A comparison of the 2018 and 2019 Farming Connect baseline surveys

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Introduction

The Farming Connect baseline survey has been run for the past three years beginning in 2016, this report compares the results of the most recent 2019 survey with those of the 2018 questionnaire. The 2018 survey interviewed 911 farmers and the 2019 survey captured data from 705 farmers and their businesses from across Wales.

Farming Connect works to deliver information, advice and support to farmers in Wales, drawing upon the latest scientific research and putting key finding into practice on their demonstration and focus sites whilst also managing innovative projects via the European Innovation Partnership (EIP Wales). Farming Connect aims to transform business prospects for farmers across Wales by offering subsidised access to a variety of consultants and specialists, technical and practical training courses and by connecting local farmers with one another to share best practice.

In both the 2018 and 2019 baseline survey, members indicated the benefit of attending discussion groups and farm visits. Farming is a traditional occupation that is often passed down from generation to generation and the associated farming practices are no exception. Using peer groups of local people and on-farm demonstrations of new concepts offers the opportunity to share ideas, discuss new practices and how to implement this on-farm. Farming Connect continue to make effective use of the learning model through their discussion groups and workshops.

Differences between the 2018 and 2019 surveys include an increase in surveyed farmers using benchmarking data to make changes to their management practices. Results suggest that participants have improved their ability to use benchmarking data and apply it on the farm over the year, possibly as a result of participating in Farming Connect activities. In terms of training courses, animal health monitoring and soil sampling remained popular activities across both years, but grass measuring was more popular in 2018 and silage sampling in 2019. Results also suggest that between 2018 and 2019, participants perceived an increased positive impact of Farming Connect upon their business.

Survey Results

1. Do you benchmark your business performance against other similar businesses for any of the following?

Type of benchmarking	Number of responses		% responses	
	2018	2019	2018	2019
Physical only	74	42	8	6
Financial only	41	81	4	11
Physical and financial	199	111	22	16
Total responses	314	233	35	33
Total non-responses	596	471	65	67

Overall, the majority of those surveyed in both 2018 and 2019 did not respond to this question, possibly indicating that they do not undertake any benchmarking activity at all. Of the remainder of responses, most (2018: 22%; 2019: 16%) answered that they undertake both physical and financial benchmarking. Responses from 2018 indicate a preference for 'physical only' benchmarking (8%)

whereas, in 2019, more responders selected 'financial only' (11%). As results indicate that the majority of participants do not undertake benchmarking, perhaps increasing awareness of the support available from Farming Connect for benchmarking (*i.e.* 'Measure to Manage' workshops and advisory services) may be beneficial.

It is also well-documented that farmers will listen to farmers, hearing from a peer that has used benchmarking to improve the business would likely be highly effective due to the sense of trust and credibility (Franz *et al*., 2010). This is a technique which has been used by Farming Connect at Farming for the Future events, 'Accessing Technical Advice' events and in discussion groups, but more demonstrations of benchmarking best practice may also help.

2. Have you started benchmarking as a result of taking part in any of the following Farming Connect activities in the last year (multiple answers can be given per response)?

FC activity	Number of Responses		% responses	
	2018	2019	2018	2019
Discussion groups	180	146	20	21
Agrisgop	38	39	4	5
Agri Academy	10	11	1	1.6
Tesco	2	3	0	0
Aberystwyth University	21	2	2	0
Verbally	5	0	0	0
Other	14	6	1.5	0
Total responses	225	171	25	24
Total non-responses	686	539	75	76

The majority of those surveyed (2018: 75%; 2019: 76%) did not answer this question or answered N/A, accounting for those that do not undertake any benchmarking activity as indicated in the previous question as well as those that do not benchmark as a result of Farming Connect activities specifically. Of those that do benchmark their business as a result of Farming Connect activities, the vast majority (2018: 20%; 2019: 21%) did so as a result of participating in discussion groups. Other influential activities include Agrisgôp (2018: 4%; 2019: 5%), in 2019 Agri Academy (2%) and in 2018 Aberystwyth University (2%). It is likely that those responding "Aberystwyth University" were referring to the farm business survey (FBS) which is run every year. However, very few answered that their benchmarking activities were a result of 'Aberystwyth University' in 2019 when compared to 2018. It is possible that this is due to the 80th anniversary of FBS occurring in 2018 which may have boosted engagement, returning to more typical levels in the following year.

This result suggests that farmers have found discussion groups highly beneficial and are adopting new practices as a result. Peer education is a highly effective method of training/teaching as participants are often more receptive to learning from others that have tried and tested a new concept, thus providing a sense of credibility. In the practice of farming, this concept is essential, where knowledge is often passed on from generation to generation or within tight-knit communities (Foster and Rosenzweig, 1995; Franz *et al*., 2010). Farming Connect has made great use of this teaching model to educate farmers about the process of benchmarking through discussion groups in combination with 'Measure to Manage' workshops.

3. Have you used your benchmarking figures to make changes in the way you manage your farm in the last year?

Response	Number of responses		% responses	
	2018	**2019**	**2018**	**2019**
Yes	169	175	18	25
No	225	85	25	12
Total responses	402	260	44	37
Total non-responses	517	445	56	63

As previously, the majority did not answer this question. When non-responses were added to those that answered "No" this equated to 75-80% which corresponds to the previous proportion of farmers that did not answer the question and therefore likely do not benchmark at all. In 2018, 25% of responses indicated that they had not used their benchmarking figures to make changes to the way they manage their farm, then in 2019, 25% agreed that they used their benchmarking figures to make changes. The process of benchmarking can be a relatively straightforward one, however, making sense of and using the data practically on the farm can be difficult. It is, therefore, likely that this result occurred due to farmers learning how to apply the data between 2018 and 2019. It is conceivable that the support and advice surrounding benchmarking delivered by Farming Connect has played a key role in this change – perhaps through increased engagements at workshops and discussion groups.

4. Does your business have a succession plan in place (someone to take over from you when you retire)?

Response	Number of responses		% responses	
	2018	**2019**	**2018**	**2019**
Yes	384	311	42	44
No	460	344	50	49
Not relevant	41	40	4.5	6
Total responses	885	695	97	98
Total non-responses	26	10	3	2

In both 2018 and 2019 the percentage of responses indicating 'yes' and 'no' were fairly evenly split for this question – with slightly more indicating that they did not have a plan in place (2018 50% and 2019 49% answered 'no', where in 2018 42% and in 2019 45% answered 'yes'). Ideally, all respondents to whom this is applicable would answer yes, that they do have a plan in place – whilst a 100% success rate is rarely ever possible in any sphere, there may be some improvement to be made in this area. Farming Connect already offers support and professional services relating to succession, so perhaps it's more a case of highlighting these services to Farming Connect members or considering alternative delivery methods (*i.e.* video content).

5. Have you carried out any of the following on your farm during the last year (select all that apply)?

Activity	Number of responses		% responses	
	2018	2019	2018	2019
Animal health monitoring	534	411	59	34
Grass measuring	100	80	11	7
Silage Sampling	58	258	6	22
Soil sampling or nutrient management planning	548	444	60	37
One activity	262	202	29	29
Two activities	265	211	29	30
Three activities	173	147	19	21
Four activities	48	32	5	4
Total responses	768	592	84	84
Total non-responses	143	113	16	16

Between 2018 and 2019 there is a significant difference in the popularity of activities. Although, in both years ‘animal health monitoring’ and ‘soil sampling’ were most popular, in 2018 59% and 2019 34% selected ‘animal health monitoring’ and 60% and 37% selected ‘soil sampling’, respectively. In 2018 then, far more opted for grass measuring than in 2019 (11% and 7% respectively). Then, the reverse may be said of silage sampling which was much more popular in 2019 (22%) than in 2018 (6%).

The majority of respondents also indicated that they undertook more than one activity in both 2018 and 2019. Of the cohorts, 28% engaged in one activity in both 2019 and 2019, 29-30% engaged in two activities, 19-20% with three activities and 4-5% with all four activities. This pattern remains constant between 2018 and 2019. Overall, only 16% of those surveyed in 2018 and 2019 did not undertake any of the above activities, which is a relatively small proportion. Furthermore, it is encouraging to see a trend in participating in more than one activity – suggesting that farmers are finding the activities beneficial and worthwhile which would encourage them to repeat the experience.

6. If you selected any of the above, have you used this information to make changes in the way you manage your farm in the last year.

Response	Number of responses		% responses	
	2018	2019	2018	2019
Yes	633	546	69	77
No	152	51	17	7
Total responses	785	597	86	85
Total non-responses	129	108	14	15

Overall, the majority (69% in 2018 and 77% in 2019) of respondents indicated that they had used the information from Farming Connect activities to make changes in management. This result suggests that farmers are not only participating in activities offered by Farming Connect but are interpreting and utilising the data they receive to make improvements to their business.

7. Do you have a clear ambition for your business over the next 3-5 years?

Response	Number of responses		% responses	
	2018	2019	2018	2019
Yes	595	506	65	72
No	292	193	32	27
Total responses	887	699	97	99
Total non-responses	24	6	3	0

In both 2018 and 2019, the majority (56% and 72%, respectively) of responses indicated that those surveyed did have a clear ambition or aim in mind for their business over the next 3-5 years. There is an increase in the amount of responses indicating that they have a clear ambition for their business between 2018 and 2019, potentially as a result of Farming Connect activities which may be sufficient to spark ideas and inspire farmers to this about the future of their farming business.

8. Do you have a written business plan outlining how you will deliver your ambition?

Response	Number of responses		% responses	
	2018	2019	2018	2019
Yes	159	136	17	19
No	728	560	80	79
Total responses	887	696	97	99
Total non-responses	24	9	3	1

The majority in both years (2018: 80%, 2019: 79%) indicated that they did not have a written plan. This suggests that of those who answered yes to having a clear aim previously, very few also have a written business plan outlining how they will achieve this. Farming Connect currently offers up to 80% funding towards business planning advice for farm businesses, so perhaps additional advertisement would be beneficial to engage participants in this service and help members realise their ambitions.

9. (a) Are you currently using electronic recording software to manage the performance of your flock/herd?

Response	Number of responses		% responses	
	2018	2019	2018	2019
Yes	278	206	30	29
No	602	491	66	70
Total responses	880	698	96	99
Total non-responses	31	7	4	1

Responses indicate that for the most part, those surveyed do not use EID in both 2018 and 2019 (66% and 70% respectively). EID is a relatively new technology and studies suggest that whilst it could help increase profitability and resource use it is a significant investment for any business to make, particularly those operating on a small scale which constitutes a significant amount of Welsh farms (StatsWales, 2017; Lima *et al*., 2018). The study by Lima *et al.,* (2018) surveyed UK farmers on the use of EID and found that more than half of those surveyed did not use EID, nor did they intend to in the future. This number roughly correlates to results shown here; indicating that perhaps, communication of the evidence of positive effects of EID (*e.g.* reduced flock lameness levels) or on-farm demonstrations may be helpful.

9. (b) If "yes", please provide a description of the type of system you operate.

EID Software	Number of responses		% responses	
	2018	**2019**	**2018**	**2019**
Shearwell	33	15	4	2
Agri data	15	10	2	1
FarmIT	4	7	0	1
Scales/weighing	2	5	0	0
Summit	0	5	0	0
Farm Plan	3	4	0	0
Milk Recording/NMR	8	4	1	0
TrueTest	6	4	0	0
Allflex	3	3	0	0
BCMS	0	3	0	0
Uniform Agri	5	3	0	0
Dairy Plan	0	2	0	0
Farm Wizard	1	2	0	0
Gallagher	0	2	0	0
Unspecified tag/reader/wand	160	86	18	12
Other	24	20	3	3
Total Responses	264	175	29	25
Total non-responses	647	530	71	75

Overall, the most popular brand of EID used by farmers surveyed was Shearwell in both 2018 and 2019 (4 and 2%, respectively). However, the majority (18% and 12%) that answered did not specify the brand of EID. By far the most popular option was the stick or wand reader, likely in conjunction with an ear tag. A handheld reader such as a stick or wand is thought to be the easiest type of reader to use, as they are robust, affordable and portable, allowing the farmer to collect a list of individual EIDs from animals in a race – well suited to managing sheep (Morgan-Davies *et al*., 2015).

10. Are you intending to complete any training courses through Farming Connect in the next 12 months?

Response	Number of responses		% responses	
	2018	**2019**	**2018**	**2019**
Yes	543	386	60	55
No	339	224	37	32
Depending on what courses are available	N/A	74	N/A	10
Total responses	882	684	97	97
Total non-responses	29	21	3	30

The majority of the surveyed cohort indicated that they were intending to complete training courses with Farming Connect in the next year. In 2018 this proportion was 60% and in 2019 fell slightly to 55%, possibly because members followed through with their intentions and did engage in training courses between surveys. This is a good outcome, suggesting that farmers are interested in the courses that Farming Connect have to offer and are likely engaging with the training opportunities too.

11. Have you considered planting trees on your farm?

Response	Number of responses		% responses	
	2018	2019	2018	2019
Yes	432	362	47	51
No	462	341	51	48
Total responses	894	702	98	99
Total non-responses	17	3	2	0

The responses to question 11 were fairly evenly split in both years, in 2019 with 52% responding positively and 48% negatively. In 2018, this split was very similar with 47% indicating that they had considered planting trees and 51% indicating that they had not. This is perhaps surprising as over the past few years agroforestry has seen a surge in popularity, with organisations such as the Woodland Trust offering funding and grants for those planting tree on a large scale (30+) and similar Woodland Stewardship grants becoming available (Gov.uk, 2019; The Woodland Trust, 2019). Although, it is important to note that a portion of those answering 'no' likely already have woodland on their farm.

It is currently accepted that increasing the presence of trees in Welsh agricultural landscapes is a key climate change mitigation strategy. Understanding why farmers appear to be reticent with regards to this approach is, therefore, an important factor, worthy of investigation. Potential reasoning includes the release of grants and subsidies to fund such activities which are currently still in their infancy.

12. Other than bovine TB, what is the biggest animal health issue at the moment relevant to your holding?

Health issue	Number of responses		% responses	
	2018	2019	2018	2019
Lameness cattle	102	82	11	12
Sheep	N/A	28	N/A	4
Sheep scab	70	62	8	9
Fluke	N/A	38	N/A	5
Footrot	82	38	9	5
BVD/diarrhoea	51	37	6	5
Pneumonia	51	25	6	3
Johne's disease	48	20	5	3
Parasites/worms	140	16	15	2
Mastitis	23	14	2.5	2
Abortion	15	11	2	1
Fertility	24	9	3	1
Maggots & lice	10	8	1	1
Antibiotic/anthelmintic resistance	14	6	1.5	1
Blowfly	N/A	5	N/A	0
CODD	28	5	3	0
Ticks	N/A	5	N/A	0
Nutrition	10	4	1	0

African Swine fever	1	3	0	0
Flies/flystrike	5	3	0	0
IBR	12	3	1	0
Swine flu	N/A	3	N/A	0
Leptospirosis	11	N/A	1	N/A
Coccidiosis	6	N/A	0	N/A
Pasteurella	6	N/A	0	N/A
Avian influenza	5	N/A	0	N/A
Other	54	26	6	4
No problems	N/A	24	N/A	3
Total responses	774	418	85	59
Total non-responses	137	287	15	40

Top 5 health concerns:

2018:

1. Parasites (15%)
2. Lameness (generalised) (11%)
3. Footrot (9%)
4. Sheep scab (8%)
5. Pneumonia/BVD (6%)

2019:

1. Lameness (generalised) (12%)
2. Sheep scab (9%)
3. Fluke/footrot (5%)
4. BVD (6%)
5. Pneumonia (6%)

In 2018 and 2019 a very similar set of health concerns are being recorded. Lameness, sheep scab foot rot, BVD and pneumonia are all key concerns of farmers over the past 2 years. The major difference observed between 2018 and 2019 is concern over parasites (including anthelmintic resistance, but not including fluke) and more specifically fluke (liver and rumen). In 2018, the most common health issue was parasites with 15% of the cohort indicating concern, however, this was not replicated in 2019 where only 2% listed parasites as an issue, instead in 2019 there is more focus on fluke specifically (5%). Liver fluke is an economically important disease, causing significant production losses in both sheep and cattle, with the emergence of resistance to flukicides and climate change resulting in wetter, milder conditions, the control of fluke is becoming ever more urgent (Gordon *et al.*, 2012). Farming Connect offers information about fluke management (numerous articles, factsheets and technical publications) and have run projects seeking to improve farmer awareness. Highlighting these resources at key times of the year (acute infections tend to emerge August – October, sub-acute from October onwards and chronic cases from December onwards) could help to increase engagement with the relevant resources ([1]NADIS, 2019).

Also of great concern was generalised lameness (11% in 2018 and 12% in 2019). Responses (9% and 5% respectively) indicated that footrot in sheep is an issue, which may fall under the umbrella of lameness. The topic of lameness is a broad one, as the causes can be extremely varied – for example, treatment for footrot will differ significantly to that required for laminitis or a broken bone.

Nevertheless, lameness is an economically significant issue for farmers, in sheep alone it is thought to cost approximately £28 million per year in the UK ([2]NADIS, 2019

Sheep scab is also of concern to those surveyed, with 8% in 2018 and 9% in 2019 indicating that this was an issue on their farm. Sheep scab is caused by the mite *Psoroptes ovis* and results in severe skin lesions and inflammation (van den Broek & Huntley, 2003). This leads to fleece loss, a decline in body condition, lower birth weights, higher lamb mortality and carcass condemnation at the slaughterhouse ([1]NADIS, 2019). Because the disease is transmitted via a mobile vector which can survive up to 17 days in the environment, it is highly contagious. As such, if farms do not treat infected sheep, spread to neighbouring holdings is inevitable. In the UK there is a legal requirement to treat sheep scab, yet a 2010 study indicated that 36% of Welsh sheep farms had experienced an outbreak in the past 5 years ([1]NADIS, 2019). In early 2019, the Welsh Government confirmed funding for a Sheep Scab Eradication Project – an encouraging commitment that was well received by those involved in the agricultural industry.

13. On a scale of 1-6, how important is the management of the following to your business: (one meaning not important, six being very important):

a) Biodiversity and habitats

Value	Number of responses		% responses	
	2018	2019	2018	2019
1	5	9	0	1
2	4	21	0	3
3	24	59	3	8
4	80	150	9	21
5	389	280	43	40
6	396	177	43	25
Total responses	898	696	99	99
Total non-responses	13	9	1	1

Responses between 2018 and 2019 show some changes, with 86% of responders selecting 5 or 6 on the scale in 2018, compared to 65% in 2019. This may suggest that biodiversity and habitats have become less of concern between 2018 and 2019, but that the topic does remain somewhat of a priority for Welsh farmers.

b) Soil

Value	Number of responses		% responses	
	2018	2019	2018	2019
1	28	1	3	0
2	40	1	4	0
3	190	11	20	1
4	239	36	26	5
5	258	140	28	20
6	147	503	16	71
Total responses	905	692	99	98
Total non-responses	6	13	1	2

When asked how important the management of soil is to their farm business, participants showed a different response in 2018 compared with 2019. Survey results from 2018 suggest that soil is of some concern, as around half of responses (54%) rate it at a 4 or 5 on the scale. However, in 2019, 71% of answers indicated that soil was a top priority, ranking this issue at 6 on the scale. This result suggests that there has been an improvement or an increase in farmer's understanding of the need to monitor and maintain the soil in order to maximise productivity and profits between 2018 and 2019, likely as a result of Farming Connect activities, particularly soil sampling and workshops.

c) Water quality

Value	**Number of responses**		**% responses**	
	2018	**2019**	**2018**	**2019**
1	2	3	0	0
2	5	2	0	0
3	27	23	3	3
4	65	73	7	10
5	305	291	33	41
6	496	298	54	42
Total responses	900	690	99	98
Total non-responses	11	15	1	2

The response to water quality was similar in 2018 and 2019, as 87% responses in 2018 indicated 5 or 6 on the scale and 83% in 2019. This would suggest that water quality is of consistent importance to farmers in Wales.

d) Landscape

Value	**Number of responses**		**% responses**	
	2018	**2019**	**2018**	**2019**
1	2	4	0	0
2	18	13	2	2
3	50	51	5	7
4	185	176	20	25
5	462	335	51	48
6	176	108	19	15
Total responses	893	687	98	97
Total non-responses	18	18	2	3

The importance of managing landscapes to participants in both the 2018 and 2019 survey was very similar. Results suggest that participants are moderately concerned with maintaining the landscape, although it is not as important as soil or water quality. Such a response is encouraging, as the iconic landscape of Wales is recognised as a public good, with the vast majority being managed and maintained by farmers (Welsh Government, 2017).

e) Water

Value	Number of responses		% responses	
	2018	2019	2018	2019
1	29	4	3	0
2	22	3	2	0
3	36	23	4	3
4	123	76	13	11
5	493	302	54	43
6	188	281	21	40
Total responses	891	689	98	98
Total non-responses	20	16	2	2

The importance of managing water to participants in 2018 and 2019 was fairly similar, although there was an indication of higher concern in 2019. The 2018 survey showed 21% of participants' ranked water at 6 on the scale of importance compared to 40% in 2019.

f) Air quality

Value	Number of responses		% responses	
	2018	2019	2018	2019
1	7	5	1	0
2	14	11	1.5	1
3	46	41	5	6
4	168	109	18	15
5	501	333	55	48
6	162	188	18	27
Total responses	898	687	98	97
Total non-responses	13	18	2	3

The importance of managing air quality in 2018 and 2019 was again comparable. In both years the majority of responses fell at the upper-middle end of the scale with most selecting '5' (55% in 2018 and 47% in 2019).

14. As a result of Farming Connect activity, have you made any changes to your farming practices?

Response	Number of responses		% responses	
	2018	2019	2018	2019
Yes	412	308	45	44
No	497	380	54	54
Total responses	910	689	99	98
Total non-responses	1	17	1	2

Answers to this question were fairly evenly split in 2018 and 2019, with 44-45% of the cohort having changed their farming practice and 54% indicating they had not. This is a good outcome, making changes to farm practices is likely a multifactorial decision and veers away from the more traditional learning seen in farming communities where practices are handed down through the family and shared in tight-knit local groups, often generating resistance to change (Franz *et al.*, 2010). Such responses suggest that Farming Connect has likely had a positive influence on farming practices in Wales.

Alternatively, there is a chance that those answering 'no' may already be operating efficiently and following best practice guidelines. In which situation, attendance at a Farming Connect event may have reaffirmed their practices and encouraged them to continue as is.

15. What are the reasons why you didn't make any changes?

Response	Number of responses		% responses	
	2018	2019	2018	2019
Not suitable for my farming system	145	236	16	33
Not suitable for my business or change is not required at present	183	50	20	7
Lack of labour or time	44	33	5	5
Not enough time has elapsed yet	25	23	3	3
Lack of capital	86	6	9	1
Not enough information supplied by Farming Connect	10	5	1	0
Lack of relevant skills	3	2	0	0
Change in government policy	3	2	0	0
Total responses	499	357	55	51
Total non-responses	412	348	45	49

In 2018 the main reason (20%) for not changing farming practices was unsuitability for the business or that change was not required at present, followed by 16% stating that change was not suitable for their farming system. In 2019, a switch between the two can be observed, with 33% declining changes due to unsuitability for the farming system and 7% stating the reason as unsuitability to the business or that change was not required. Lack of relevant skills and information from Farming Connect are much less popular responses, which may highlight the impact that Farming Connect is having in educating and training farmers.

16. What changes did you make?

Response	Number of responses		% responses	
	2018	2019	2018	2019
Made changes in soil management	96	86	10	12
Changed animal management/health monitoring	58	44	6	6
Attended training or courses	16	32	2	4
Grassland management	40	28	4	4
Change in livestock (breed, species or numbers)	22	23	2	3
Received and used a grant	14	15	2	2
Changes to land management	2	10	0	1
Diversification (general)	10	N/A	1	N/A
Diversified into tourism & holiday lets	0	9	0	1
Attended discussion groups	8	6	1	1
Implemented renewable energy	3	6	0	1
Made changes to animal nutrition	5	6	0	1

Planted trees	2	6	0	1
Changed to or increased arable farming	4	5	0	0
Engaged in benchmarking	1	4	0	0
Improved health & safety	6	4	1	0
Made changes to waste management	3	2	0	0
Engaged in succession planning	4	2	0	0
Made financial changes	3	2	0	0
Made a small change (unspecified)	23	8	2.5	1
Improvements (unspecified)	35	N/A	4	N/A
Change or increase in paperwork & business management	16	N/A	2	N/A
Building/building planning	21	N/A	2	N/A
Other	31	26	3	4
Total responses	407	278	45	39
Total non-responses	504	427	55	61

The most popular change that respondents made on their farms in both 2018 and 2019 was in relation to soil health (10 and 12%, respectively), managing nutrients and regularly sampling. As indicated by question 13(b), this would suggest that many farmer's primary concern is in soil health and management. Farmers are utilising the soil sampling services and making changes to their practice to increase profitability and sustainability. The second most popular change, in both 2018 and 2019, was to animal health monitoring or management practices (6%). In 2018, the third most popular change being made was in relation to grassland management (4%) whereas in 2019 this was attendance at training/courses (4%).

17. What impact has Farming Connect had on the following aspects of your business?

a) Farm viability

Response	Number of responses		% responses	
	2018	**2019**	**2018**	**2019**
Major positive impact	65	79	7	11

Minor positive impact	545	365	60	52
No impact	274	217	30	31
Negative impact	1	3	0	0
Not relevant	23	35	3	5
Total responses	908	700	99.5	99
Total non-responses	3	5	0.5	1

b) Farm competitiveness

Response	Number of responses		% responses	
	2018	2019	2018	2019
Major positive impact	29	37	3	5
Minor positive impact	448	192	49	27
No impact	398	374	44	53
Negative impact	1	2	0	0
Not relevant	28	88	3	12
Total responses	904	693	99	98
Total non-responses	7	12	1	2

c) Efficiency in the use of purchased inputs (fertiliser, fuel, etc.)

Response	Number of responses		% responses	
	2018	2019	2018	2019
Major positive impact	47	66	5	9
Minor positive impact	404	232	44	33
No impact	391	347	43	49
Negative impact	1	2	0	0
Not relevant	54	47	6	7
Total responses	897	694	98	98
Total non-responses	14	11	2	2

d) Labour efficiency

Response	Number of responses		% responses	
	2018	2019	2018	2019
Major positive impact	28	37	3	5
Minor positive impact	312	120	34	17
No impact	481	433	53	61
Negative impact	0	2	0	0
Not relevant	74	101	8	14
Total responses	895	693	98	98
Total non-responses	15	12	2	2

e) Reducing Carbon footprint

Response	Number of responses		% responses	
	2018	2019	2018	2019
Major positive impact	11	48	1	7

Minor positive impact	177	123	19	17
No impact	656	464	72	66
Negative impact	3	3	0	0
Not relevant	47	56	5	8
Total responses	894	694	98	98
Total non-responses	16	11	2	2

f) Environmental impact (biodiversity, wildlife, landscape appearance, water quality, etc.)

Response	**Number of responses**		**% responses**	
	2018	**2019**	**2018**	**2019**
Major positive impact	24	67	3	9
Minor positive impact	223	128	24	18
No impact	614	448	67	63
Negative impact	2	3	0	0
Not relevant	38	44	4	6
Total responses	901	690	99	98
Total non-responses	10	15	1	2

g) Animal welfare

Response	**Number of responses**		**% responses**	
	2018	**2019**	**2018**	**2019**
Major positive impact	62	101	7	14
Minor positive impact	468	307	51	43
No impact	345	243	38	34
Negative impact	0	2	0	0
Not relevant	25	36	3	5
Total responses	900	689	99	98
Total non-responses	11	16	1	2

h) Biosecurity

Response	**Number of responses**		**% responses**	
	2018	**2019**	**2018**	**2019**
Major positive impact	20	65	2	9
Minor positive impact	244	146	27	21
No impact	593	434	65	61
Negative impact	2	2	0	0
Not relevant	33	46	4	6
Total responses	891	693	98	98
Total non-responses	20	12	2	2

i) Health and safety

Response	**Number of responses**		**% responses**	
	2018	**2019**	**2018**	**2019**

Major positive impact	38	97	4	14
Minor positive impact	207	171	23	24
No impact	630	387	69	55
Negative impact	0	2	0	0
Not relevant	21	36	2	5
Total responses	896	693	98	98
Total non-responses	15	12	2	2

j) Family succession

Response	Number of responses		% responses	
	2018	2019	2018	2019
Major positive impact	24	46	0	6
Minor positive impact	183	73	3	10
No impact	608	456	67	65
Negative impact	0	2	0	0
Not relevant	77	109	8	15
Total responses	892	686	98	97
Total non-responses	19	19	2	3

k) Jobs and income in the broader rural community

Response	Number of responses		% responses	
	2018	2019	2018	2019
Major positive impact	11	41	1	6
Minor positive impact	119	64	13	9
No impact	706	474	77	67
Negative impact	0	2	0	0
Not relevant	62	111	7	16
Total responses	898	692	99	98
Total non-responses	13	13	1	2

l) Use of ICT

Response	Number of responses		% responses	
	2018	2019	2018	2019
Major positive impact	24	54	1	8
Minor positive impact	269	145	29	20
No impact	565	424	62	60
Negative impact	1	5	0	1
Not relevant	34	63	4	9
Total responses	893	691	98	98
Total non-responses	18	14	2	2

Respondents indicated in 2018 that across the board (aside from the question pertaining to health and safety) Farming Connect made more of a 'minor positive impact' than in 2019. Between 2018 and 2019 there is a significant rise in the number of responses indicating that Farming Connect had a 'major positive impact' on their business, which is reflected in the 2019 results. This trend is observed across the board and may be an indicator of perceived increased positive impact by Farming Connect. Responses indicating a negative impact were low across the board and across both years.

18. For each of the following items, please state to what extent Farming Connect has had an impact on your farming profit and/or your family income long-term. Please you quantify this using the following percentage ranges of less than 5%, between 5% and 10%, between 10% and 25%, more than 25%?

a) Variable costs (feed, seeds, fertilizer etc.)

Response	Number of responses		% responses	
	2018	2019	2018	2019
Increased more than 25%	1	6	0	1
Increased 10-25%	9	16	1	2
Increased 5-10%	29	26	3	4
Increased less than 5%	148	51	16	7
No change	629	455	69	64
Decreased less than 5%	77	119	13	17
Decreased 5-10%	4	12	0	2
Decreased 10-25%	1	4	0	0
Total responses	898	689	98	98
Total non-responses	13	16	2	2

b) Fixed costs (finance, labour, machinery, building depreciation, etc.)

Response	Number of responses		% responses	
	2018	2019	2018	2019
Increased more than 25%	2	9	0	1
Increased 10-25%	11	6	1	1
Increased 5-10%	33	21	4	3
Increased less than 5%	135	36	15	5
No change	655	525	72	74
Decreased less than 5%	56	79	6	11
Decreased 5-10%	34	6	4	1
Decreased 10-25%	0	3	0	0
Decreased more than 25%	0	1	0	0
Total responses	893	686	98	97
Total non-responses	18	19	0	3

c) Farm turnover

Response	Number of responses		% responses	
	2018	2019	2018	2019
Increased more than 25%	6	16	1	2
Increased 10-25%	5	13	0	2
Increased 5-10%	33	38	4	5

Increased less than 5%	198	82	22	12
No change	633	516	69	73
Decreased less than 5%	13	16	1	2
Decreased 5-10%	2	7	0	1
Decreased 10-25%	2	1	0	0
Decreased more than 25%	0	0	0	0
Total responses	892	689	98	98
Total non-responses	19	16	2	2

d) Turnover from diversification (e. g. contracting for other farmers, provision of accommodation within the farm house, small scale retailing or food processing)

Response	Number of responses		% responses	
	2018	2019	2018	2019
Increased more than 25%	9	15	1	2
Increased 10-25%	6	5	1	0
Increased 5-10%	18	11	2	1
Increased less than 5%	91	25	10	3
No change	762	574	84	81
Decreased less than 5%	8	9	1	1
Decreased 5-10%	1	1	0	0
Decreased 10-25%	0	0	0	0
Decreased more than 25%	0	0	0	0
Total responses	895	640	98	91
Total non-responses	16	64	2	9

e) Farm profits

Response	Number of responses		% responses	
	2018	2019	2018	2019
Increased more than 25%	6	11	1	1
Increased 10-25%	3	9	0	1
Increased 5-10%	30	22	3	3
Increased less than 5%	133	81	14	11
No change	695	521	76	74
Decreased less than 5%	19	24	2	3
Decreased 5-10%	3	11	0	1
Decreased 10-25%	0	2	0	0
Decreased more than 25%	1	1	0	0
Total responses	890	682	98	97
Total non-responses	21	23	2	3

f) Total labour used (FTE)

Response	Number of responses	% responses

	2018	2019	2018	2019
Increased more than 25%	7	4	1	1
Increased 10-25%	2	3	0	0
Increased 5-10%	27	4	3	1
Increased less than 5%	36	20	4	3
No change	798	619	88	89
Decreased less than 5%	15	19	2	3
Decreased 5-10%	0	3	0	0
Decreased 10-25%	0	0	0	0
Decreased more than 25%	2	2	0	0
Total responses	887	674	97	96
Total non-responses	24	31	3	4

g) Total family income (e.g. farm profits and other income)

Response	Number of responses		% responses	
	2018	2019	2018	2019
Increased more than 25%	9	12	1	2
Increased 10-25%	1	2	0	0
Increased 5-10%	31	17	3	2
Increased less than 5%	44	30	5	4
No change	786	591	86	84
Decreased less than 5%	14	15	1	2
Decreased 5-10%	5	6	0	1
Decreased 10-25%	0	2	0	0
Decreased more than 25%	1	2	0	0
Total responses	891	676	98	96
Total non-responses	20	29	2	4

Responses to all items within question 21 are very similar between 2018 and 2019, with the vast majority of responses laying in the central options – here, “increased less than 5%”, “no change” and “decreased less than 5%”.

19. What other assistance would you like from Farming Connect to help improve the efficiency and productivity of your business?

Response type	Number of responses		% responses	
	2018	2019	2018	2019
Information and support about grants and financial support	144	97	15	14
Funding for trailer test & HGV license	13	16	1	2
Information and advice on environmental issues (incl. planting trees)	12	33	1	5
Additional or more varied training courses (Incl. geographically)	48	30	5	4

More funding/easier access to courses	14	N/A	1	
Better communication about courses and what Farming Connect has to offer	40	30	4	4
Computing/ICT courses and support	37	26	4	4
Farm technology (Precision agriculture, EID, etc.)	0	9	0	1
Support with digital tax and VAT	9	6	1	1
Help with nutrient management & planning (incl. soil sampling)	28	26	3	4
Advice and support with diversification	35	25	4	3
Advice on Brexit and the government	33	20	4	3
Advice on animal health, welfare and management	25	18	3	2
Business planning and advice	11	13	1	2
More discussion groups	7	13	1	2
Advice and training on grassland management	10	13	1	2
Support for new or young farmers	26	12	3	2
Information and advice on the future of farming	0	12	0	2
Advice about (family) succession	11	7	1	1
More assistance for small businesses & small grants	31	7	3	1
More practical assistance and training	6	6	0.5	1
Mentoring and 1-2-1 advice	5	6	0.5	1
Advice and funding for renewable energy	0	5	0	1
Advice and training on first aid or health & safety	6	5	0.5	1
Support and advice about mental health	1	5	0	1
Advice and support on benchmarking	2	4	0	0
More support for organic farms	1	4	0	0
More demonstration farms/farm visits	8	N/A	1	N/A
Advice on waste and slurry management	9	N/A	1	N/A
Information and support on SPG scheme	11	N/A	1	N/A
Other	27	11	3	1
Satisfied with current provision	87	33	9	5
Total responses	739	398	81	56
Total non-responses	172	309	19	44

<u>Top 3 requests for additional support:</u>

2018:

Information and support about grants and financial support (15%)

Additional or more varied training courses (incl. geographically) (5%)

2019:

1. Information on and support in applying for grants (8%)
2. More grants and financial support (6%)
3. Information and advice on environmental issues (incl. planting trees) (5%)

Responses to question 19 were extremely varied as a free writing response was required. Although, the majority could be categorised into slightly wider subtopics for the purpose of clarity.

The most frequent request for assistance was with grants and funding in both 2018 and 2019. In 2018, 9% of participants requested 'more grants and financial support' and 6% requested 'more information about and support when applying for grants'. The third most popular response in 2018 was for 'additional or more varied training courses, including geographically' (5%). In 2019, the trend is reversed, with 8% of participants requesting 'more information about and support when applying for grants' and 6% 'more grants and financial support'. The third most popular answer in 2019 was for 'information and advice on environmental issues' (including biodiversity, sustainability and planting trees).

Farming Connect is primarily responsible for knowledge exchange and transfer and does not provide subsidies or grants/funding for farm improvements (*e.g.* building sheds). Of perhaps of more interest here, is the request for assistance when applying for grants – help with paperwork, guidance on what makes a good application and notifications about availability. Farming Connect does offer support for farm businesses in preparing business plans to support grant applications and attendance at some Farming Connect events is a pre-requisite for applying for some Welsh Government grants. If not already in used, alternative methods for delivering support might include telephone consultations, a series of short advisory videos or a grant 'checklist'/advisory booklet.

As mentioned, BPS funding will be phased out in the coming years and replaced with more environmentally and sustainability-focused schemes. As such it is no surprise to observe a significant increase (from 1 to 5% over 2018 and 2019) in farmers requesting additional information about how to increase biodiversity and protect habitats on their farm and reduce their environmental impact and carbon footprint. In particular, there is a strong interest in agroforestry but farmers need more solid information about planting choices, establishment methods, aftercare *etc*. before making the investment.

Many find training courses valuable (4%) but would like better communication about them and some flexibility – *i.e*. during weekends or in evenings. The request for more discussion groups and courses in different locations around Wales is difficult due to the rural nature of Wales, groups and training courses cannot be run in every area and as such Farming Connect must prioritise. Farming Connect already offers extensive e-learning materials to its members and whilst question 10 indicated members are aware of this, they may not be aware that the content could provide similar detail to that of some training courses (for example, Business Improvement).

Another frequent request is for IT training, with 4% of the cohort in 2018 and 2019 expressing an interest. Farming Connect currently offers a variety of computer training – through online courses, group workshops or face to face tuition. This flexible approach provides members with options depending on the way they wish to learn, making this clear to members and providing information well ahead of time may also help farmers to access these.

20. The geographical spread of respondents

County	Number of responses		% responses	
	2018	2019	2018	2019
Bridgend	5	5	0.5	1
Caerphilly	5	7	0.5	1
Cardiff	2	2	0	0
Carmarthenshire	129	95	14	13
Ceredigion	92	74	10	10
Conwy	47	41	5	6
Denbighshire	41	32	5	5
Flintshire	22	16	2	2
Gwynedd	98	79	11	11
Isle of Anglesey	39	37	4	5
Monmouthshire	41	30	4	4
Neath Port Talbot	14	11	1.5	1
Newport	2	2	0	0
Pembrokeshire	71	45	8	6
Powys	238	186	26	26
Rhondda Cynon Taf	12	7	1	1
Swansea	13	10	1	1
Vale of Glamorgan	11	7	1	1
Wrexham	20	14	2	2
Total responses	909	702	99.7	99
Total non-responses	3	3	0.3	1

A large proportion of respondents (26%) in this survey reside in Powys, followed by 13% in Carmarthenshire and 11% in Gwynedd. In the minority were Torfaen, Newport, Cardiff and Blaenau Gwent (with 2 respondents per county). Geographical distribution was very similar between 2018 and 2019.

Concluding remarks

When comparing the results of the 2018 and 2019 report the majority show great consistency between years. Although, improvements have been made in the use of benchmarking data to make changes to management practices. More participants of the survey in 2019 indicated that they had made changes as a result of benchmarking data when compared to the 2018 results which suggest an improved ability to interpret and apply the data on farm over the year. Such progress may well be a result of participation in Farming Connect activities. In terms of training courses, ‘animal health monitoring’ and ‘soil sampling’ remained popular activities across both years, but ‘grass measuring’ was a more popular choice in 2018 and silage sampling in 2019. Results also suggest that between 2018 and 2019, participants perceived an increased positive impact of Farming Connect upon their business.

As highlighted throughout the report, the Farming Connect members surveyed have indicated that discussion groups and also farm visits have been extremely beneficial and interesting. 'Watching' and 'doing' are powerful tools for learning and peer education in farming is also highly effective, as peers that are performing a practice hold a sense of credibility and are perceived as relatable and trustworthy. Farming Connect continues to make good use of these learning mechanisms via their demo sites, farm visits, discussion groups and workshops.

Finally, it is reassuring to observe increased interest in agro-environmental schemes between 2018 and 2019. The farmers surveyed indicated strong concern about biodiversity and habitats on their farms and expressed an interest in improving sustainability and their environmental impacts. As the BPS is set to be phased out and replaced by new environmental and sustainability-based systems, preparation for this change would likely be very helpful. Supporting farmers in engaging with schemes such as planting trees on their land will certainly be valuable.

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