



## Grass & herbal leys farm network

Final report to AHDB and Defra

19<sup>th</sup> July 2018

### Submitted to:

Rebecca Coleman  
Dr Mary Vickers  
AHDB Beef & Lamb

Luke Spadavecchia  
Defra

### Prepared by:

Dr Lizzie Sagoo, ADAS  
Dr Anne Bhogal, ADAS  
John Williams, ADAS  
Lynn Tatnell, ADAS

## Contents

<b>1</b>	<b>Background.....</b>	<b>1</b>
<b>2</b>	<b>Project aim.....</b>	<b>1</b>
<b>3</b>	<b>Approach .....</b>	<b>1</b>
<b>4</b>	<b>Network establishment and promotion .....</b>	<b>2</b>
4.1	<i>Activities to establish and promote the network .....</i>	<i>2</i>
4.2	<i>Grass and herbal leys network registered list .....</i>	<i>3</i>
<b>5</b>	<b>Grass &amp; herbal leys online survey .....</b>	<b>4</b>
5.1	<i>Introduction.....</i>	<i>4</i>
5.2	<i>Results .....</i>	<i>4</i>
5.3	<i>Summary.....</i>	<i>13</i>
<b>6</b>	<b>Grass &amp; herbal leys farm network meeting.....</b>	<b>14</b>
6.1	<i>Introduction.....</i>	<i>14</i>
6.2	<i>Knowledge gaps .....</i>	<i>14</i>
6.3	<i>Grass and herbal leys network development and communication .....</i>	<i>15</i>
<b>7</b>	<b>Strategy meeting.....</b>	<b>16</b>
<b>8</b>	<b>Future development of the network .....</b>	<b>17</b>
	<b>Appendix 1 – Press release .....</b>	<b>18</b>
	<b>Appendix 2 – Meeting agenda .....</b>	<b>20</b>
	<b>Appendix 3 – Grass and herbal leys network survey .....</b>	<b>21</b>

## 1 Background

Integration of grass/herbal leys and livestock production into arable rotations has the potential to provide benefits to both arable and livestock farming systems.

Continuous arable cropping with annual soil cultivations and little or no inputs of organic materials have led to a decline in soil organic matter content. Soil organic matter levels are intimately linked to soil properties that are important to the maintenance of soil quality and fertility which are key for the long-term sustainability of crop production. Temporary grass/herbal leys have the potential to enhance soil organic matter levels, leading to increased moisture retention, better nutrient turnover and reduced risk of soil erosion.

Furthermore, the introduction of grass leys into arable rotations provides the opportunity for the cultural control of black-grass by facilitating a decline in the weed seedbank and a reduction in the resistance pressure to current herbicides which will maintain their effectiveness for longer.

## 2 Project aim

The aim of the project was to establish a 'Grass and herbal leys farm network' consisting of farmers, researchers and industry organisations to provide a platform to facilitate quantification of the long term (i.e. 5-10+ years) impacts of leys in rotation.

## 3 Approach

This project was for an initial six month period ('phase one') to formally establish and expand the network. Activities included:

- Network establishment and promotion
- Grass and herbal leys online survey
- Project partnership meeting
- Creation of farm network database
- End of project future strategy meeting with AHDB and Defra

## 4 Network establishment and promotion

### 4.1 Activities to establish and promote the network

This initial 6 month network establishment phase aimed to widely promote the network to maximise engagement with relevant farmers, research organisations and key industry partners.

A one-page summary document outlining the aims and vision of the network and publicising the project partnership meeting was produced at the start of the project in the form of a press release (Appendix 1). This press release was circulated via:

- News article on ADAS website (<http://www.adas.uk/News/new-grass-and-herbal-leys-farm-network-launched>). 3176 views (15/07/18)
- Press release circulated to
  - Farmers Weekly
  - Farmers Guardian
  - Farming UK
  - FACTS
  - Agricology
  - Two independent farming journalists
- In addition to ADAS and AHDB, the press release has been published by:
  - Farm Carbon Cutting toolkit (<https://farmcarbontoolkit.org.uk/news/new-grass-and-herbal-leys-farm-network-launched-adas-and-ahdb>)
  - Agricology <https://www.agricology.co.uk/join/events/launch-grass-herbal-leys-farm-network>
  - Tillage magazine <http://tillagemagazine.net/new-grass-herbal-leys-farm-network-launched/>
- Other promotion of network and partnership meeting via
  - ADAS Crop Action
  - ADAS Technical Update
  - ADAS Rosemaund Farmers Association. The network was included in a presentation on soil health (January 2018).
  - Social media (Twitter – initial post achieved 22,116 impressions & 873 engagements – 15/07/18)
  - Presentation at Agricology field day ‘Mixing it up: leys, livestock and arable’ 3<sup>rd</sup> January 2018
  - Agricology blog ‘Rotational benefits of leys – looking to the future’ <https://www.agricology.co.uk/field/blog/rotational-benefits-leys-looking-future>
  - FACTS newsletter (April 2018)
- Additional network publicity following the partnership meeting:
  - News article on the network and partnership meeting (including slides from the meeting) on the ADAS website (<http://www.adas.uk/News/grass-and-herbal-leys-farm-network-2>) 317 views (15/07/18).
  - Webpage on ADAS website, including details of the network and a link to register (<http://www.adas.uk/services/Grass-and-herbal-leys-farm-network>)
  - Grassland Southwest – network featured on ADAS stand.

## 4.2 Grass and herbal leys network registered list

There are 177 people registered with the Grass and herbal leys farm network (as of 15/07/18), this includes everyone who registered to attend the network partnership meeting in April and all those who have completed the online survey (Section 5). The online survey is the main method for initial engagement with the network. The survey will remain open for the foreseeable future to continue to register people with the network.

*Table 1. Grass and herbal leys network registered list*

Occupation	Number	Percentage
Farmer	80	45
On-farm advisor or agronomist	31	18
Research	19	11
Other	47	27

‘Other’ includes those from AHDB, EA, Natural England, CSF, Defra, seed suppliers, other consultants and representatives from the agrichemical industry.

The Grass and herbal leys farm network database is managed in accordance with GDPR Regulations. A link to the privacy policy is provided from the Network webpage on the ADAS website (<http://www.adas.uk/Portals/0/Grass%20%26%20herbal%20leys%20farm%20network%20%28Privacy%20Policy%20May%202018%29.pdf>).

## 5 Grass & herbal leys online survey

### 5.1 Introduction

Registration for the grass and herbal leys network is online and as part of the registration participants are asked to complete a short questionnaire. To date there have been 133 responses to the survey (15/07/18). Only farmers using grass/herbal leys are asked the additional questions on ley management. A summary of results from the survey is given below. Details of the survey questions are in Appendix 3 and the link to the survey is <https://www.smartsurvey.co.uk/s/grassandherballeysnetwork/>

### 5.2 Results

- What is your main occupation?**

*Number of respondents = 133*

Occupation	Number	Percentage
Farmer	61	46
On-farm advisor or agronomist	27	20
Research	17	13
Other	28	21

‘Other’ includes those from AHDB, EA, Natural England, CSF, Defra, seed suppliers, other consultants and representatives from agrichemical industry.

- Please provide information on why you are interested in joining the network**

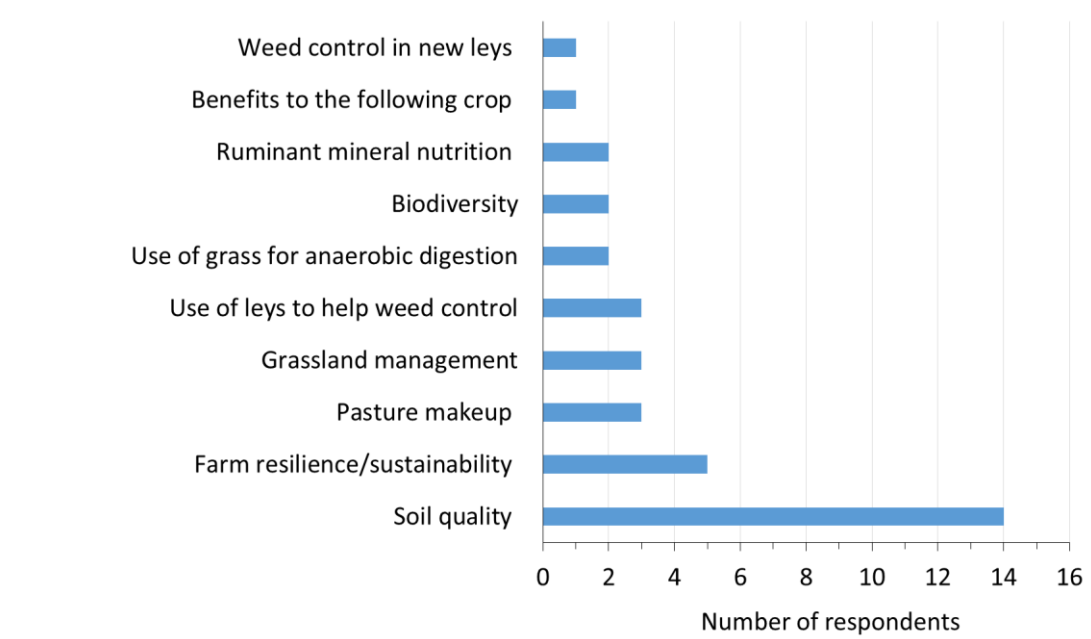
Any respondent who did not select ‘Farmer’ as their main occupation was asked why they were interested in joining the network.

*Number of respondents = 71 (all those selecting ‘On farm advisor or agronomist’, ‘Research’ or ‘Other’ as their main occupation; 1 respondent did not provide an answer).*

Reasons for joining the network	Number	Percentage
To keep up to date with any new research	29	41
The information is useful to my clients	13	18
I am interested in participating in research	29	41



Respondents selecting 'I am interested in participating in research' (29) were asked to provide information on their research interests. These responses indicated a wide range of research topics and interest in working with the network on current and future projects. Research topics mentioned included:



- **Are grass/herbal leys part of your farm rotation?**

*Number of respondents = 61 (all those selecting 'Farmer' as their main occupation).*

Grass leys part of rotation?	Number	Percentage
Yes	47	77
No	14	23

Those answering 'No' indicated that they were either considering introducing leys into the rotation (8 respondents), were interested in learning more about leys (5 respondents) or had used leys in the past (1 respondent).

- **What are the main soil types on your farm?**

*Number of respondents = 47 (all those with grass/herbal leys as part of the rotation). Option to select more than one answer.*

Main soil types	Number	Percentage*
Light sand	10	13
Shallow	10	13
Medium	26	33
Deep clayey	25	32
Deep silty	4	5
Organic	3	4
Peat	1	1

\* Percentage of all responses

- **What type of farm are you?**

*Number of respondents = 47 (all those with grass/herbal leys as part of the rotation). Option to select more than one answer.*

Type of farm	Number	Percentage*
Beef & sheep	15	29
Dairy	3	6
Arable only	2	4
Mixed (arable and livestock)	30	58
Other	2	4

*\* Percentage of all responses*

‘Other’ included equine (1 respondent) and sheep/goats (1 respondent).

- **What are your grass/herbal leys used for?**

*Number of respondents = 47 (all those with grass/herbal leys as part of the rotation). Option to select more than one answer.*

Grass/herbal leys used for	Number	Percentage*
Grazing beef cattle	26	28
Grazing sheep	27	29
Grazing dairy cattle	6	6
Cutting (hay/silage)	30	32
Cut (seed)	0	0
Other	4	4

*\* Percentage of all responses*

‘Other’ included equine (1 respondent) and sheep/goats (1 respondent), HLS (1 respondent) and fertility building in an organic rotation (1 respondent).

- **How many years do you normally keep your leys**

*Number of respondents = 46 (all those with grass/herbal leys as part of the rotation; one respondent did not provide an answer). Option to select more than one answer.*

Length of ley	Number	Percentage*
1-2 years	9	16
3 years	10	18
4-5 years	30	55
>5 years	6	11

*\* Percentage of all responses*



- **How do you establish the leys?**

*Number of respondents = 47 (all those with grass/herbal leys as part of the rotation). Option to select more than one answer.*

Establishment	Number	Percentage*
Spring sown	27	39
Autumn sown	27	39
Undersown	16	23

*\* Percentage of all responses*

- **If you have legume or herb rich leys have you received support for these as part of an agri-environmental stewardship option (formerly EK21, OK21, HK21 and OHK21; now Mid-Tier GS4 under Countryside Stewardship).**

*Number of respondents = 46 (all those with grass/herbal leys as part of the rotation; one respondent did not provide an answer).*

Establishment	Number	Percentage
Yes	11	24
No, I don't have legume or herb rich leys	8	17
No, I was not aware of the support available	7	15
No, I have not applied for this support	20	43

Four respondents selecting 'No, I have not applied for this support' provided additional comments; two indicated that they may apply to these schemes in the future, one said the prescriptions for grazing were not practical and another said the schemes were too prescriptive and complicated to access. None of the respondents selecting 'No, I was not aware of the support available' provided additional comment.

- **What other crops do you grow in rotation with your grass/herbal leys?**

*Number of respondents = 40 (all those with grass/herbal leys as part of the rotation; seven respondents did not provide an answer). Respondents were given the option for free text entry. The table below indicates the number of respondents listing specific crops being grown in rotation with leys.*

Crop	Number
Barley	21
Wheat	17
Beans	9
Oats	8
Oilseed rape	5
Peas	5
Maize	5
Forage rape	3
Sugar beet	3
Stubble turnips	2
Kale	2
Potatoes	2
Rye	1
Quinoa	1
Linseed	1
Carrots	1

- **What type of cultivations do you use at the end of the ley in preparation for the next crop?**

*Number of respondents = 47 (all those with grass/herbal leys as part of the rotation). Option to select more than one answer.*

Cultivations to establish following crop	Number	Percentage*
Plough based	25	44
Minimum tillage	16	28
Strip tillage	1	2
No tillage (following crop direct drilled)	15	26

*\* Percentage of all responses*

- **Do you use glyphosate or another weed killer to destroy the ley before the next crop?**

*Number of respondents = 47 (all those with grass/herbal leys as part of the rotation).*

Use of weed killer	Number	Percentage
Yes	32	68
No	15	32

The proportion of respondents using a weed killer varied according to cultivation systems used to establish the next crop, with proportionally more respondent's with no-tillage or minimum tillage systems using a weed killer than with a plough based system.

Cultivations to establish following crop	Use of weed killer			
	Number		Percentage	
	Yes	No	Yes	No
Plough based	13	12	52	48
Minimum tillage	12	4	75	25
Strip tillage	1	0	100	0
No tillage (following crop direct drilled)	13	2	87	13

- **What type of seed mix do you use for your leys?**

*Number of respondents = 47 (all those with grass/herbal leys as part of the rotation). Option to select more than one answer.*

Seed mix	Number	Percentage*
Grass	8	8
Grass and clover	31	32
Red clover	17	17
Lucerne	4	4
Herbal mix	31	32
Other	7	7

*\* Percentage of all responses*

'Other' included chicory (2 respondents), chicory and red clover (1 respondent), Sainfoin (1 respondent), and other grass/herbal mixes (3 respondents).

- **If you use your leys for grazing or cutting for forage, do the animals belong to your farm?**

*Number of respondents = 46 (all those with grass/herbal leys as part of the rotation; one respondent did not provide an answer).*

Do animals belong to the farm?	Number	Percentage
Yes	43	93
No	3	7

Of those answering 'No', one respondent commented that forage was provided to a nearby dairy farm, one said that they produced hay and haylage for horses and the other did not provide any additional comment.

- **If you manage your leys by grazing, how do you manage the grazing?**

*Number of respondents = 43. Option to select more than one answer.*

Grazing management	Number	Percentage*
Set stocking	4	7
Rotational grazing (moving animals between field)	26	48
Paddock grazing (moving animals between paddocks within fields)	24	44

*\* Percentage of all responses*

- **Does your use of grass/herbal leys help you control black-grass?**

*Number of respondents = 45 (all those with grass/herbal leys as part of the rotation; two respondents did not provide an answer).*

Do leys help you control blackgrass?	Number	Percentage
Yes	13	29
Yes, but we don't have a significant problem with black-grass	11	24
No, we don't have a black-grass problem	21	47

- **Do you see an increase in other weed species in crops following a ley?**

*Number of respondents = 41 (all those with grass/herbal leys as part of the rotation; six respondents did not provide an answer).*

Increase in weeds following a ley?	Number	Percentage
No	34	83
Species from the ley become weeds	3	7
Yes	4	10

Four of the six respondents who didn't select an answer added a comment that it was too early to provide an answer.

- **Grass/herbal leys may help improve soil quality. Please can you comment on whether this is an important factor in your use of leys?**

*Number of respondents = 45 (all those with grass/herbal leys as part of the rotation; two respondents did not provide an answer). Respondents were given the option for free text entry.*

- 41 responded that improvements to soil quality were an important factor in use of leys.
- 4 responded that soil quality was either not an important factor, not the main factor or they had not considered it.
- 3 respondents said they had already seen an improvement in their soils as a result of integrating leys into the rotation.

- **Do you take soil samples for analysis?**

*Number of respondents = 47 (all those with grass/herbal leys as part of the rotation).*

Do you take soil samples?	Number	Percentage
Yes	44	94
No	3	6

- **What do you analyse the soil for?**

*Number of respondents = 44 (all those with grass/herbal leys as part of the rotation & who take soil samples for analysis). Option to select more than one answer.*

What do you test soil for	Number	Percentage*
pH	43	98
P, K and Mg	43	98
Organic matter	25	57
Other	10	23

*\* Percentage of farmers analysing their soil (n=44)*

- **As part of the development of the network we hope to carry out monitoring on commercial farms. Would you be willing to take part in this?**

*Number of respondents = 46 (all those with grass/herbal leys as part of the rotation; one respondent did not provide an answer).*

Willing to take part in monitoring	Number	Percentage
Yes	43	93
'No' or no response given	3	7

Location information was given by 41 of the 43 respondents who said they would be willing to take part in monitoring. These farms are located across the country (Figure 1) in contrasting agro-climatic zones. Average annual rainfall data for farm locations (postal districts) was sourced from the MANNER-NPK climate database. Average annual rainfall for these farms varied between 575 mm to 1819 mm (Figure 2).

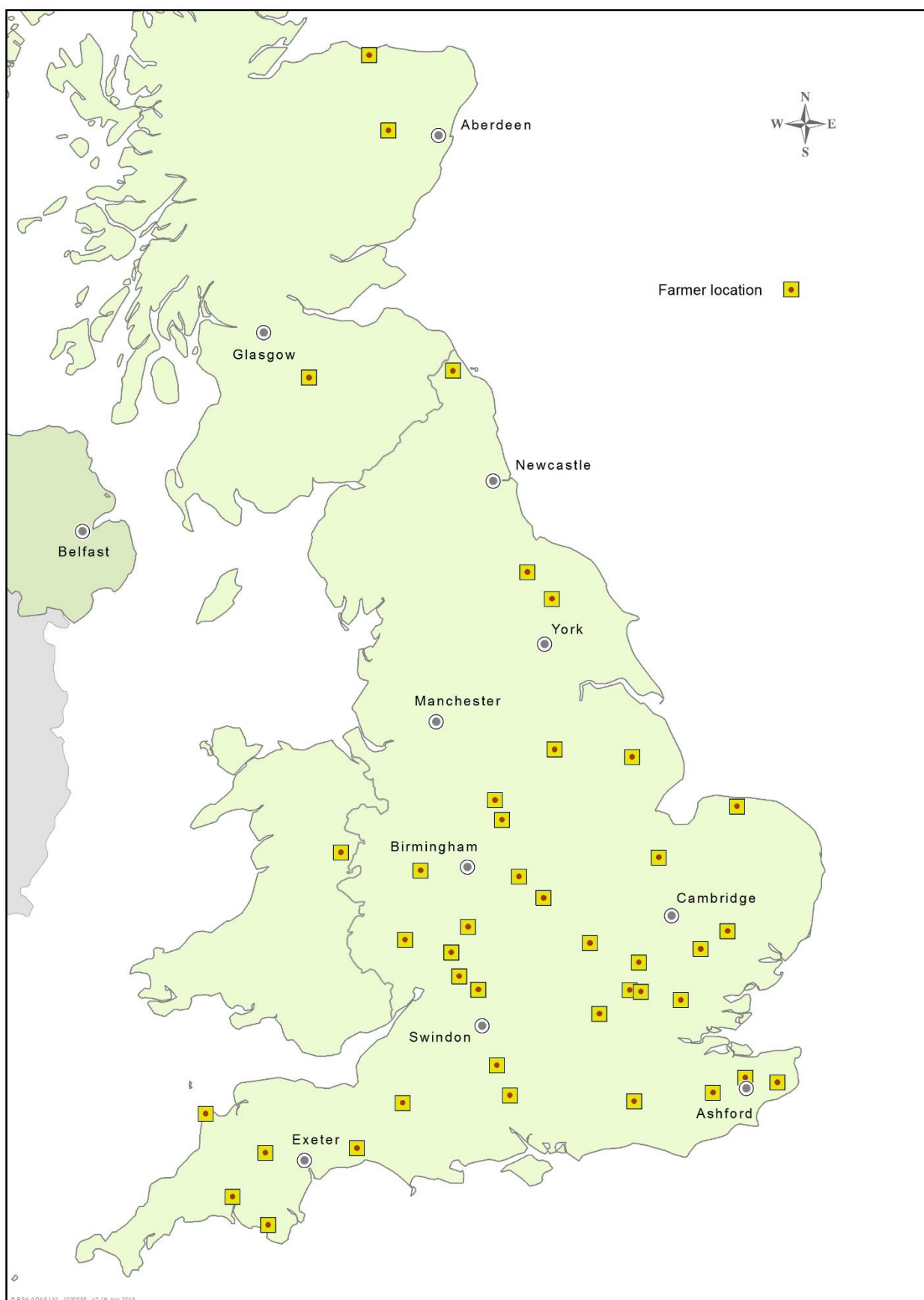
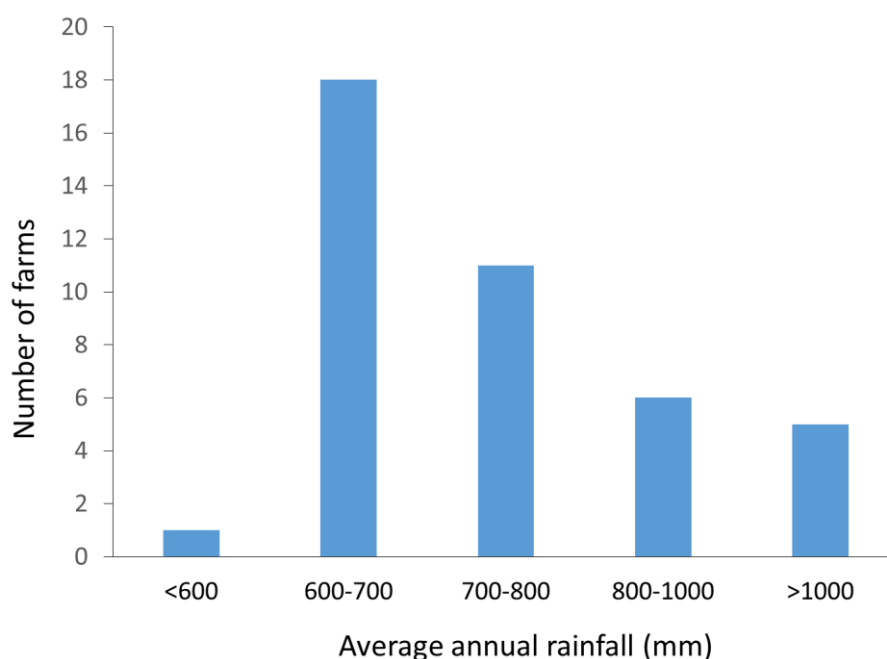


Figure 1. Location of grass/herbal ley farm sites willing to take part in measurements



*Figure 2. Number of farms in different average annual rainfall bands (rainfall data based on postal district from MANNER-NPK climate database).*

### 5.3 Summary

133 people responded to the survey of which just fewer than 50% were farmers (remainder were largely agronomists/researchers). Approximately three quarters of the farmers who responded had leys as part of their rotation, either as part of a mixed farming system or for beef/lamb production (less than 10% were dairy farmers), with the leys both cut for silage and grazed (largely using paddock or mob grazing systems rather than set stocking). The full range of soil types (including a couple of farms on peaty/organic soils) and agro-climatic conditions are represented by the network – from north east of Scotland to south west England. About 80% farmers had leys which included legumes/herbal species (only 8% had pure grass swards), with leys typically in place for 3-5 years (73%). Just under half of farmers responding used plough-based cultivation to establish arable crops after the ley, 28% used minimum tillage and 26% direct drill, with a greater proportion of farmers using minimum tillage or direct drilling also using a weed killer to destroy the ley. More than 90% of farmers who responded said improvements in soil quality were an important factor in their use of grass/herbal leys and 53% said the leys helped them control black-grass.



## 6 Grass & herbal leys farm network meeting

### 6.1 Introduction

The inaugural Grass/herbal leys farm network partnership meeting was held on 19<sup>th</sup> April at Coventry Rugby Club. The meeting was workshop style and included:

- Scientific session on rotational benefits of grass and herbal leys
- Break out session focussing on –
  - What are the knowledge gaps?
  - Network development and communications.
- Panel discussion ‘Practical issues of managing leys within the rotation’
- Introduction to the network and its long term aims and vision

Appendix 2 includes the meeting agenda. 75 people registered to attend the meeting (excluding ADAS and AHDB staff). The final number attending was 56 (46 excluding ADAS and AHDB staff) with the lower than expected attendance reflecting the first day of good spring weather

### 6.2 Knowledge gaps

The table below provides a summary of the main knowledge gaps identified during the break out session.

Knowledge gap	Specific question
Sward composition	<ul style="list-style-type: none"><li>• Which species to grow for different purposes &amp; environments (e.g. grazing/haylage/silage/AD/other).</li><li>• How best to establish them (including seed rates).</li><li>• Productivity, longevity &amp; value (impacts on animal performance – LWG, health benefits etc.).</li><li>• Benefits (&amp; dis-benefits) of different species (physiology of the ley) – including benefits to pollinators &amp; wildlife.</li></ul>
Sward management	<ul style="list-style-type: none"><li>• Infrastructure requirement – cost effective fencing, water supply etc.</li><li>• Grazing management – optimal sward heights &amp; grazing/cutting regimes to maximise benefits; animal breeds best suited to different types of ley.</li><li>• Effect on soils (of the contrasting ley management regimes). Is there an optimum or minimum ley length required to achieve soil quality benefits?</li><li>• Control of weeds (e.g. docks).</li></ul>
Sward destruction	<ul style="list-style-type: none"><li>• Mechanical vs. chemical (or even use the grazing animal?) – impacts on soils, establishment &amp; yield of following crop</li></ul>
Arable impacts	<ul style="list-style-type: none"><li>• What crops should follow a grass ley &amp; how to establish them.</li><li>• Impact on weeds/diseases/pests (positive &amp; negative)</li><li>• Impact on soils – how long does the ley have to be to see any benefit; do you need multiple cycles?</li></ul>
Socio-economic impacts	<ul style="list-style-type: none"><li>• Is it profitable to return to ley-arable rotations? What are the key performance indicators?</li><li>• How to develop partnerships between arable &amp; livestock farmers (issues associated with cattle movement).</li><li>• Subsidy opportunities</li></ul>
Other	<ul style="list-style-type: none"><li>• Breeding requirements – low input systems may require different crop &amp; livestock breeds</li><li>• How to measure, standardize and interpret SOM/SOC</li><li>• Need a simple ‘how to’ guide</li></ul>

### 6.3 Grass and herbal leys network development and communication

The break out groups were asked what the main role of the network should be and how they wanted to receive information about the network in the future.

Feedback from the break out groups was that the main role of the network should be to:

- Share knowledge & experiences
- Provide relevant & up-to-date messages
- Undertake research to build the evidence base including:
  - Sampling & monitoring on subset of farms in the group
  - Platform for identifying knowledge gaps, develop ideas & attract additional funding

Suggested means of network communications included:

On-line forum (but be aware of existing forums), farm walks/demo days, newsletter (only when have something to share though), leaflets/how to guides (including case studies), social media (twitter page), website, annual meeting.

It was noted that the network should endeavour to link to other groups & KE activities. Feedback also suggested the network should target arable farmers and consider the potential to provide a 'match-making' service i.e. link livestock farmers who need grazing, with arable farmers who have/could be persuaded to have leys.



*Adam Quinney opens the meeting*



*Tom Chapman presenting*



*Break out session*



*Break out session*

## 7 Strategy meeting

An end of phase 1 future strategy meeting with AHDB and Defra was held on 22<sup>nd</sup> June. The aim of the meeting was to identify methodology to address knowledge gaps, timescale to deliver, appropriate funding sources/partnerships and actions to progress.

At the meeting ADAS presented:

- Summary of online survey responses.
- Feedback from the network meeting.
- Other relevant research projects.
- Possible future research projects including:
  - i. Impacts of temporary leys on soil quality*
    - Establish a framework and infrastructure for monitoring practice and soil testing on farms (aim to facilitate the collection of data from existing and new projects into a single database).
    - Quantify the impact of temporary leys on soil organic matter/soil quality (working with farmers in the network; assessments pre and post leys)
  - ii. Impacts of ley destruction methods*
    - Comparison of plough, minimum tillage and no tillage methods of establishing the following arable crop on soil quality.
    - Potential to use a split field or tramline approach and assessing yields of the following combinable arable crop using yield maps.
    - This work could link the current AHDB Soil biology and health partnership.
  - iii. Sward management (herbal leys), focus on:*
    - Sward management for maintaining and maximising benefits of multi-species leys.
    - Cutting/grazing management to preserve sown species.
    - Animal breeds best suited to different types of ley.
    - Forage quality.
    - Economics.
  - iv. Effectiveness of leys in controlling black-grass:*
    - Quantify the reduction in black-grass.
    - Impact of length of ley.
    - Impact of ley destruction method.
    - Sampling pre & post leys in 'problem' black-grass fields.

## 8 Future development of the network

The first phase of network development has successfully established the grass and herbal leys farm network group. The total number registered with the network has exceeded the original target of 40 farmers (20 with leys), 10 industry partners and 5 research partners. 43 farmers with leys in the rotation have joined the network and said they would be willing to take part in monitoring on their farms; these farms are located around the country on different soil types and with contrasting leys and management systems. The network provides a valuable platform for current and future projects investigating the long term rotational benefits of grass/herbal leys.

In order to continue to develop the network, ADAS will:

- i. Maintain the network registered list.
- ii. Promote the network via ADAS Open days, Farmer Associations and Crop Action/Technical Update publications.
- iii. Continue to build academic links. The Grass and Herbal Leys network will be included in presentations at:
  - British Society of Soil Science annual conference, September 2018.
  - Association of Applied Biologists conference 'Soil improvement: impact of management practices on soil function and quality' October 2018.
  - SAC/SEPA Land use conference 'Rewarding the delivery of public goods: How to achieve this in practice', November 2018.

## Appendix 1 – Press release

### Press release

#### New grass and herbal leys farm network launched

**8<sup>th</sup> February 2018**

ADAS and AHDB are seeking industry representatives to join a new farm network focusing on the use of grass and herbal leys. Farmers, interested individuals and organisations are invited to join the network which will provide a platform to investigate the long-term impacts of leys in rotations.

To launch the initiative, a free meeting is being held on 19th April at Coventry Rugby Club for those interested in taking part. It will include a morning workshop with speakers discussing current knowledge on rotational benefits of leys followed by an interactive session where participants are invited to help steer and prioritise the activities of the network.

ADAS Soil Scientist Lizzie Sagoo said: “This is a great opportunity for farmers and researchers to work together to identify the longer-term benefits of leys. We are particularly keen to hear from farmers willing to take part in future projects who have, or are considering introducing, grass or herbal leys into their rotations.

“A focus will be impacts on soil health and the potential for using leys for black-grass control as well as the practical and economic considerations of including grass or herbal leys in arable rotations.

“The network will enable us to work more closely with farmers and a priority will be to ensure future research is targeted to industry needs and the outputs are easily accessible.”

Rebecca Colman, AHDB Beef & Lamb Research Scientist, said: “Defra’s newly published 25-year plan includes a commitment to work with farmers to achieve good soil management practice and this includes reintroducing grass leys into arable rotations. AHDB value long-term research in this area to help us understand the benefits and challenges of integrating leys into arable rotations.”

The launch meeting is free to attend and open to all, however registration is required as places are limited. Email [GrassLeys.Network@adas.co.uk](mailto:GrassLeys.Network@adas.co.uk) or phone 01954 268 200.

To register to join the Grass and herbal leys network, please click [here](#) to complete a short questionnaire on your use of/interest in grass/herbal leys.

#### Notes to editors

Click [here](#) to view the Grass & herbal leys partnership meeting agenda.

#### Contact

For further information please contact Lizzie Sagoo on 07833 520475 or [Lizzie.Sagoo@adas.co.uk](mailto:Lizzie.Sagoo@adas.co.uk)

#### About ADAS:

ADAS is the company’s registered trading name and is not an acronym.

Established for over 75 years, ADAS is the UK's largest independent provider of agricultural and environmental consultancy, research and development, and policy advice. We have a unique combination of insight and practical experience, underpinned by robust, informed, science-based information that allows us to meet the needs of our clients. Our great strength is our breadth and depth of expertise spanning the entire environmental sector. ADAS has over 350 staff covering more than 80 specialisms, operating from a network of offices and research sites in England and Wales.

For more information see: <http://www.adas.uk>

#### **About AHDB:**

AHDB is a statutory levy board, funded by farmers, growers and others in the supply chain. Our purpose is to inspire our farmers, growers and industry to succeed in a rapidly changing world. We equip the industry with easy-to-use, practical know-how which they can apply straightaway to make better decisions and improve their performance. Established in 2008 and classified as a Non-Departmental Public Body, it supports the following industries: meat and livestock (cattle, sheep and pigs) in England; horticulture, milk and potatoes in Great Britain; and cereals and oilseeds in the UK. AHDB's remit covers 72 per cent of total UK agricultural output.

Further information on AHDB can be found at [www.ahdb.org.uk](http://www.ahdb.org.uk)

#### **About Defra's 25 Year Environment Plan**

'A Green Future: Our 25 Year Plan to Improve the Environment' sets out Defra's goals for improving the environment within a generation. It details how government will work with communities and businesses to do this. It sets out what government will be doing over the next 25 years.

Further information on Defra's 25 year plan can be found at <https://www.gov.uk/government/publications/25-year-environment-plan>



## Appendix 2 – Meeting agenda



### Grass and herbal leys farm network

**Jon Sharp Suite, Coventry Rugby Club, Butts Park Arena, Butts Rd,  
Coventry, CV1 3GE**

**Thursday 19<sup>th</sup> April 2018**

*A new farm network is being set up to investigate the long term impacts of leys in the rotation. ADAS and AHDB invite you to join this first network meeting to discuss the rotational benefits of leys and help plan the future strategy of the network.*

10:30	Registration and refreshments	
10:45	Rotational benefits of grass/herbal leys	
	Welcome	Adam Quinney AHDB Beef & Lamb Chair
	Value of grass/herbal leys in improving soil quality	Anne Bhogal, ADAS
	Using leys to manage weeds in arable rotations	Lynn Tatnell, ADAS
	Integrating grass/herbal leys into arable rotations	Tom Chapman Easthall Farm & St Paul's Walden Bury Estate
12:30	Lunch	
13:15	Introduction to the network and it's long term aim & vision	Lizzie Sagoo, ADAS
13:30	Network priorities	Break out session
14:15	Practical issues of managing leys within the rotation	Panel session
14:45	Summary & next steps	Lizzie Sagoo, ADAS
15:00	Close	

**To register: email [GrassLeys.Network@adas.co.uk](mailto:GrassLeys.Network@adas.co.uk) or phone 01954 268200**



## Appendix 3 – Grass and herbal leys network survey

**Introductory text:** ADAS and AHDB have launched a new farm network which focusses on the use of grass and herbal leys. The network will be a partnership between farmers, researchers and industry and provides a platform to investigate the long term impacts of leys in rotations. The network is open to any individuals or organisations.

Complete your details below to join the network. We ask that you complete a short questionnaire to let us know about your use of/interest in grass leys. This information will be used to help us with the future development of the network.

- Name
- Email address
- Telephone contact number

**1. What is your main occupation?**

- a. Farmer (go to Q3)
- b. On-farm adviser or agronomist (go to Q2)
- c. Research (go to Q2)
- d. Other Option for free text entry (go to Q2)

**2. Please provide information on why you are interested in joining the network (able to select as many boxes as possible)**

- a. To keep up to date with any new research
- b. The information is useful for my clients
- c. I am interested in participating in research

*If selected, then*

Please provide some details of your research interests (e.g. soil quality, weeds, livestock health etc). Please provide details of any current projects which you would like to link to the network. Option for free text entry

- d. Please provide us with any other comments or information that you think would be useful Option for free text entry

**End of questionnaire**

**3. Are grass/herbal leys part of your farm rotation?**

- a. Yes (go to Q5)
- b. No End of questionnaire

*If selected then*

Please let us know why you are interested in joining the network? For example, are you considering introducing leys in the future? If so, why and do you have any concerns about introducing leys and livestock into the rotation?

**4. Please provide some details of your farm location and soil types**

- a. Postal district (i.e. CB23)

**b. Soil types (select your main soil types from the list below) -**

- Light sand
- Shallow
- Medium
- Deep clayey
- Deep silty
- Organic
- Peat

**5. What type of farm are you**

- a. Beef & sheep
- b. Dairy
- c. Arable only
- d. Mixed (arable and livestock)
- e. Other (free text entry)

**6. What are your grass/herbal leys used for (select as many as appropriate)**

- a. Grazing beef cattle
- b. Grazing sheep
- c. Grazing dairy cattle
- d. Cutting (hay/silage)
- e. Cut –seed
- f. Other – please provide details (free text entry)

**7. How many years do you normally keep your leys?**

- a. 1-2 years
- b. 3 years
- c. 4-5 years
- d. >5 years

**8. How do you establish the leys?**

- a. Spring sown
- b. Autumn sown
- c. Undersown

Please provide us with any other comments or information that you think would be useful

**9. If you have legume or herb rich leys have you received support for these as part of an agri-environmental stewardship option (formerly EK21, OK21, HK21 and OHK21; now Mid-Tier GS4 under Countryside Stewardship).**

- a. Yes
- b. No, I don't have legume or herb rich leys
- c. No, I was not aware of the support available
- d. No, I have not applied for this support
- e. Please provide us with any other comments or information that you think would be useful

**10. What other crops do you grow in rotation with your grass/herbal leys?**

- a. Option for free text entry

11. Do you use glyphosate or another weed killer to destroy the ley before the next crop?

- a. Yes
- b. No
- c. Please provide us with any other information that you think would be useful

12. What type of cultivations do you use at the end of the ley in preparation for the next crop?

- a. Plough based cultivation
- b. Minimum tillage
- c. Strip tillage
- d. No tillage (following crop direct drilled)
- e. Please provide us with any other comments or information that you think would be useful

13. What type of seed mix do you use for your leys

- a. Grass
- b. Grass & clover
- c. Red clover
- d. Lucerne
- e. Herbal mix
- f. Other (please provide details)
- g. Please provide us with any other comments or information that you think would be useful

14. If you use your leys for grazing or cutting for forage, do the animals belong to your farm?

- a. Yes
- b. No
- c. Please provide us with any other comments or information that you think would be useful

15. If you manage your leys by grazing, how do you manage the grazing

- a. Set stocking
- b. Rotational grazing (moving animals between fields)

*If selected, then*

How frequently do you typically move the animals? *Option for free text entry*

- c. Paddock grazing (moving animals between paddocks within fields)

*If selected, then*

How frequently do you typically move the animals? *Option for free text entry*

16. Does your use of grass/herbal leys help you control black-grass?

- a. No, we don't have a black-grass problem
- b. Yes, but we don't have a significant problem with black-grass
- c. Yes

- d. Please provide us with any other comments or information that you think would be useful
17. Do you see an increase any other weed species in crops following a ley?
- a. Yes (option to add text on which species)
  - b. No
  - c. Species from the ley become weeds
  - d. Please provide us with any other comments or information that you think would be useful
18. Grass/herbal leys may help to improve soil quality. Please can you comment on whether this is this an important factor in your use of leys?
- a. Option for free text entry
19. Do you take samples of your soil for analysis?
- a. Yes (if yes than Q18)
  - b. No
20. What do you analyse the soil for
- a. pH
  - b. P, K and Mg
  - c. Organic matter
  - d. Other (please provide details) (option for free text entry)
21. As part of the development of the network we hope to carry out monitoring on commercial farms. Would you be willing to take part in this?
- a. Yes **Go to Q22**
  - b. No **End of questionnaire**
22. Please provide details of number of current grass/herbal ley fields on your farm and planned number of fields to be established in leys over the next 3 years
- a. Current total number of fields in ley grass/herbal leys
  - b. Fields to be established as leys for 2019
  - c. Fields to be established as leys for 2020
  - d. Fields to be established as leys for 2021
  - e. Please provide us with any other comments or information that you think would be useful

Thank you for taking the time to complete this questionnaire and your interest in the network. If you would like to attend the first Grass/herbal leys farm network meeting on 19<sup>th</sup> April please email [GrassLeys.Network@adas.co.uk](mailto:GrassLeys.Network@adas.co.uk) or phone 01954 268200 to book your place.

If you have any other comments or information you want to share with us please use the box below. **End of questionnaire**