

# Avian Influenza Survey

## An audit of the knowledge, attitude and opinions about Avian Influenza (AI) in a amateur backyard chicken keeper community in the United Kingdom.

### Background and intention

This study is not and was never intended to be a formal research project. The survey was limited to members of 'The Hen House' Facebook group, an online community of amateur backyard chicken keepers with over 10,000 members. The survey was a qualitative, questionnaire of backyard chicken keepers, participants were self-selecting and all responses anonymous with the aim to provide useable information about the knowledge this community has about AI, what is their general knowledge and understanding about AI, its risk to animal and human health, the attitudes of the community to AI, biosecurity and potential compliance with legislative regulations and restrictions such as lockdowns.

The majority of poultry research to date has been conducted in respect to commercial poultry farming and commercial interests leading consideration. Much of the health and veterinary care research can simply be transposed into general chicken and poultry management. However, little specific research has been conducted into the amateur, non-commercial chicken keeper. The current evidence is anecdotal at best, but the psychology and approach to their animals may well be very different from commercial farmers. There is no specific or agreed definition of what is a amateur backyard chicken keeper. For the purposes of this survey a backyard chicken keeper is: **a person who keeps chickens, either at their primary residence or other non-commercial location such as an allotment, primarily for the experience and enjoyment of the activity and not for commercial gain or formal business enterprise. This does not preclude a backyard chicken keeper from selling eggs, but the sale of egg occurs when production exceeds personal consumption requirements as opposed to expressly keeping chickens primarily for egg production to generate profit.**

Chickens in the UK are legally classed as livestock, so fall under the exclusive regulation of DEFRA. However, there is a clear disconnect in thinking about the status of such animals. Backyard chicken keepers tend to think of their chickens as pets, like a dog or cat. They have an emotional bond to their chickens, which may be hard for some to understand, but this is human nature.

The aim of this study is to examine and understand how backyard chicken keepers think about their chickens and then to establish how that thinking influences their decisions and feelings regarding biosecurity, AI and compliance with regulatory requirements.

Without the acceptance, co-operation and compliance of backyard chicken keepers, enforcement in the event of a quarantine will be almost impossible. In short, keepers need to want to register their chickens, they are going to want to follow official advice and more importantly understand why they need to do so and have confidence in such advice or directives. There may also need to be a change in cultural thinking at governmental level, that commercial chicken farmers and backyard chicken keepers have very different priorities and approach to their animals, and therefore there may need to be a parallel different management of both groups.

## Expected Outcomes

It is hoped the study results will provide insight into the specific issues:

1. What backyard chicken keepers understand about AI.
2. What is the confidence in official advice among backyard chicken keepers.
3. What are the barriers to accepting official advice.
4. What are the general trends in attitude toward AI and official advice among backyard chicken keepers.
5. Is there any variation in attitude among demographic groups and/or geographical groups in respect of AI and official advice.
6. What could be done to improve acceptance and compliance

## Study Population Demographics

This study was exclusively conducted with members of ‘The Hen House’ Facebook page community. Facebook analytics accessed by the group’s administration team show that the member population in August 2024 comprises of 79% female, 20% male, with 94% of members reporting living within the UK, with approximately 65% of members aged between 35 and 64 years. The survey participants broadly mirror this, with 85% female, 12% males, 81% of participants are aged between 35 and 65 years, with all participants reporting as living within mainland UK and Northern Ireland. This gives a reasonable degree of confidence that the data collected, and results obtained are truly representative of this group.

The number of participants per age range are as follows:

Age Range	Number of Participants	Percentage Participants
18-24	4	1%
25-35	27	7%
36-45	71	20%
46-55	127	35%
55-65	94	26%
65+	40	11%
<b>Total</b>	<b>363</b>	<b>100%</b>

73% of participants held further or higher education qualifications with 58% of participants being graduates with a further 15% holding a technical or trade qualification. 1% participants reported holding no formal qualifications. Occupation was also similar with 70% of participants reporting their current or former occupation before retirement being one of management, professional or skilled trade. 2% of participants reported as being unemployed which is less than half the national unemployment rate of 4.2% Unfortunately the study did not distinguish between unemployed seeking work, and unemployed due to economic inactivity such as disability.

With respect to geographical location there was participation from all 4 nations of the United Kingdom. The county reported by participants in descending order are as follows:

County	No	Percentage
Derbyshire	15	4.72
Hampshire	15	4.72
Essex	14	4.40
Norfolk	14	4.40
Surrey	14	4.40
Oxfordshire	13	4.09
Cheshire	12	3.77
KENT	12	3.77
Worcestershire	12	3.77
Gloucestershire	10	3.14
Hertfordshire	10	3.14
Nottinghamshire	10	3.14
Devonshire	8	2.52
Leicestershire	8	2.52
Lincolnshire	8	2.52
West Midlands	8	2.52
West Yorkshire	8	2.52
Lancashire	7	2.20
Warwickshire	7	2.20
Dorset	6	1.89
North Yorkshire	6	1.89
Scotland (other)	6	1.89
Somerset	6	1.89
East Sussex	5	1.57
Northamptonshire	5	1.57
Suffolk	5	1.57
West Sussex	5	1.57
Berkshire	4	1.26
buckinghamshire	4	1.26
Cambridgeshire	4	1.26
Cornwall	4	1.26
Cumbria	4	1.26
Highlands	4	1.26
Carmarthenshire	3	0.94
Staffordshire	3	0.94
Stirlingshire	3	0.94

Wiltshire	3	0.94
Aberdeenshire	2	0.63
Bedfordshire	2	0.63
Berwickshire	2	0.63
East Yorkshire	2	0.63
London	2	0.63
Perthshire	2	0.63
South Yorkshire	2	0.63
Wales (other)	2	0.63
Angus	1	0.31
Antrim	1	0.31
Ceredigion	1	0.31
Clackmannanshire	1	0.31
Cleveland	1	0.31
Dumfries and Galloway	1	0.31
Durham	1	0.31
Fife	1	0.31
Lanarkshire	1	0.31
Mid Glamorgan	1	0.31
Monmouthshire	1	0.31
Moray	1	0.31
Northumberland	1	0.31
Powys	1	0.31
Rutland	1	0.31
Teesside	1	0.31
Yorkshire	1	0.31

## Knowledge of AI, and attitudes towards biosecurity

While it is required that those commercially involved in the chicken and poultry industry have knowledge of, and training in biosecurity, there are no such requirements for backyard chicken keepers. Therefore, some basic questions were asked of participants as to their basic knowledge and understanding of AI. Participants were able to select all the statements they agreed with. The results are as follows:

Question	Percentage Agree (%)
It is a virus	91
Avian Influenza only infects chickens	1
Only wild birds carry Avian Influenza	4
Avian Influenza only comes from migrating birds	7
Well kept backyard chickens are not at risk from Avian Influenza	2
Avian Influenza cannot infect humans	6
Avian Influenza cannot infect other animals	5
Backyard chickens cannot infect wild birds	1
Avian Influenza is only a problem if backyard chickens are not kept in clean conditions	3
There are many different types of Avian Influenza, and some are more deadly than others	65
None of the above	3

It is rather disturbing that of the study participants, 8% are unaware that AI is a virus and only 65% are aware there are many viral variants. However, on the positive side - in respect of awareness related to cross infection between wild and captive birds - this is high. As is the awareness of the zoonotic potential of AI, and that it is not possible to control the spread of AI simply by keeping the coop and run clean.

With regard to attitudes towards biosecurity and the requirement to register their flock, 89% of participants were aware of the new regulations and legislative deadlines in respect of Scotland and the rest of the UK. When asked if participants agreed with the new requirement to register their flock 42% responded positively, with 29% disagreeing with the requirements, with the remaining 29% unsure whether they agree or disagree. When asked about the intention to follow the requirement to register their flock, 36% confirmed they had already registered their flock with DEFRA, 41% indicated they intend to do so and the remaining 23% indicating they do not intend to register their flock despite being aware the registration requirement is compulsory.

This is summarised below:

Do you agree with the new requirement to register your chickens?		
YES	NO	MAYBE
42%	29%	29%

### Do you intend to register your flock?

Already Registered	Yes	No
36%	41%	23%

The attitudes towards registration can be further refined in respect to age and gender:

### Do you agree with the new requirement to register your chickens?

Age	Female			Male		
	Yes (%)	No (%)	Maybe (%)	Yes (%)	No (%)	Maybe (%)
18-24	75	25	0	0	0	100
25-35	18	41	41	0	60	40
36-45	56	21	38	0	88	12
46-55	30	23	39	31	31	38
56-65	36	24	40	50	30	20
65+	53	25	41	67	33	0

### Do you intend to register your flock?

Age	Female			Male		
	Already Registered (%)	Yes (%)	No (%)	Already Registered (%)	Yes (%)	No (%)
18-24	0	75	0	0	0	100
25-35	18	46	36	0	40	60
36-45	38	48	14	0	25	75
46-55	39	43	18	46	27	30
56-65	40	43	17	70	10	20
65+	41	41	18	17	33	50

There was a follow up question for the participants who indicated they do not intend to register their flock in an attempt to understand the barrier to complying with the requirements and the results are as follows:

Question	Percentage Agree (%)
I do not believe it will make a difference to any Avian Influenza outbreak	21
My chickens are perfectly safe at home	6
My chickens have no contact with wild birds	3
I do not trust the government in this matter	23
If my chickens are on a register, I would be concerned that the government might want to euthanise them in the event of an outbreak	28
I do not want to know about Avian Influenza	1
I do not like being told what to do	4
It is too much hassle to do it	2
Avian Influenza is only a problem for commercial chicken farms	3
Other ( <i>anonymous comments attached as appendix</i> )	8

It is clear that the majority of responses (51%) are related to not trusting to government and a fear that in the event of an outbreak their flock will be euthanised. There is also a strong feeling that there is little role for the backyard chicken keeper in controlling and managing an AI outbreak. When the participation group was asked as a whole about their opinions regarding wild birds infecting their flock, and vice versa, the results are as follows:

**Do you believe there is a risk of wild birds infecting your chickens?**

YES	NO	DON'T KNOW
85%	10%	6%

**Do you believe there is a risk of your chickens infecting wild birds?**

YES	NO	DON'T KNOW
38%	43%	19%

Looking at taking specific biosecurity measures, participants reported a general willingness to positively engage with biosecurity measures when asked and could select all responses that applied to them. The results are as follows:

**What biosecurity measures would you take to reduce the risk of catching Avian Influenza from your flock?**

Question	Percentage Agree (%)
I would use a face mask	34
I would wear disposable gloves	42
I would wear goggles	10
I would change clothing after contact with my chickens	28
I would wear a pair of boot/shoe covers before and after contact with my chickens	42
I would wash or sanitise my hands before and after contact with my chickens	65
My chickens would not be allowed in my home	74
I would avoid close face to face contact with my chickens	63
I do not see the point of biosecurity measures	4
None of the above	4
Other	3

It would appear on face value that participants are applying a common-sense approach in so much as hand washing, not allowing chickens into their homes and avoid close contact with them. The question deliberately avoids asking for participants to think if they were applying biosecurity measures during a known AI outbreak as in practice, notwithstanding official advice to lockdown or a AI exclusion zone, any bird and any time can become infected with AI. It was important to consider an everyday approach to biosecurity as precautionary not necessarily in consideration of a specific risk or outbreak scenario.

Participants were then asked their reasons for taking biosecurity measures. Participants were free to tick as many options they felt were appropriate to them. The results are as follows:

### What would be your reasons for using biosecurity measures?

Question	Percentage Agree (%)
To protect my chickens	88
To protect wild birds	53
To protect the commercial chicken and poultry industry	34
To protect myself and my family from Avian Influenza	65
It is official advice, and should simply be followed	39
I would not follow biosecurity measures	7
Other	2

It is clear that in the participation group, the majority apply biosecurity measures to protect their chickens, and to protect themselves and their family from AI.

Further to this, participants were asked about where they sought information about Avian Influenza and how they would like to receive updates and alerts about AI. Participants could select all that apply. The results are as follows:

### Where do you look for information about Avian Influenza?

I do not	Government DEFRA official website	I have signed up for official alerts	Facebook or other social media	Word of Mouth	Internet search engine	Main stream media	Other
9%	62%	34%	53%	7%	13%	19%	2%

Participants were also asked how they would like to receive information about AI and the results are as follows:

### What would be the best way for you to receive alerts about Avian Influenza?

Text Message	Email	Recorded telephone message	Post	Other
48%	45%	0%	0%	7%

As previously stated, chickens in the UK are legally classed as livestock but there is strong anecdotal evidence to suggest backyard chicken keepers tend to think of their chickens as pets, like a dog or cat. They develop a deep emotional bond with their chickens, and they become part of their family and lifestyle.

Participants were also asked how they view their chickens, and not surprisingly 89% considered them a family pet with only 10% viewing their chickens as livestock. This clearly shows that the approach and attitude towards chickens are markedly different between commercial and amateur backyard chicken keepers.



This is in no way to suggest commercial chicken keepers do not care for their animals, it is clear that the vast majority care deeply, but the underlying basis of the attitude is different, from a commercial commodity that is cared for as opposed to a family pet. The evidence for this is that once a chicken is past her best laying, the commercial farmer will sell them on either for food or pet food production or to the amateur keeper market. Whereas a backyard chicken will almost universally keep a chicken as a pet even when they cease laying.

Participants were asked three further questions – how seriously they considered AI to their personal health, that of their chickens and how likely they would be to follow official lockdown advice on a scale of 0 to 10. The results are as follows:

**On a scale of 0-10 how seriously do you consider Avian Influenza is to YOUR chickens?  
(0= no risk 10= life threatening)**

	10	9	8	7	6	5	4	3	2	1	0
%	26	1	11	11	7	17	6	9	4	4	3

**On a scale of 0-10 how seriously do you consider Avian Influenza is to your  
PERSONAL health?  
(0= no risk 10= life threatening)**

	10	9	8	7	6	5	4	3	2	1	0
%	4	1	5	4	4	11	6	14	16	20	17

**On a scale of 0-10 how likely are you to follow official advice in the event of a quarantine?  
(0= not at all 10= actively follow advice no matter what)**

	10	9	8	7	6	5	4	3	2	1	0
%	45	18	13	6	1	6	1	3	1	2	5

This is a rather confusing picture as there appears to be a general dissatisfaction with official government policy, registration and a great deal of suspicion as to the motives of the government. It is worrying that generally, participants are concerned for the risk AI poses to their chickens, they are far less concerned about the risk AI poses to their personal health. However, and again generally, there is a willingness to follow official advice in the event of a lockdown quarantine. Using this data along with demographic, educational, employment, age and gender it is possible to suggest what kind of person is most likely **not** to follow any lockdown guidelines:

- From the responses of the participants, males, aged between 36-45 living in the Midlands region working as a tradesperson are most likely to ignore lockdown rules.
- It is also worth noting that females, aged between 46-55 living in the Midlands with a bachelor's degree are almost as likely to ignore lockdown rules.
- It appears from this limited survey backyard chicken keepers living in the Midlands are generally more likely to ignore lockdown rules than any other region in the UK.

## **Outcome Insights**

### **What do backyard chicken keepers understand about AI?**

Generally, there is an excellent understanding about the basic biology of AI amongst backyard chicken keepers. There is a high level of acknowledgement that AI is a virus, although 8% of respondents did not seem to be unaware of this. The majority of respondents also understood there were 'different types' of the influenza virus. There is high degree of understanding that AI is a risk, not just to birds but also other animals and potentially humans. The data supports the conclusion that it is not a lack of knowledge that is causing backyard chicken keepers to be reluctant or refusing to register their flock.

### **What is the confidence in official advice among backyard chicken keepers.**

There is a confusing picture in respect to this, with on one hand a very sceptical mistrust of government and DEFRA policy but on the other DEFRA and other official governmental organisations enjoy a high level of trust when backyard chicken keepers wish to find information about AI. A tentative conclusion that might be supported by the data is that while backyard chicken keepers are willing to accept official advice as authoritative and correct, keepers then decide if they are willing to accept such advice or follow recommendations. This matter requires further study to understand the cognitive processes and reasoning as to why backyard chickens keepers appear to display such feelings and behaviours.

### **What are the barriers to accepting official advice?**

It cannot be denied that the study has shown that there is a significant amount of misinformation and ignorance regarding the new poultry registration regulations and AI. A large majority of respondents simply do not understand how practicing biosecurity measures would make any difference in the event of an AI outbreak. The issue of distrust was highly evidence with 51% of respondents either indicating they did not trust the government and/or believe their flock will randomly be euthanised in the event of an AI outbreak. There appears to be deficit in the education of backyard chicken keepers and a lack of understand about the importance of biosecurity in the home environment. Again, further study is needed to fully understand this issue, and this research is urgently needed given the current devastating effect of AI in the wild bird population. Although not considered in this study, it would be of interest to discover what knowledge and understanding backyard chicken keepers have with respect to the implications of AI could have upon food production and supply chains. This is also an education issue that can only be addressed with confidence once the underlying knowledge and attitudes of backyard chicken keepers have been fully investigated. In addition, and as expected, the vast majority of respondents view their chickens as pets. Despite the legislative and regulatory reality backyard chicken keepers have a mindset significantly different and diametrically opposite to DEFRA and other government agencies.

### **What are the general trends in attitude toward AI and official advice among backyard chicken keepers?**

At present, the data suggests there is a general opinion amongst backyard chicken keepers that while AI is real, poses a real risk to their chickens and other animals populations including humans, that there is cognitive dissonance and general failure to understand how a few chickens in their

back garden or on an allotment could possibly play a role on an AI outbreak or risk. Backyard chicken keepers display a high regard for the welfare of **their** chickens but little understanding what part they could in minimising and mitigating AI. There is a significant shift in thinking between the risk their chickens pose to other birds and vice versa. 85% of respondents indicated they considered wild bird a risk of infecting their chickens but in contrast only 38% indicated they believed their chickens were an infection risk to wild birds. There is what can best be described as an ambivalence to official advice and flock registration. This issue does not exist in isolation, and it is clear to some degree that recent experiences with COVID are playing a part in backyard chicken keepers appearing to be transposing their negative experience of COVID lockdown and restriction onto their beliefs about flock registration and possible repercussions thereof. This is again an issue of education and is worthy of further study.

### **Is there any variation in attitude among demographic groups and/or geographical groups in respect of AI and official advice?**

Within the study population there is clear preference for females to keep chicken than males at a rough ration of 5:1. Given the relatively small scale of this study, it cannot be extrapolated if this would represent the backyard chicken keeping community nationally, but anecdotal evidence suggests this is the case. Geographically, chicken keeping is found in all regions and counties of the UK, with chicken keepers more likely to be middle aged and upwards. From the study it is suggestive that respondents living within the Midlands are more likely to be resistant to both flock registration and following biosecurity measure and advice.

### **What could be done to improve acceptance and compliance?**

Due to the somewhat confusing picture from the initial study audit, and recommendation in respect to acceptance and compliance would be limited. However, there are 3 broad approaches that could further our understanding:

- Firstly, is it clear further study is needed; we are involving other backyard chicken keeping communities in an attempt to see if these results are replicated generally, or if different findings are supported by that data.
- Secondly, there is an urgent need for more, better, and different education by government agencies including DEFRA to reassure and gain the confidence of the backyard chicken keeping community.
- Thirdly, there appears to be a real lack of solid and simple advice available to backyard chicken keepers. Designing a simple and effective biosecurity toolkit backyard chicken keepers could access and follow would hopefully give confidence and improve compliance. Notwithstanding the foregoing, further study is urgently needed.