likely (101)	N/A (102)
On unproductive land (6)	0	\bigcirc	\bigcirc	\bigcirc	0	0
On productive land (1)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
In unused edges or corners of fields (2)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
In your fields (your fields can still be used for crops or livestock) (3)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
To grow food crops (e.g., fruit or nuts) (4)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	0
Along boundaries (including hedgerows, fences, walls, or watercourses) (14)	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	0

Q21 When thinking about planting trees on your land, how important would each of the following considerations be to you?

Please rate on a scale from 0-10, where 0 means not important at all and 10 means extremely important

	0	1	2	3	4	5	6	7	8	9	10
How the landscape looks and feels and how it should look and feel ()											
Running a good business ()											
The farming way of life, being part of a farming community, respecting tradition and ways of doing things ()											
Caring what others think, feeling valued, being listened to ()									_		
Concern for the state of the wider environment ()											
Producing food ()											
The ongoing sustainability and functionality of the farm ()			_	_	_		_	_	_		

Q22 Do you have any feedback on the specific things we have asked in this section? (This is an optional response).

Q23 In the next section, we are looking to understand a bit more about any previous tree planting you have undertaken.

Q24 Have you planted trees or allowed natural tree cover expansion on your farm within the past 5 years? Please select all that apply.

(Natural tree cover expansion includes deliberately allowing trees to grow naturally, without planting them.)

	Planted trees (1)
	Allowed trees to grow naturally (2)
	\otimes None of these (3)
	⊗Don't know (4)
Display Thi	s Question:
If Q24 =	= 1

Q25 In which contexts have you planted trees, and to what extent?

N.B: Quantifying the extent to which you have planted trees depends very much on the size and type of your farming operation. Please respond according to how great **you** feel the commitment has been for your farm.

	A small amount (1)	Moderately (2)	A great deal (3)	None (N/A) (4)
New woodland or expanding existing woodland (1)	0	0	0	0
Field corners or margins (2)	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Into hedgerows (3)	0	\bigcirc	\bigcirc	\bigcirc
Along waterways (4)	\bigcirc	\bigcirc	\bigcirc	\bigcirc
In fields (5)	0	\bigcirc	\bigcirc	\bigcirc
Other (please specify) (6)	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Display This Que	estion:			

If Q24 = 2

Q26 In which contexts have you allowed trees to grow naturally, and to what extent?

N.B: Quantifying the extent to which you have allowed trees to grow naturally, depends very much on the size and type of your farming operation. Please respond according to how great **you** feel the commitment has been for your farm.

	A small amount (1)	Moderately (2)	A great deal (3)	None (N/A) (4)
New woodland or expanding existing woodland (1)	0	0	0	0
Field corners or margins (2)	0	\bigcirc	\bigcirc	\bigcirc
Into hedgerows (3)	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Along waterways (4)	0	\bigcirc	\bigcirc	\bigcirc
In fields (5)	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Other (please specify) (6)	\bigcirc	\bigcirc	\bigcirc	\bigcirc
<i>Display This Que</i> <i>If Q24 = 1</i> <i>Or Q24 = 2</i>	estion:			

Q27 For which of the following reasons or purposes have you planted trees or allowed trees to grow naturally within the past 5 years?

	A small amount (1)	Moderately (4)	A great deal (5)	None (N/A) (6)
For food crops (1)	0	\bigcirc	0	0
For wood products (e.g. timber) (2)	0	\bigcirc	\bigcirc	\bigcirc
For energy crops (e.g. firewood, biomass) (3)	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Hedgerow expansion (4)	\bigcirc	\bigcirc	\bigcirc	\bigcirc
To benefit livestock (5)	0	\bigcirc	\bigcirc	\bigcirc
To benefit crops (6)	\bigcirc	\bigcirc	\bigcirc	\bigcirc
To benefit wildlife (7)	\bigcirc	\bigcirc	\bigcirc	\bigcirc
For carbon sequestration (8)	0	\bigcirc	\bigcirc	0
Other (please specify) (9)	\bigcirc	\bigcirc	\bigcirc	\bigcirc

Q28 You're almost done!

Before you go, we'd like to understand a little more about your likely approach to planting and managing trees on your farm in the future.

Q29 How likely are you to undertake tree planting/more tree planting on your land in the next 5 years?

- \bigcirc Extremely unlikely (1)
- \bigcirc Somewhat unlikely (2)
- \bigcirc Neither likely nor unlikely (3)
- \bigcirc Somewhat likely (4)
- \bigcirc Extremely likely (5)

Q30 Are there any barriers that prevent you, or discourage you, from increasing the number of trees on your farm? Please select all that apply.

	My age - I won't enjoy the benefit. (1)
	Cost of planting (2)
	Cost of maintenance (3)
	The amount of work involved in planting and maintaining them. (4)
	Grant schemes are too rigorous and prescriptive. (5)
is too p	My land is not really suitable for planting trees (e.g. too productive, soil boor, lack of water etc.) (6)
	Concern around taking productive land out of the equation. (7)
trees o	I don't believe there would be enough of a tangible benefit to planting n my land. (8)
	I don't have the knowledge/expertise required. (11)
	I'd worry about what others would think of me. (12)
	Other (please specify) (9)
	\otimes There are no barriers for me when considering planting trees. (10)

Q31 What would encourage you to increase the number of trees on your farm? Please select all that apply.

Improved grant funding (1)
Clarity on ELMS/Government Schemes (2)
Support from the local community (3)
The potential to gain some recognition for doing so (4)
Better information on the benefits and drawbacks (8)
Support with learning how to plant or manage trees (5)
The ability to gain commercial benefit, e.g., shooting, leisure, timber ion etc. (9)
Seeing other farmers benefiting from doing so (10)
Other (please specify) (6)
\otimes Nothing would encourage me to increase the number of trees on my 7)

Q32 Do you have any further comments that you would like to make about trees and farming in England?

Q33 Finally, we'd like to ask you a few questions about yourself. This simply helps to give us a better understanding of the demographic make up of the farming community who have responded to this survey.

Q34 Which age bracket do you fall into?

- 15-20 years (1)
- 21-25 years (2)
- 26-30 years (3)
- 31-35 years (4)
- 36-40 years (5)
- 41-45 years (6)
- 46-50 years (7)
- 51-55 years (9)
- 56-60 years (10)
- 61-65 years (11)
- 66-70 years (12)
- 71+ years (13)
- \bigcirc Prefer not to say (8)

Q35 What gender do you identify as?

- \bigcirc Male (1)
- \bigcirc Female (2)
- \bigcirc Other (please specify) (3)
- \bigcirc Prefer not to say (4)

Q36 What is the highest level of education that you have completed?

- Primary school (1)
- \bigcirc Secondary school up to 16 years (2)
- \bigcirc Higher or secondary or further education (A-Levels, BTEC etc.) (3)
- \bigcirc College or University (4)
- \bigcirc Postgraduate degree (5)
- Other (Please Specify) (12)
- \bigcirc Prefer not to say (13)

Q37 Would you like to be entered into the prize draw to win one of 5 £100 vouchers? <u>Full terms and conditions</u> are available on our website.

- Yes (1)
- No (2)

Q38 Would you be willing to take part in future research projects run by Forest Research?

Participation is not obligatory if you are contacted, this simply lets us know whether you are happy for us to get in touch for future research projects around trees and woodlands on agricultural land.

 \bigcirc Yes, I am happy to be contacted in the future. (1)

 \bigcirc No, I am not interested in taking part in future research. (2)

Display This Question:		
If Q38 = 1		
Or Q37 = 1		

Q39 If you have indicted you would like to be included in the prize draw and/or you are happy to be contacted about further research by Forest Research in the future, please provide us with the below details;

\bigcirc First Name (1)	
○ Surname (2)	

O Email address (3)

Appendix D – Evidence review search terms

The search terms used to guide the initial evidence review are provided below:

Who	Geography	Topics	Qualifiers
Farm*	Engl* (not `New England')	Identit*	Attitud*
Agricultur*	UK / United Kingdom	Valu*	Perception
(Agricultural) land manager	Britain / British	Cultur*	Perceive
Agricultural landowner		Norms	Perspective
		`good farmer'	Opinion
		Politics	Viewpoint
		Social capital	
		Heritage	
		Tree*	Understand*
		Wood*	Social
		Forest*	Behavi*
		Hedge*	Action
		'trees outside woods'	Socio-cultural
		Afforest*	Cultur*
		treescape	Value
		Reforest*	Valuing
		<pre>`tree planting'</pre>	Meaning
		Environment*	Business model
		Incentiv*	Choice*
		Landscape	Decision*
		Agroforest*	4
		Agroecolog*	
		Silvopast*	
		Silvoarable	
		Land management	
		Post-productiv*	4
		Regenerative	
		Creat*	
		Expan*	

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