

Agroforestry ELM Test

Interviews with the Agroforestry ELM Test farmers: general statistics and an analysis of advice and guidance and financing options they have used

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Executive summary:

Twenty-eight English farmers varying in their level of agroforestry expertise and the type of agroforestry practiced have been subject to formal interview in the Agroforestry ELM Test project to date. The geographic locations of the farmers and general statistics describing their farming and agroforestry operations are presented.

Agroforestry predominantly accounts for less than 20% of total farm hectareage.

An analysis of “advice and guidance” sources and “payment” (agroforestry financing) options used by the Agroforestry ELM Test farmers is also presented.

Novice agroforestry farmers are non-discriminating in the information sources on agroforestry they use, with relatively “superficial” sources such as social networks and online videos being important, among many others.

More experienced agroforestry farmers are much more discriminating in the agroforestry information sources used. Key sources involve “serious study” (books and internet) and person-to-person interaction (farmer-to-farmer and farmer-to-third sector and consultant specialists).

Self-financing is overwhelmingly the way English farmers have financed agroforestry to date.

Introduction:

This report is the second major deliverable of the Agroforestry ELM Test project and supplements the first major deliverable already submitted; an evidence review on barriers to agroforestry in the UK (<https://tinyurl.com/neenrew8>). The evidence review should be referred to for background to the project and an outline of project structure.

In this report, the findings of a series of hour-long interviews with each of the “monitor farmers” and “cluster farmers” recruited to the Agroforestry ELM Test project are presented in the form of a map of spatial locations of farmers and some summary statistics of their farming and agroforestry operations. An analysis of interview responses in the areas of “advice and guidance” and “payments” (how agroforestry projects have been financed to date) are also presented here. These are the focal areas of the Agroforestry ELM Test.

Methods:

Twenty-eight farmers have been interviewed at the time of submission of this report. Interviews are still underway to obtain the remaining eight interviews. Interviews were conducted by telephone and took approximately one hour. The interview template used by the interviewer is shown in Appendix 1. Nineteen of the farmers were “experienced agroforestry farmers” who are currently farming with agroforestry. The remaining nine were classified as “inexperienced agroforestry farmers” who were interested in agroforestry but had not, or were currently making, the transition to agroforestry farming.

Geographic locations and general statistics describing farmers interviewed so far are shown in Figure 1 and Table 1.

Additional analysis of interviews has so far been restricted to “advice and guidance” and “payment” issues: those issues that form the focus of this Test. This corresponds to analysis of responses to section 7 and section 4, table 2, question 8, in Appendix 1, respectively.

The table in section 7 comprises two parts. In the first, a series of predefined advice and guidance sources were presented to the interviewee and the interviewee asked to rank their importance on a scale of 1 (not useful) to 5 (most useful). A zero score was given when no response was indicated. Scores within each category were summed to present results (Figures 3 - 5).

The second part of table 7 is a section where interviewees could offer additional advice and guidance sources missed in predefined categories. Here the researcher grouped similar responses into categories. The categories chosen and their component responses are shown along the x-axis and legend of Figure 6. The same scoring system as above was used but occasionally interviewees simply stated that a source was significant without giving a score. In this case a score of 3 was allocated. Again, scores within categories were summed to present results (Figures 6 and 7).

Means of financing (“payments”, section 4, table 2, question 8) used by agroforestry practitioners were analysed similarly by grouping responses into more general categories. The categories chosen and their component responses are shown along the x-axis and legend of Figure 8. Scoring now proceeded by allocating a single point each time a particular source of finance was mentioned by an interviewee (repeat mentions by an interviewee accrued no extra score). Scores were again summed to present results (Figure 8).

Findings:

General

Our sample of 28 farmers interviewed so far covers a wide range of farm types and geographic locations across England, and covers the range of types of agroforestry currently practiced in the UK: lowland silvopasture, upland silvopasture, silvoarable, silvohorticulture, silvopoultry, and woodland grazing (Figure 1, Table 1). The distribution of % total hectareage dedicated to agroforestry within our sample of 19 farmers actively practicing agroforestry is highly skewed towards to lower end of values: 68% of farmers dedicate less than 20% of their hectareage to agroforestry (Figure 2). Of the 42% of our sample that dedicate less than 10% of their hectareage to agroforestry, half of these, dedicate less than 1% of their hectareage to agroforestry and could be describes as “experimenting” with or “testing the water” with this type of farming.

Advice and guidance

Inexperienced agroforestry farmers (n = 9) appear relatively non discriminating in the sources of information they use to learn about agroforestry: all of the sources of advice of guidance offered to them by the interviewers are well used (Figure 4). The four most popular sources of advice and guidance are: other farmers, internet, social media and videos. Electronic information technology appears important to the novice agroforestry practitioner in acquiring information.

This contrasted to experienced agroforestry practitioners (Figure 5, n = 19). Here individuals appear much more discriminating in the agroforestry information they use. Sources are dominated by peer-to-peer interactions (other farmers, projects/initiatives, discussion groups) and what could be describes as “serious study” (books and internet). Other sources of information such as videos and social media are much less important at this stage of the learning process.

This difference in the discrimination of agroforestry farmers with regard to information sources at the novice and expert stage is reflected in the variance of data points in Figures 4 and 5. There is significantly less variation in the source of information used at the novice stage compared to the expert stage (Two tailed F-Test for the difference of two variances, $P < 0.001$). Novice agroforestry are open to a variety of information sources whereas expert ones are much more discriminating in the information sources they use.

There are two very distinct information sources that were “missed” by researchers in predefining the information sources categories in section 7, Appendix 1: Third sector organizations, unpaid by farmers (Woodland Trust, Farming and Wildlife Advisory Group, etc.), and paid specialists (consultancies etc.) (Figure 7). These were considered roughly equally in importance and considerably more important than the small number of other agroforestry information sources offered. While only six inexperienced agroforestry farmers offered additional categories of information use, it appears that free third sector and paid specialist information sources are also used by novices.

Altogether, these findings on advice and guidance used by novice and expert agroforestry practitioners point to a model in which farmers become interested initially in agroforestry through a very wide range of sources including relatively superficial sources such as online videos and social media. As farmers develop expertise in agroforestry information sources switch to a much narrower range comprising: “serious study” (books and internet) and person-to-person interactions (farmer-to-farmer and farmer-to-specialist).

Payments: financing agroforestry

All but one of the experienced agroforestry practitioners interviewed (n = 19) have financed at least part of their agroforestry operation themselves or their landlord has financed it. Other sources of

funding are relatively minor. Some farmers have paid for components of their agroforestry systems with grants from the Woodland Trust. Other have paid for components of the using state grants such as Countryside Stewardship, Environmental Stewardship, and the English Woodland Grant Scheme (Figure 8).

Discussion:

Hectarage dedicated to agroforestry by farmers is relatively low (under 20%) in our sample. As agroforestry represent a relatively long terms commitment and precludes farmers from, for example, responding to fluctuating commodity price season to season and year to year on small sections of their land, it may be that this will always be the case. Alternatively, the evidence review earlier released from the Agroforestry ELM Test and the current analysis reveals an extremely unappealing funding environment for agroforestry in England, with most farmers currently financing agroforestry themselves, regardless of the public good they are producing. Improvement in the funding environment, could, thus, bring about an increase in both the number of farmers adopting agroforestry or an increase in the numbers adopting agroforestry and the hectarage dedicated to it. Likely only time will tell, as funding provision within ELM for agroforestry becomes clearer and it becomes more attractive to farmers, which alternative is realised.

The insights on information sources used by farmers at the novice and expert phase of agroforestry practice suggests some strategies that those involved in farming knowledge exchange could use to increase the adoption of agroforestry. Firstly, as novice agroforestry farmers use a very broad range of sources, there should not be an over reliance on single sources such as social media to “get farmers interested” in agroforestry. Efforts should be spread across as wide a range of information sources as possible to increase interest in agroforestry. Secondly, those working in knowledge exchange can facilitate movement from the novice to expert agroforestry practitioner phase by providing sources of advanced information use (books, internet webpages, sources of person-to-person interaction) within information sources used by novice agroforestry practitioners. In particular, online videos and social media posts, which are widely used by novice agroforestry practitioners, should not guide readers/viewers to more of the same sources, but should guide them towards the sources of information (“serious study and person-to-person) that are associated with the development of expertise.

This analysis arguably complicates the issue of how agroforestry advice and guidance may be facilitated through state provision within ELM. The hope that a single source of advice and guidance would dominate appears dashed. Instead, the picture appears quite complex, with a different range of information sources being used at different stages of the acquisition of agroforestry expertise. That said, there are some information sources that appear important regardless of level of expertise. Farmer-to-farmer interactions are among these, and it may be that facilitating peer-to peer interaction among farmers is an areas Defra could focus resources and play an important role in the provision of agroforestry advice and guidance within ELM.

An interesting finding that emerges from the analysis of addition agroforestry information sources offered by interviewees is the willingness of those sampled to pay for agroforestry advice. Paid expert advice in the form of consultants and other paid specialists was roughly as popular as unpaid advice from the third sector. It was notable that even some individuals who have not yet practiced agroforestry have paid for advice on it, and this perhaps reflects the interest and perceived potential for the provision of public good that many currently see in agroforestry. It will be a major objective of the Agroforestry ELM Test as it moves into the main workshop phase with farmers to determine how much and which types of advice and guidance farmers feel they should pay for and what should

be free. This issue is also likely key in the financing of agroforestry. Some farmers will clearly pay for it themselves, but to increase adoption it will be necessary to determine exactly what elements of the agroforestry project they feel should be provided for, what elements they should pay themselves, and what components should be financed by other means such as the private sector.

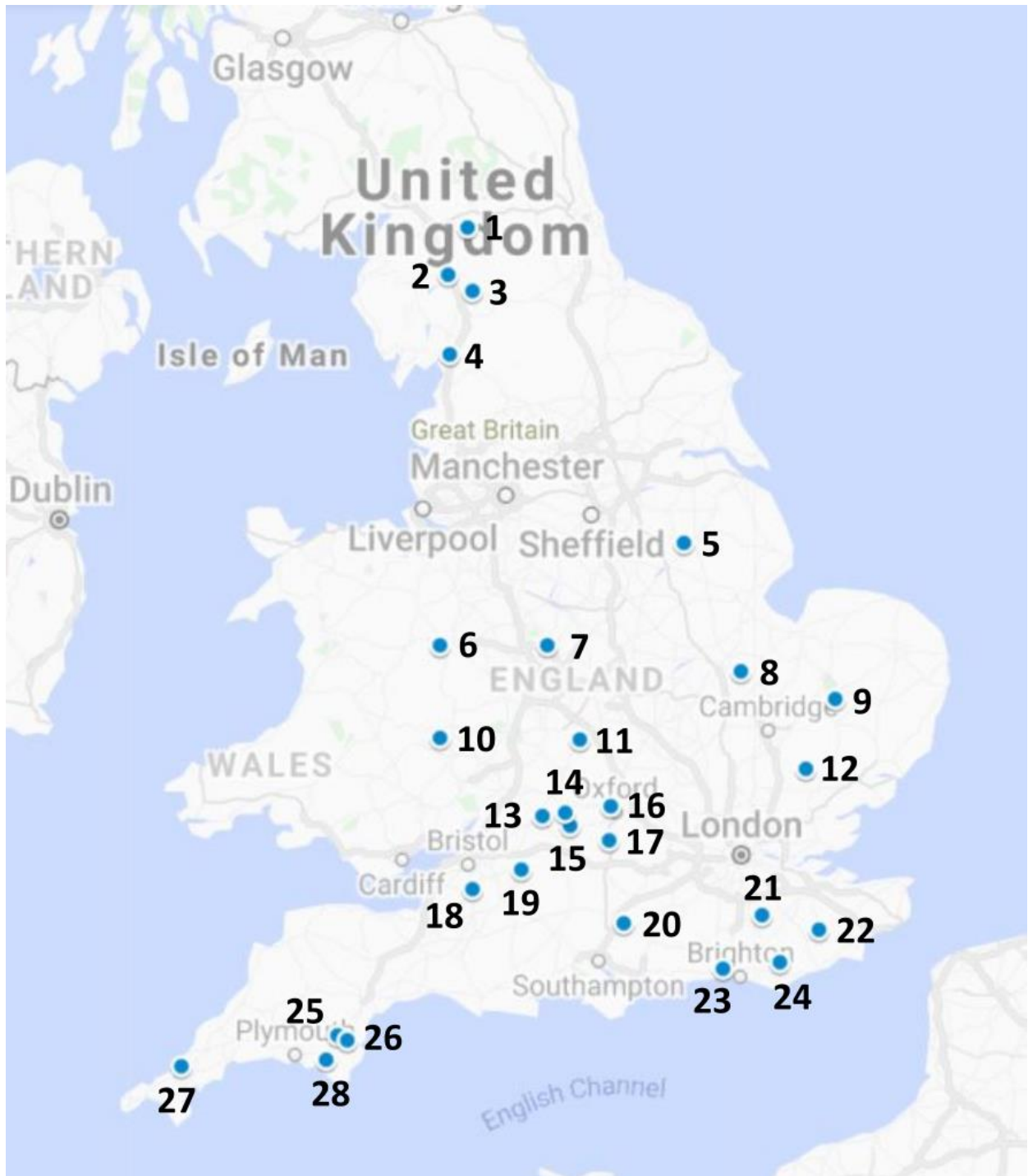


Figure 1: Map of current monitor and cluster farmers on the Agroforestry ELM Test (late Sept 2021). All farmers indicated have undergone a formal interview within the project.

Table 1: Details of Agroforestry ELM Test farmers corresponding to numbers in Figure 1.

Number on map	Farmer name	Farm lat.	Farm long.	Hectare (ha)	Farm type	Agroforestry type	Area under agroforestry (ha)	Principal agroforestry interest (if not practicing)
1	Nic & Paul Renison	54.88465089	-2.618730586	142	Upland grazing (sheep)	Upland Silvopasture	≈ 21	NA
2	David Brass	54.64504077	-2.791213918	182	Beef, sheep, poultry	Silvopoultry	≈ 36	NA
3	Jenny and Lenny Bowes	54.55419742	-2.579144011	227	Mixed livestock	NA	NA	Silvopasture
4	Bill Grayson	54.2275391	-2.773285466	263	Suckler beef and lamb	Lowland Silvopasture, Woodland Grazing	88 woodland pasture	NA
5	Claire Birch	53.21966406	-0.653940929	770	Beef	Lowland Silvopasture, Woodland Grazing	539	NA
6	Jonathan Lovegrove Fielden	52.6687346	-2.84789334	364	Dairy	Lowland Silvopasture, Woodland Grazing	55	NA
7	Clive Bailye	52.6668023	-1.900049062	239	Arable	NA	NA	Silvoarable
8	Stephen Briggs	52.52158327	-0.16286986	110	Arable / Horticulture	Silvoarable	4	NA
9	John Pawsey	52.37625715	0.709282521	650	Mixed arable and sheep	Silvoarable, Lowland Silvopasture	20	NA
10	Steven Ware	52.1655305	-2.862992647	121	Poultry, cereals, apples	Silvoarable	70	NA
11	Tom Tame	52.14075703	-1.604801196	49	Lowland sheep grazing	Lowland Silvopasture	4	NA
12	Archie Ruggles Brise	51.97980798	0.442985422	800	Arable, sheep	Silvoarable, Lowland silvopasture	5	NA
13	Andy Dibben		-1.939219476	647	Mixed arable, livestock, horticulture	Silvohorticulture	6	NA

		51.73210 833						
14	Sam Phillips	51.74602 897	- 1.733789 925	708	Mixed: cereals, grazing dairy and sheep	NA	NA	Silvoarable, Silvopasture, Silvopoultry
15	Andrew Woof	51.67935 733	- 1.685649 521	200	Arable and beef	NA	NA	Silvopasture, Silvoarable
16	Claire Hill	51.78364 994	- 1.316531 445	486	Mixed: arable, beef, sheep, hens	Silvopoultry	27	NA
17	Julian Gold	51.59488 407	- 1.335960 302	303	Mixed arable, sheep	Silvoarable, Lowland Silvopasture	77	NA
18	Helen Jackson Brown	51.31918 046	- 2.581359 403	11	Grazing sheep, cows	NA	NA	Silvopasture
19	Tom Willings	51.42444 912	- 2.138409 931	1538	Poultry	NA	NA	Silvopoultry
20	Andy Blason	51.12373 263	- 1.207731 714	1200	Mainly arable. Sheep, pigs	NA	NA	Silvoarable
21	Polly Dumbreck	51.16588 665	0.037697 635	54	Grazing cows, sheep pigs, poultry	Lowland silvopasture	0.4	NA
22	Jay Wrighton	51.08021 29	0.545760 858	834	Arable and poultry	NA	NA	Silvopoultry
23	Mike Tristram	50.86782 526	- 0.305660 304	70	Mixed arable, grazing cattle and sheep	NA	NA	Silvoarable, Silvopasture
24	Anthony Penrose	50.89952 701	0.198467 598	172	Mixed arable and grazing beef cows	Coppiced woodland	32	NA
25	John Richards	50.48317 084	- 3.779513 746	526	Horticulture, dairy	Silvohorticulture	0.8	NA
26	Rafaele Pompa	50.45301 736	- 3.693429 992	198	Arable, horticulture, some cows	Silvohorticulture, Silvoarable	20	NA
27	Sally Westway	50.30559 117	- 5.196452 175	2	Horticulture	Silvohorticulture	2	NA
28	Rebecca Hosking	50.34953 822	- 3.891072 754	18	Lowland grazing sheep	Lowland silvopasture	6	NA

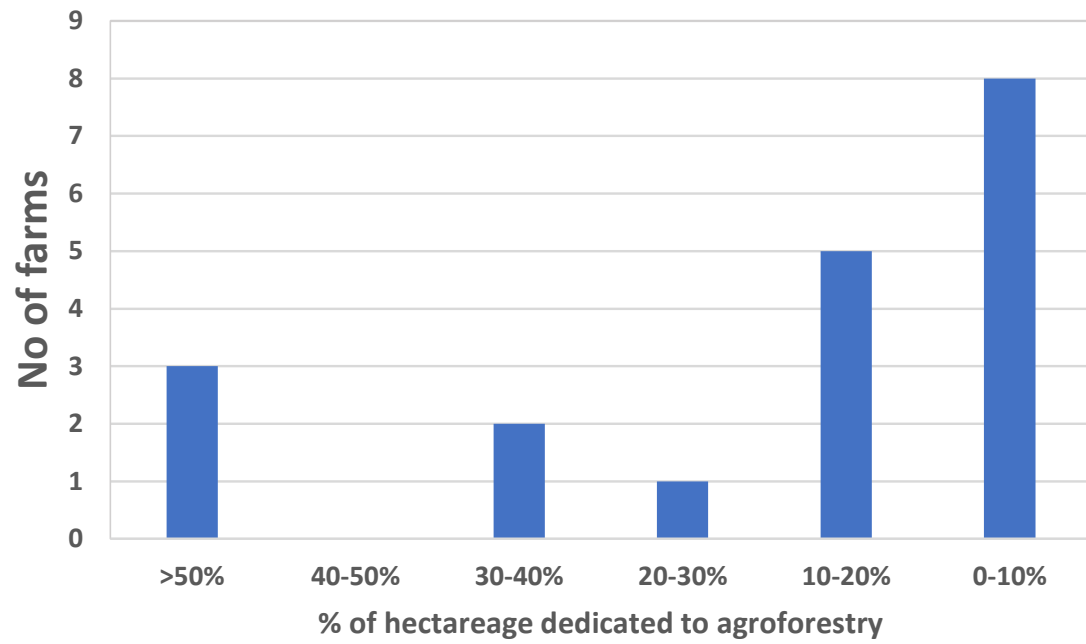


Figure 2: Distribution of % of total hectareage dedicated to agroforestry in the sample of 19 farmers actively practicing agroforestry.

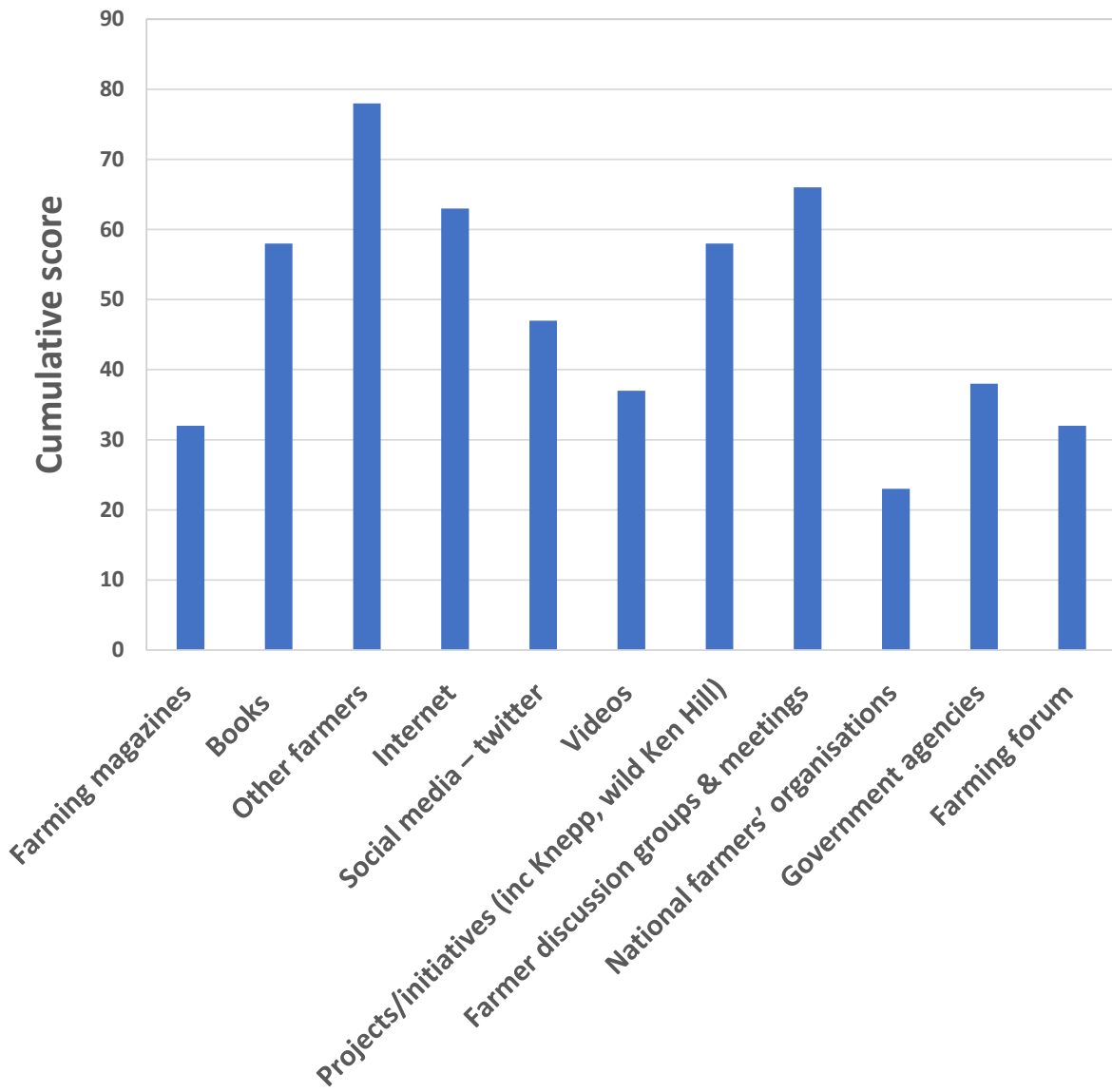


Figure 3. Advice and guidance preferences of all agroforestry farmers expressed during formal interview (n = 28). Interviewees responded here to 11 pre-defined categories devised by interviewers.

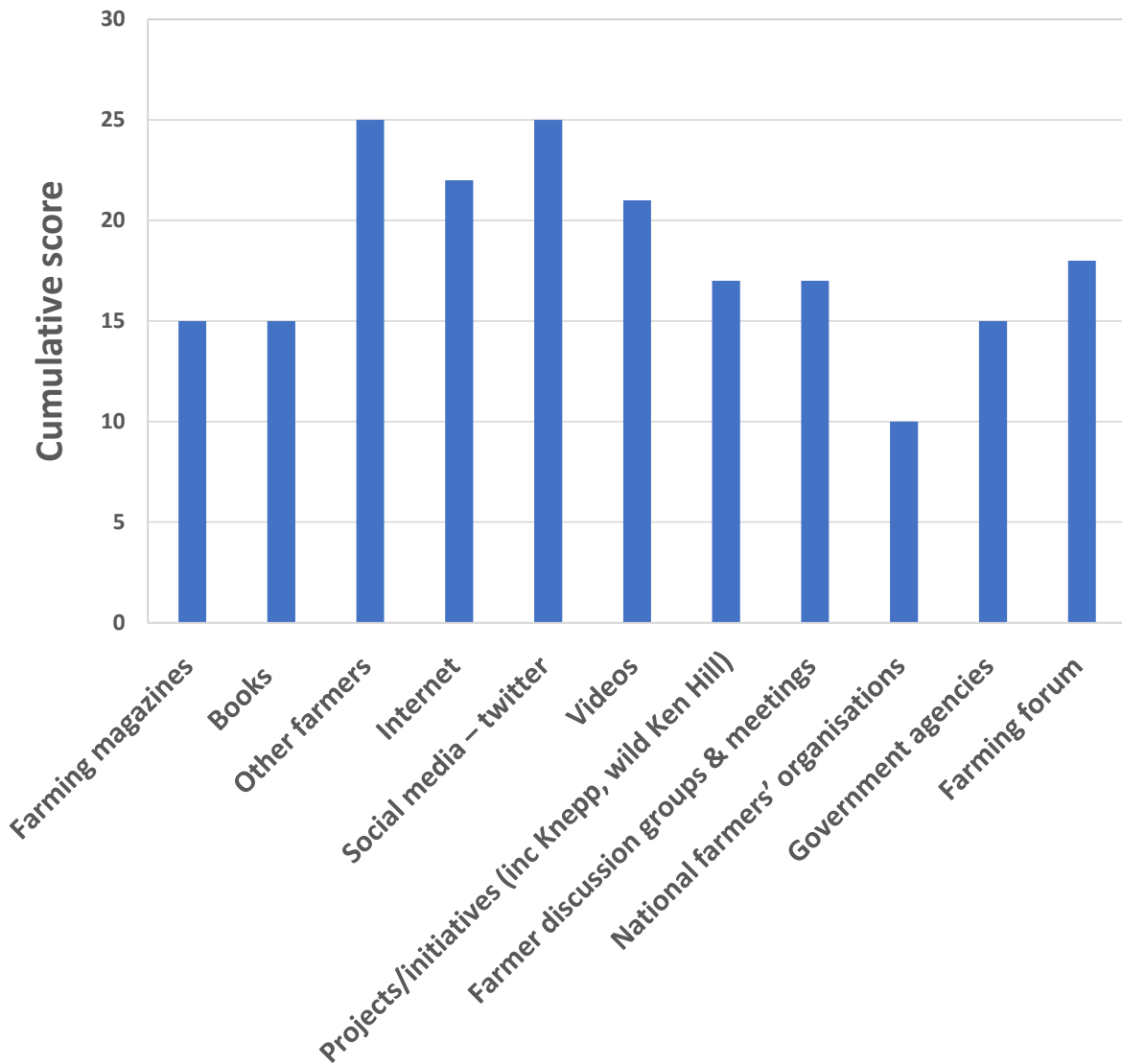


Figure 4. Advice and guidance preferences of inexperienced agroforestry farmers (not yet set up an agroforestry system or currently undergoing transition) expressed during formal interview (n = 9). Interviewees responded here to 11 pre-defined categories devised by interviewers.

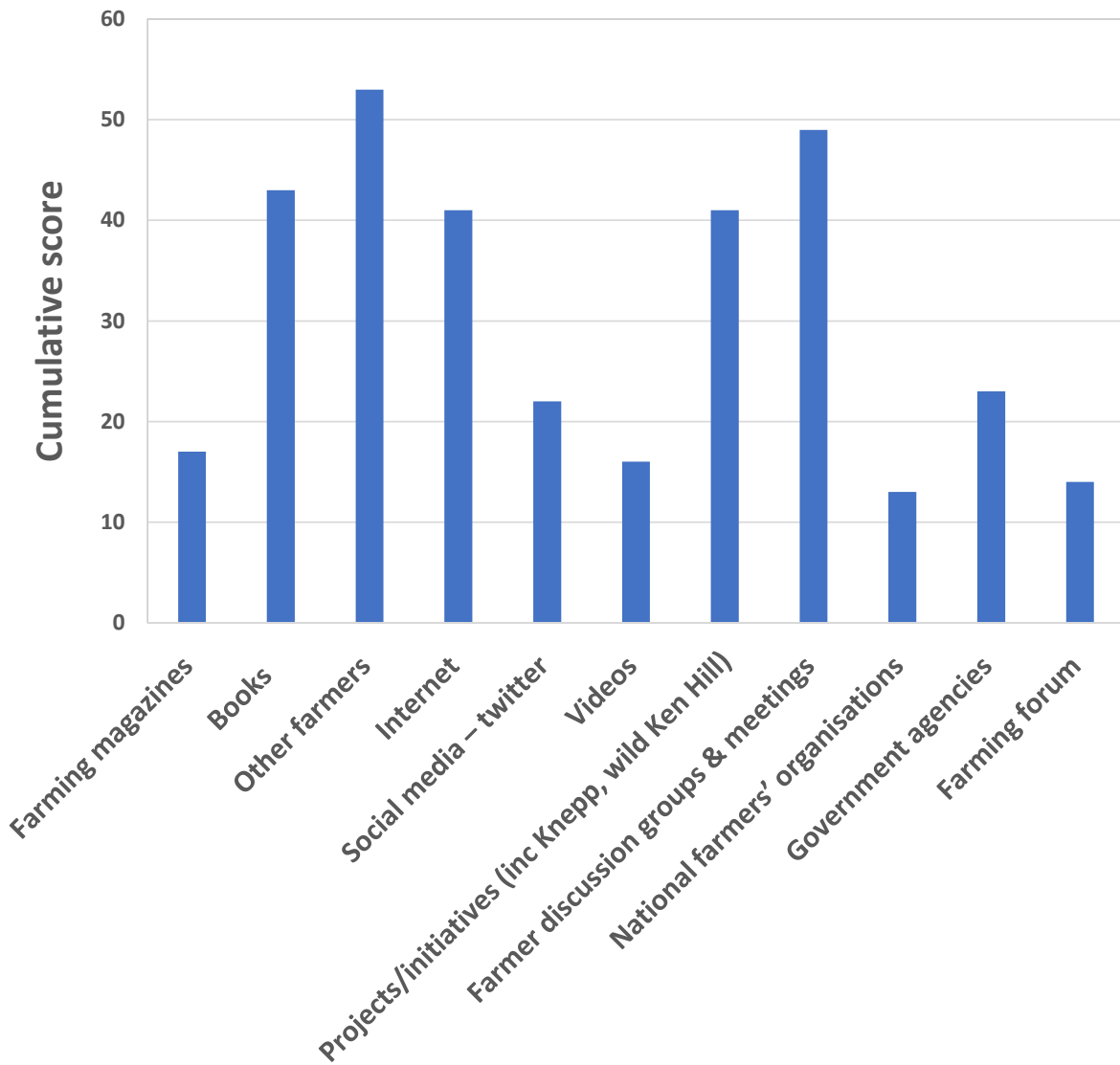


Figure 5. Advice and guidance preferences of experienced agroforestry farmers (currently practicing agroforestry) expressed during formal interview (n = 19). Interviewees responded here to 11 pre-defined categories devised by interviewers.

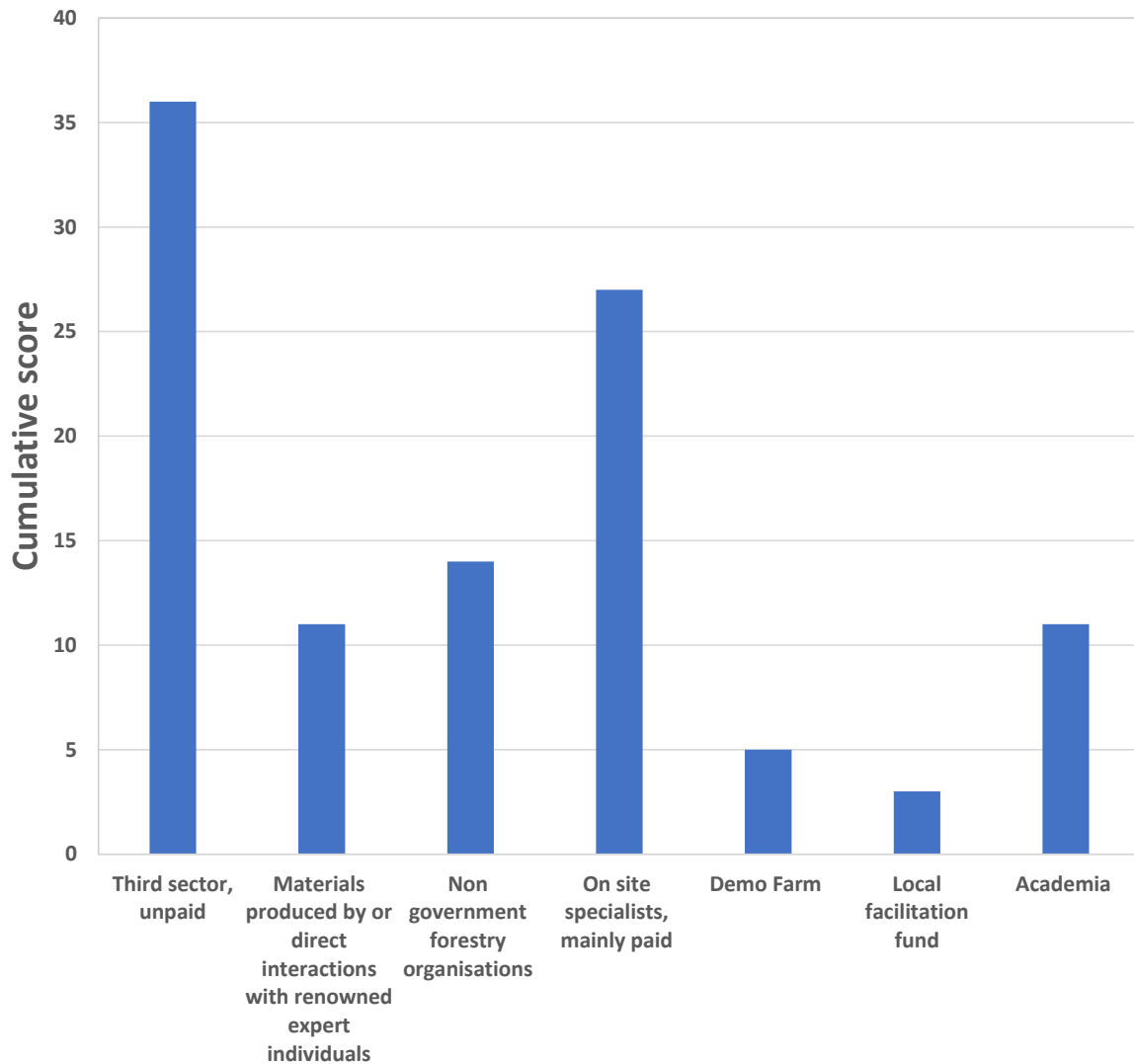


Figure 6. Analysis of additionally advice and guidance sources offered by interviewees after presentation of pre-defined advice and guidance categories. These represent sources of advice and guidance “missed” by researchers in devising pre-allocated categories (n = 21). Individual responses under the category “Third sector, unpaid” included: FWAG, Woodland Trust, “Environmental Organisations”, Rewilding Britain, CEH, Innovative Farmers, Groundswell. Individual responses under the category “Materials produced by or direct interactions with renowned expert individuals” included: John Davis, Martin Wolfe, Mark Sheppard, Darren Doherty, “Swedish Expert”, Ben Cornwall. Individual responses under the category “Non government forestry organisations” included: FWF, Confederation of Forest Industries Trade association, New Zealand Walnut Growers Assoc., Australian Walnut Growers Assoc. Individual responses under the category “On site specialists, mainly paid” included: Abacus Agriculture, farm advisor/rep, “independent specialist onsite”, “specialist onsite forester”, “consultancies”. Individual responses under the category “Demo farm” included: Wakelyns. Individual responses under the category “Academia” included: Scholarships, onsite student advisor.

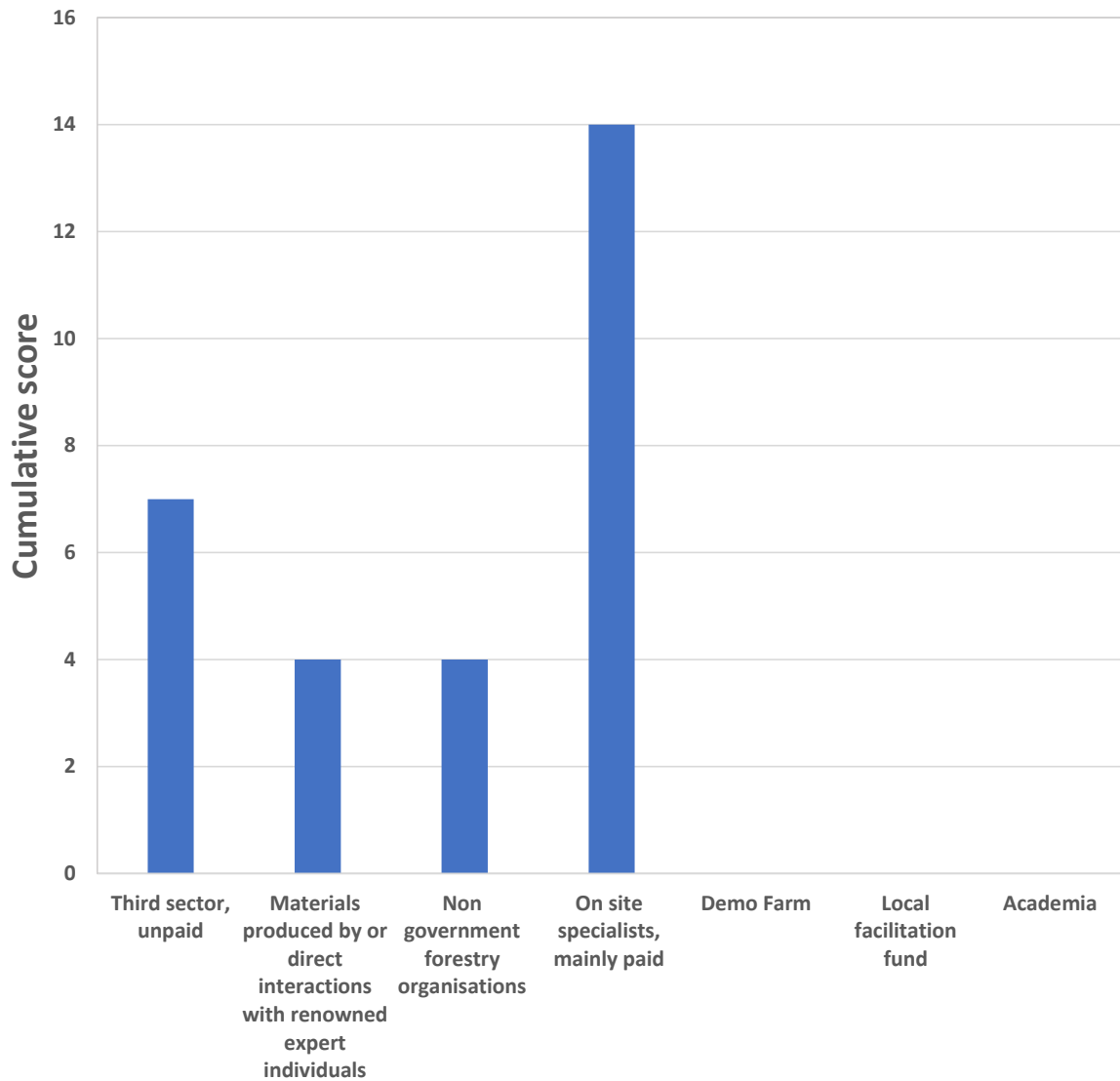


Figure 7. Analysis of additionally advice and guidance sources offered by interviewees after presentation of pre-defined advice and guidance categories. These represent sources of advice and guidance “missed” by researchers in devising pre-allocated categories. Only additional sources offered by inexperienced agroforestry practitioners are shown (n = 6). See figure 5 for individual responses grouped under each category on the x-axis.

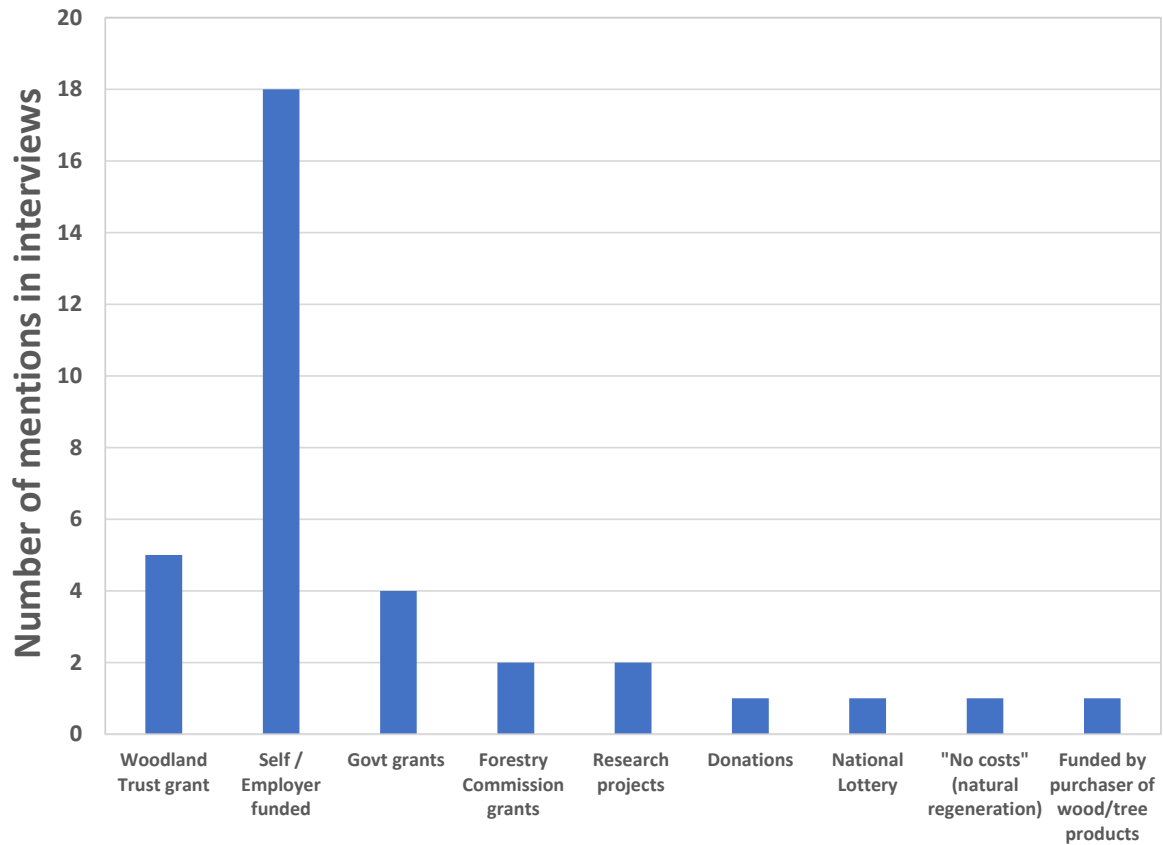


Figure 8: Sources of funding for agroforestry projects among farmers currently practicing agroforestry (n = 19). Individual responses under the category “Govt grants” included: Countryside Stewardship, "Government grants", Environmental Stewardship, English Woodland Grant Scheme. Individual responses under the category “Forestry Commission grants” included: Historical Forestry Commission grants 1970s, Forestry Commission Woodland Grant Scheme. Individual responses under the category “Research projects” included: Defra, CEH.

Appendix 1: The interview template

Defra Agroforestry Test Project: Farmers' viewpoints

1 General introduction

“As you will be aware, we are currently undertaking the Agroforestry ELM Test project. This project is designed to gauge farmer opinion on agroforestry to assist Defra in the design of the post-Brexit ELM (Environmental Land Management) incentive system. We are interested in all aspect of farmer opinion on UK agroforestry, but have promised Defra to pay particular attention to farmer preferences for payment and advice and guidance options when delivering agroforestry projects. Agroforestry as we define it includes boundary as well as in-field agroforestry designs.

The interview you are about to take part in is the first of a series of interviews and workshop we will undertake in the Agroforestry ELM Test project. The purpose of these initial interviews is to discuss the background about the 6 monitor farmers and 30 associated cluster farmers on this project: about their current farming and agroforestry operations. We will touch on preferred payment, advice and guidance options for agroforestry but not in much detail at this point as later interviews will cover these points in more detail.

The results of these interviews will allow us to better design the project workshops (that you will also be able to attend) and a series of more detailed interviews with a wider sample of the farming community.

This interview should take around 30 minutes. We ask you to be at your ease. No names will be attached to interview comments by farmers in any of the outputs of the Agroforestry ELM Test so please feel free to voice your opinion.”

Note to interviewer: It is strongly recommended that interviewers print this interview out and complete it by hand.

2 About the online interview and persons

Participant name		
Date		
Interviewer name		
Time of appointment:		
Formal interview	Start time	Finish time
Length (hours, min)		
Farm (business) name		
Farm role of person interviewed (owner farmer, farm manager, worker etc)		
Are you the decision maker on the farm? If not, what is your role in the farm's decision-making process?		

3 Can you tell us a bit about your farm?

Please fill in table about farm facts before and during the interview but keep it informal.

Farm Size:	
Staff/labour employed on farm:	
Tenure:	
Farm Type:	
Rainfall:	
Altitude:	
Soil:	
Location:	
Farming system: e.g., intensive, low input etc	
Full description of farm type: For example; <ul style="list-style-type: none"> • Cereals • Arable including roots, field veg • Mixed livestock and crops (%split) • Lowland livestock – non/SDA • Upland livestock – SDA • Dairy • Pig and/or poultry (head/unit) • Other 	
Crop types and areas;	
Pasture types (ages) and areas	
Livestock numbers and types	
Horticulture inc. field veg, potatoes	
Nature conservation areas and any ungrazed areas / set-aside	
Woodland:	
Historic/ current grant schemes:	
Grant schemes not currently used but used previously	
What are the main challenges you face as a farm business over the next 5 years?	

4. Can you tell us about your experiences of agroforestry?

Please fill in table about farm facts before and during the interview, but keep it informal

Questions for participants without any agroforestry	
In broad terms as a farming practice what are your main views on agroforestry?	
Are you considering planting agroforestry on your farm?	
What would be the main reason for you to plant agroforestry on your farm?	
What type of agroforestry system would most appeal to you and why?	
What areas/land use type of the farm would you consider planting up as agroforestry?	
What are the main barriers for to adopt agroforestry on your farm?	
Are there any obvious support measures that would encourage you to plant agroforestry on your farm? e.g.: payment incentives, advice and guidance, capital grants.	
Remember we previously spoke of the challenges you face over the next 5 years? How can agroforestry help you face those challenges?	

Questions for existing agroforestry practitioners

In broad terms as a farming practice what are your main views on agroforestry?

What area of the farm is already under agroforestry?

Proportion of area under agroforestry dedicated to either of the following: silvoarable, silvopastoral, silvopoultry, silvohorticulture, woodland grazing.

Principal animals / crops associated with agroforestry

Tree species being used for agroforestry

Main perceived purpose of agroforestry operation (e.g., output tree products, animal shelter, prevent soil erosions etc)

% of farm labour dedicated to agroforestry operation

How did you pay for the set up and continued maintenance of your agroforestry operation (e.g., self-funded, government scheme, Woodland Trust grant etc)

Benefits of your agroforestry system that you have observed

Drawbacks of your agroforestry system that you have observed

What are the main barriers you experienced when adopting agroforestry on your farm?

Are there any obvious support measures that would encourage you to plant agroforestry on your farm?

e.g.: payment incentives, advice and guidance, capital grants.

Remember we previously spoke of the challenges you face over the next 5? How can agroforestry help you face those challenges?

The following sections are envisaged as a conversation. Interviewers will be asked to list conversation prompts

5. Can you describe the costs incurred while setting up your agroforestry system? [if the farmer is not currently practicing agroforestry ask them about perceived costs]

Summary of the interviewee's narrative:

Cost category examples: crop/grazing loss of area, time/management, capital items, land value.

Summary of conversation prompts used by the interviewer:

6. Given the costs we discussed in the previous section, what features of a payments system for agroforestry do you think would encourage more farmers to adopt agroforestry? [if the farmer is not currently practicing agroforestry ask them about perceived advantageous features]

Summary of the interviewee's narrative:

e.g.: payment incentives, advice and guidance, capital grants.

Summary of conversation prompts used by the interviewer:

7. Where did you seek advice and guidance when setting up your agroforestry system? [if the farmer is not currently practicing agroforestry, ask them where they would seek advice if they decided to set up an agroforestry system]

Please use the table below for some scoring whether sources were helpful/ not helpful using a simple Likert Scale from 1= least helpful to 5 = most helpful

	Before starting	During transition	helpful (1= least, 5 most helpful)				
			1	2	3	4	5
Farming magazines							
Books (note key titles)							
Other farmers							
Internet							
Social media							
Videos							
Projects/initiatives							
Farmer discussion groups & meetings							
National farmers' organisations							
Government agencies							
Farming forum							
Other (please list below and score):							
FWAG							
John Davis							
Woodland Trust							

Notes on filling in the table:

THANK YOU VERY MUCH for your time.

“We will let you know when we have a draft report that can be shared with you if you are interested”.

8. Notes after the interview

Please list any events or other factors that impinged on the interview that should be considered by the researcher when analysing this interview.

Notes:

9 Informed consent

Staff at “Agricology” are currently creating profiles of influential agroforestry farmers in the UK. Do they have permission to read the notes from your interview and contact you regarding this?

yes		no	
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Staff at ORC are currently creating “A National Network of Agroforestry Farms” as part of Farming the Future, administered by the A Team Foundation. Do they have permission to contact you regarding this?

yes		no	
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