

ES Farm Data Groups: State of HAU Farm Data Survey 2022

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2022-07-05



Contents

1	Summary	3
2	Results	4
2.1	Farm Data: awareness of data assets and use	4
2.2	Farm Data: data needs and satisfaction	5
2.3	Farm Data: staff contribution of data	6
2.4	Farm Data: suggestions	7
3	Methods	8
3.1	Survey subjects	8
3.2	Survey Instrument	8

1 Summary

A survey by questionnaire and interview of Harper Adams Farm Data producers, resources, and users was conducted. Key stakeholders were identified and surveyed about current Farm Data assets, their Farm Data needs, whether existing Farm Data assets meet their needs, and their perception of how Farm Data availability and utility can be improved.

Our primary findings were:

- **HAU Farm Data are inadequate to meet the needs of data producers** (Harper Farm staff) or other potential users (Academics, students, or staff)
- **Available HAU Farm Data assets are of limited usefulness** because they exist primarily in the form of report summaries in haphazard formats
- **HAU Farm Data availability is inconsistent** and incomplete
- **HAU Farm Data assets fall short of best practice** and are potentially not secure (e.g. with veterinary and research tracking of individual animals)

Our primary recommendations are:

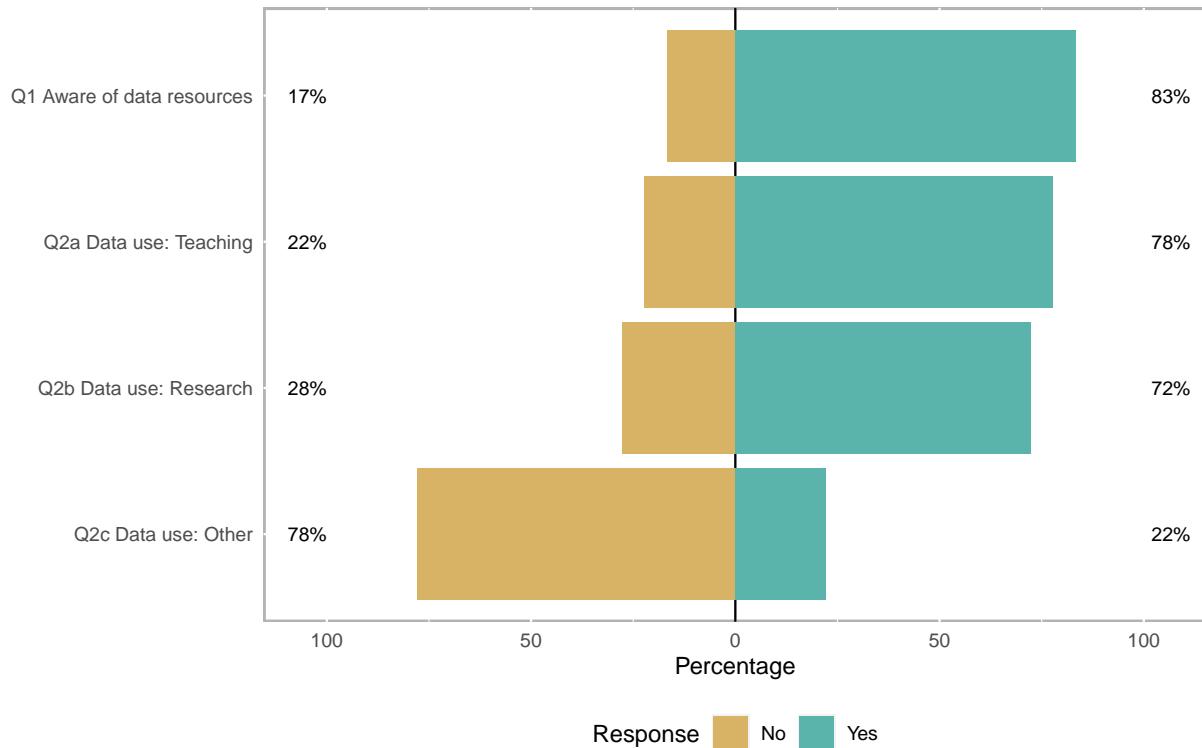
1. **There is a need for a Farm Database that is searchable, complete and secure**
2. **Data design should be driven by end user information needs and easy to use**
3. **Responsibility for data capture and design requires specialized skills and should be allocated a formal role**
4. **We recommend a Farm Data capture exercise** for a subset of Farm Data assets (e.g. database and dashboard for yield, inputs and meta-data for specific fields) to acquire feedback from users as stakeholders of Harper Farm Data

2 Results

2.1 Farm Data: awareness of data assets and use

Question 1 Are you aware of Harper Farm Data resources and data availability? (yes or no)

Question 2 Do you use use data in teaching, research, or another aspect of your job? (yes or no)



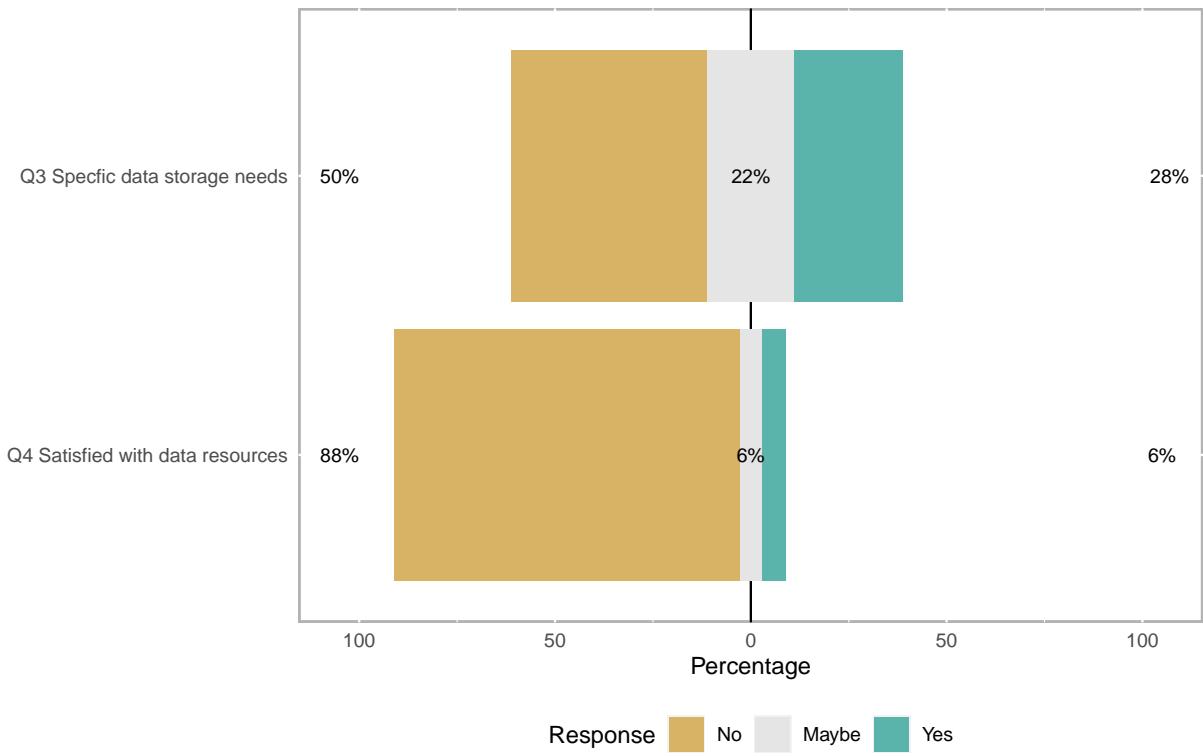
A majority of respondents were aware that Harper Farm Data resources exist (Q1: $X^2_{1,18} = 8, P = 0.005$).

A majority of respondents use (or would use) Harper Farm Data for Teaching (Q2a: $X^2_{1,18} = 5.6, P = 0.018$), and Research (Q2b: $X^2_{1,18} = 3.56, P = 0.05$). However, only a minority of respondents use Harper Farm Data for administrative purposes or for record keeping (Q1: $X^2_{1,18} = 5.6, P = 0.018$).

2.2 Farm Data: data needs and satisfaction

Question 3 Do you have specific Farm Data or data storage needs? (yes, no or maybe)

Question 4 Are you satisfied with Harper Farm Data assets? (yes, no or maybe)

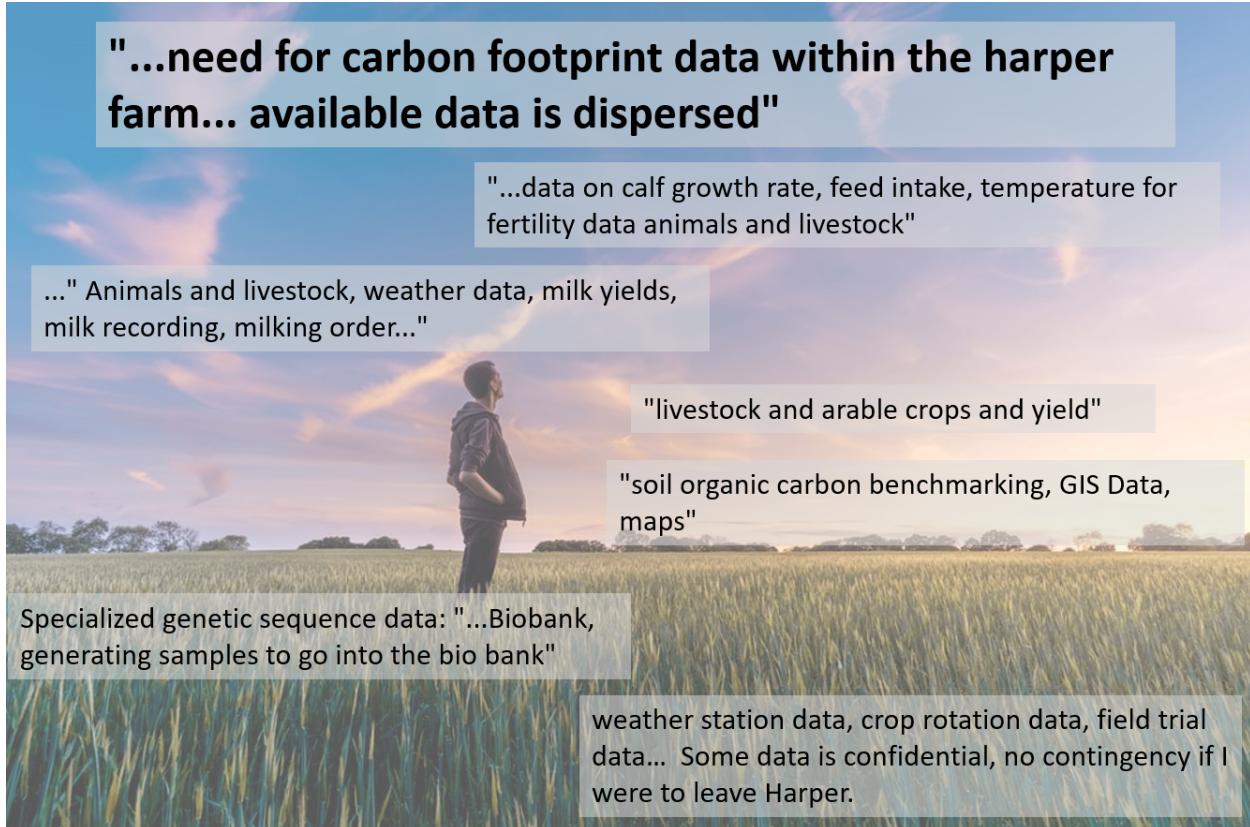


A similar proportion of respondents reported having or not having specific Farm Data storage (Q3: $X^2_{1,18} = 2.3, P = 0.31$).

A large majority of respondents reported dissatisfaction with Harper Farm Data resources (Q4: $X^2_{1,18} = 23.1, P < 0.0001$).

2.3 Farm Data: staff contribution of data

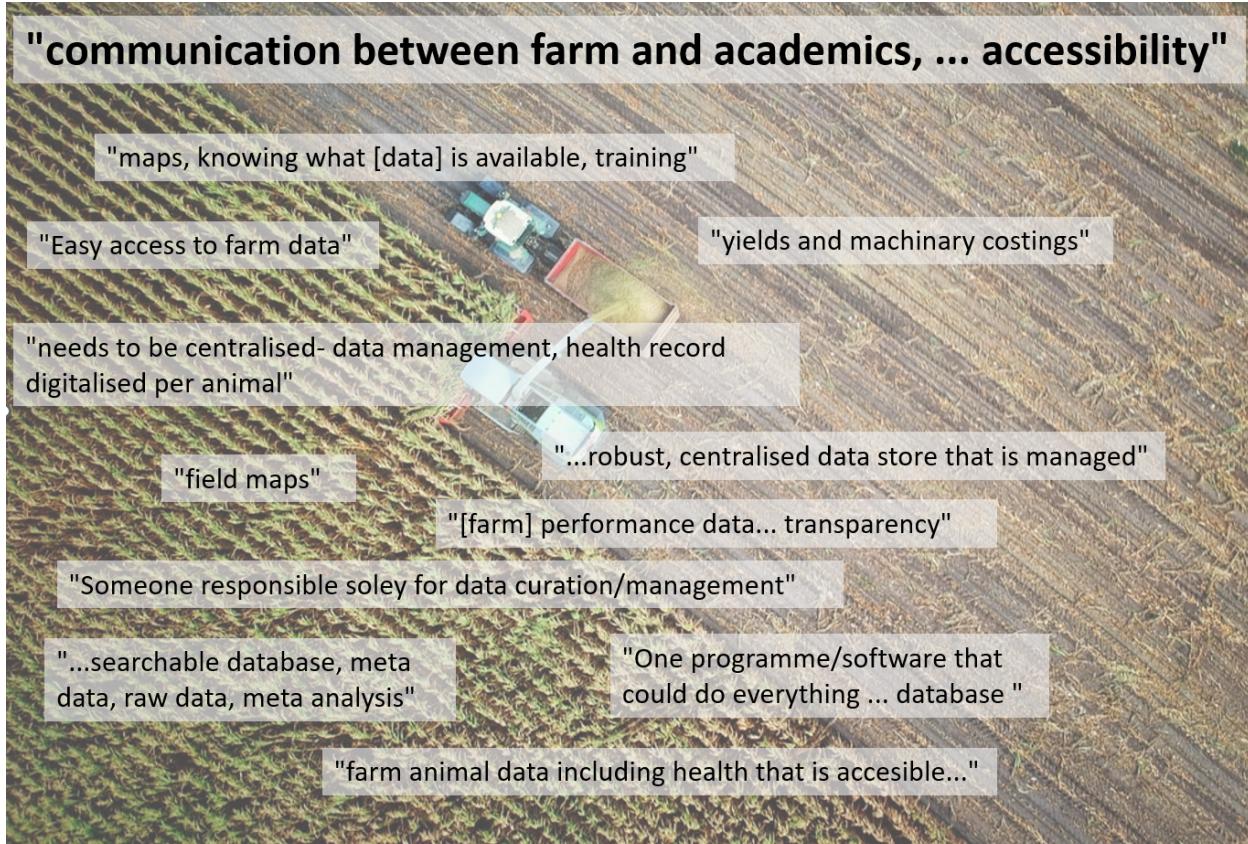
Question 5 What if any HAU data resources do you use or contribute to and for what purpose? (free response)



The Farm Data stakeholders are using and generating is diverse and ranged from common **crop yield and livestock productivity records**, to more specialized data such as **genetic information** and **GIS land use assets**. Several stakeholders cited the heterogeneous nature or lack of records relevant to carbon storage and land use best practice.

2.4 Farm Data: suggestions

Question 6 Can you make one suggestion in your work for data access or resources that would have a positive impact? (free response)



Respondents had a number of constructive and specific suggestions, however the dominant theme was the expressed need for **a searchable, cohesive database**. Other themes included the identification of a need for **staff data training** and for **data-responsible staff member or entity**.

3 Methods

3.1 Survey subjects

Academic, administration, management and farm staff were identified for subjects for our survey. Thirty-four staff were identified and offered interviews, n = 18 respondents completed our survey. Details of staff are presented below.

Farm / CERC: Scott Kirby, Alice Salt, Grace Milburn

AWERB / animals: Sandy Mackenzie, Stephen Mansbridge, Dan Humphries, Liam Sinclair

Support / IT: Darren Roberts

Teaching and students: Lydia Arnold, Sarah Parsons, Jonathan Cooper

HoDs: Parmjit Chima, Andy Wilcox, Rebecca Payne, Philip Robinson

Crops: Jim Mognahan, Simon Jeffrey, Louisa Dines, Matt Back, Paula Misiewicz & Ed Dickin (Paula and Ed on long-term traffic trial)

Engineering: Graham Higgins, David White, Kit Franklin (hands free farm)

Animals: Emma Bleach, Mark Rutter (Robotic and conventional dairies), Nicky Naylor

Economics and business: Wynn Morgan, Martin Wilkinson, Iona Huang, Nigel Hill

Other: Ed Harris, Karl Behrendt, Eric Siquieros

3.2 Survey Instrument

The survey was conducted in individual interviews lasting approximately 30 minutes per respondent. The questionnaire consisted of 6 questions, including some fixed and some free response questions.

Q1) Are you aware of existing HAU data resources (e.g. the Harper Farm Data portal) (yes, no)

Q2) Do you use data in teaching, research, or another aspect of your job? (yes, no)

Q3) Do you have specific data storage needs that are or are not met? (yes, no, maybe)

Q4) Are you satisfied with data access and resources? (yes, no, maybe)

Q5) What if any HAU data resources do you use or contribute to and for what purpose?

Q6) Can you make one suggestion in your work for data access or resources that would have a positive impact?