

# Soil Association producer interviews on attitudes to antibiotic use

Part of the Alliance to Save our Antibiotics Organic Data Project, published March 2021.

## Introduction

The 2018-19 survey of Soil Association producers showed that the mean antibiotic use on contributing organic farms was significantly lower than the national average (RUMA, 2019). Within this dataset there was considerable variation which could not be attributed to farm size. The Alliance to Save Our Antibiotics and the Soil Association wanted to conduct telephone interviews with producers who were at the top and the bottom end of the antibiotic use range to see if attitude and knowledge of the owner or stock keeper with regard to medicines or aspects of stockmanship or husbandry explained the variation. These were undertaken in September and October 2020.

## Method

The antibiotic use dataset was ranked by mg/PCU. The smallest producers were excluded, as treatments to individual animals have a disproportionate effect on their usage and production systems may not reflect the way in which most farmed animals are kept in the UK. A wide range in producer size was still retained in the farms chosen for interview, with dairy farms ranging from 35 to 900 cows, beef farms which sold or slaughtered between 20 and 329 animals in the year and sheep farms from 64 to 2166 breeding ewes. 2 commercial sized pig farms were interviewed with 250 and 350 sows respectively. Poultry farms were not included in the interviews, as their production systems and organic certification requirements are such that zero use is the norm.

Producers were telephoned by vets from The George Farm Vets and asked if they would consent to participate in a short interview to add value to the dataset to which they had contributed previously. There was no obligation to take part. Response rate was variable, with many who had provided a mobile phone contact number happy to contribute, but a very low response rate where only a landline contact number was available and repeated phone calls produced no answer. The final number of completed interviews across cattle and sheep farms was 22 higher antibiotic users and 15 lower users. Most beef and sheep producers interviewed were mixed enterprises, so their responses are considered together. The 2 pig farms who contributed were low users.

The interview questions were chosen based on previous published work in the field by Jones et al (2015), Higham et al (2018) and Davies et al (2017).

## Results

### **Q1: Who dictates farm medicines policy?**

*Dairy:* All those interviewed considered that they either decided for themselves, or in conjunction with their vet. More low users stated that they were solely responsible, whereas more high users considered their vet to be of equal importance in deciding medicines policy.

*Sheep and beef:* 75% considered that they decided in conjunction with their vet. The remainder felt it was either left entirely to the vet, or to themselves. There was no difference between high and low users.

*Pigs:* Both producers worked very closely with their vets on medicine policy.

**Q2: What are your 3 main sources of advice on medicines?**

For all sectors, most stated that their vet was the sole significant source of advice. Other sources were other farmers, internet forums, agricultural press, discussion groups, the Soil Association, SRUC (Scotland's Rural College) newsletter and homeopathy resources, though these were limited to one or two responses each.

**Q4: What diseases are responsible for most of your antibiotic use?**

*Dairy:* Mastitis and lameness were the most identified causes, particularly among high users. Calf pneumonia was the next. Some low users considered that they had eliminated antibiotic uses for these more common production diseases, and occasional use for conditions such as Infectious Bovine Keratoconjunctivitis (an eye infection spread by flies) or a difficult calving was all that remained.

*Sheep and beef:* Lameness was by far the most identified reason for antibiotic use with 80% of high users and 100% of low users listing it as a primary concern. Mastitis was next, followed by navel ill, pneumonia and dystocia. Individual high users identified problems with fly strike and eye disease.

*Pigs:* Lameness, occasional treatment after farrowing.

**Q5: Are you taking any measures specifically to reduce antibiotic use? If so, what measures are you taking?**

**Q6: What husbandry practices do you think are key to maintaining good animal health and avoiding the need for antibiotics?**

The responses to these are considered together, as producers tended to give answers which spanned both questions:

*Dairy:* Many of the low users (and one high user) identified their milk contract as a primary driver for low use, selling milk to OMSCO on a PWAB (produced without antibiotics) contract. The experience of these farms (especially the producer who was previously a high user) was of particular interest. Farmers who had been supplying milk on this contract for some time felt confident that reducing antibiotic use to almost nil had not had a detrimental impact on disease rates or welfare. All stated that antibiotics were used when necessary for welfare, but this was limited to cases of foul which had not responded to topical treatment or for the occasional caesarean section or difficult calving. Those who had recently converted to a PWAB contract were surprised not to encounter more problems, citing culling of cows with a history of multiple treatments and a reduction on stocking rate as important to them. A clean environment was the most important husbandry practice identified by both high and low users. Other factors identified by multiple low users were breeding specifically for health traits more than production, cows spending as much time outside as possible, improving cow tracks to reduce lameness risk, frequent foot bathing and prompt identification and treatment of disease. Multiple high users considered parlour routine, good transition cow health, low stocking rate and making cows stand after milking to give time for teat end closure to be important. Other measures mentioned by individuals as being important were lower yields, block calving, investment in housing/parlour, routine foot trimming, fly control and higher culling.

*Beef and sheep:* A clean environment and low stocking rate were the most common husbandry factors identified as important, particularly among low users. For high users with lameness especially, culling of repeatedly lame animals was considered important. Other factors considered

important by multiple farmers (high and low users) were good stockmanship, good nutrition, a low stress environment, minimal duration of housing and calving or lambing outside. Also raised were use of the 5 Point Plan for sheep lameness, gathering and handling stock in different locations where possible, a short lambing or calving period, foot bathing, breeding policy, ventilation, closed herd/flock, mineral/trace element status and outdoor loafing provision during the housed period.

*Pigs:* Both herds felt that prompt treatment through good stockmanship, later weaning dates up to 10 weeks, avoiding mixing groups and clean ground were important.

**Q7: Do you think you can reduce (or replace with non-antibiotic approaches) any specific uses of antibiotics on your farm? If so, which areas would you target and how?**

*Dairy:* Many were using NSAIDs (anti-inflammatory/pain relief medication) and vaccines already. For mastitis, massage with liniment was a common first line treatment among both high and low users. Homeopathy was mentioned by a few high and low users. Cessation of intramammary antibiotic therapy for mastitis and topical treatment for foul in the foot was identified by those converting to PWAB contracts.

*Sheep and beef:* Fewer non-antibiotic interventions were mentioned by these farmers, with none from low users. Use of vaccines was most frequent, followed by increased disinfection of high traffic areas and homeopathy, with NSAIDs and trace element supplementation identified by individuals.

*Pigs:* Both herds were committed users of vaccination wherever possible and using NSAIDs as a first line of treatment.

**Q8: Are organic standards helpful in your decision making around treatment?**

Most farmers felt that the standards were primarily useful when formulating herd/flock health plans rather than something to refer to for individual treatments. Low users were slightly more likely to consider them helpful on their own, possibly because when treating animals less frequently then it is more difficult to remember the requirements for withdrawal periods and record keeping.

**Q9: Is your herd/flock health plan a useful document? When did you last refer to it other than for annual inspection?**

Farmers were divided on this. High dairy users were more likely to say that the health plan was not useful as they had frequent contact with their vet so were updating their protocols continually. Of the low dairy users and both groups of sheep and beef farmers, about half thought that it was useful primarily for the annual review and half that it was not at all useful, or even a burdensome requirement. Very few referred to it regularly. Several stated that they were more likely to refer to the protocols derived from it rather than the plan itself. This was also the position of the two pig farmers.

**Q10: Number of staff who treat livestock:** Range of 1-5, with no association with level of use of antibiotics.

- **What training do they have?** All the dairy and pig farms had trained some or all their staff as part of farm assurance compliance. Some undertook additional in-house training. About half the sheep and beef farms had undertaken training on medicines use, with a greater proportion of low users having done so.
- **Are written protocols in place?** Most of the dairy farms and both pig farms had written protocols readily available for staff to refer to. Less than half the beef and

sheep farms did, with none of the low users feeling the need for written protocols apart from those required in the herd/flock health plan.

- **How are protocols decided and reviewed?** All said that this was done with the vet, either at annual health plan review, or in the case of dairy and pig farms more frequently, either quarterly or as necessary.

#### **Q11: What are your preferred methods of learning?**

Across all sectors the most frequent response was that farmers like to learn about medicines directly from their vet. Low users were more likely to list other farmers or discussion groups as a good way to learn. Opinion was divided on online resources, with some stating that the increase in online courses and webinars had been helpful to fit in with a busy work and family life, while others felt face to face learning on courses was more effective. The internet in some form was the second most common resource after the farm vet, with discussion groups, training courses, practical experience, the Soil Association and reading the farming press mentioned by two or more farmers.

#### **Q12: What role does your vet have and how do they support you? Is there anything else you would like from them?**

All the farmers interviewed were happy with their vets. Some felt that older vets in particular could be more supportive of considering non-antibiotic therapies as first line treatments, but most farmers had identified one or more vets in their local practice with whom they felt they could engage on organic principles. This one to one relationship with a trusted vet was felt particularly important by many, and some sheep and beef farmers felt this was something they missed out on compared with dairy farms. Another useful comment was that vets should engage more with farmer discussion groups, both to ensure that medicine use discussions were accurate and to build relationships and share best practice.

#### **Q13: What would help you to manage animal health and promote effective use of medicines even better than your current levels?**

Given how broad this question is it is inevitable that the responses reflect that. the most common responses were more training courses (both on medicines and stockmanship) and more one to one vet interaction as described above. Others wanted more support from the Soil Association and OMSCO around medicines with a clear point of contact for advice. The remaining single individual responses were as follows:

- More understanding of why vets have recommended particular products
- Membership of health schemes
- Learn from experience of low users in published interviews
- More attention from farming press around reduction in antibiotic use
- Homeopathy training
- Feedback from a professional post-mortem service based at regional fallen stock processor
- Enough labour and time to allow for focus rather than firefighting
- More financial incentive for being antibiotic free

## Discussion

The results of these interviews add some helpful detail to the picture given by the earlier antibiotic use benchmarking study. However, the qualitative nature of the interviews makes collating results very challenging. Long conversations with the farmer need to be distilled by the interviewing vet to

pick out the salient points, introducing the risk of the vet applying their own bias. The sample size was small (37 farmers) and may not be reflective of the whole organic sector as it was limited to those farmers who had already volunteered to contribute antibiotic usage data being willing to then complete a telephone interview many months later. Despite these limitations, some common themes have been found. Some of these are associated with farms having relatively high or low use of antibiotics in the benchmarking study, but many of the same key drivers for antibiotic use were mentioned by farms at either end of the scale.

All farmers felt that they were very low users of antibiotics, irrespective of whether the benchmarking data showed they were high or low users in the period reviewed. This was an interesting and unexpected finding, as all had received a copy of the results of the benchmarking study with their position in the range identified. Few thought they could significantly reduce their usage further, except through the husbandry practices described above. However, it was noticeable that some high users had already taken multiple actions since the review period (which ended in May 2019) and reduced usage significantly. Specific instances include the dairy farms moving to a PWAB contract described above, sheep farms where a tighter culling policy had a big impact on lameness, and beef herds where outwintering or a minimal housed period had dramatically reduced pneumonia incidence. The Soil Association has altered its annual data collection process to include antibiotic usage, so it will be interesting to see if most higher users of antibiotics are persistently high (in which case there is a perception gap) or if high users in a given 12 month period tend to be farms with generally low usage which have had a bad year. Farms which are persistently at the top end of the antibiotic usage range would potentially benefit from additional help through the Soil Association.

Vets were overwhelmingly the most commonly cited and trusted source for information and advice around medicines use. The one to one relationship with a trusted veterinary adviser was deemed very important by high and low users, agreeing with previous work by Bard et al (2019). Low users in particular needed to work with a vet who they believed shared their views on livestock management and medicines use. All farmers interviewed felt that there was at least one such person working for their local practice. Uptake of non-antibiotic approaches to treatment was widespread, particularly NSAIDs, vaccines and topical antiseptics or liniments. Further reductions in antibiotic use are more likely to come from changes in husbandry than antibiotic replacement as it was in these aspects of farming practice that interviewees tended to focus when describing their goals. Across all sectors then cleanliness was deemed most important, with many considering that the best way to achieve this is to minimise the housed period and move as frequently as possible to fresh ground. Signposting to resources on improving farm grazing infrastructure and techniques for outwintering may help these practices become more widely adopted.

Mastitis and lameness stood out as the diseases responsible for most antibiotic use on the farms interviewed. The experience of those farms undergoing a conversion to a PWAB contract in learning to deal with mastitis without antibiotics is potentially very beneficial to those who are not on such a strict contract but who wish to reduce their use of antibiotics in this area. No farmers mentioned the AHDB Mastitis Control Plan (<https://www.mastitiscontrolplan.co.uk/>) or Healthy Feet Programme (<https://ahdb.org.uk/healthyfeetprogramme>), which in the UK are the most widely recognised proven approaches to dealing with these conditions in cattle. Only 2 farms mentioned the Five Point Plan for lameness in sheep (<https://www.fas.scot/downloads/five-point-plan-tackling-lameness-sheep/>), and although aspects of the plan were identified (culling policy, handling, biosecurity) few were benefitting from a more comprehensive approach. As several farmers said they would like

more direction from the Soil Association on medicines usage, the possibility of better signposting to these nationally proven approaches should be considered.

Although practical medicines training courses received very positive feedback, paperwork-based approaches to advice around medicines were not generally popular. Organic standards and the herd or flock health plan were referred to by some on a regular basis, but most preferred direct and frequent discussion with their vet. It may therefore be helpful for the Soil Association to improve communication both with veterinary practices and universities to ensure that current and future vets have a more thorough understanding of the organic standards. A repeated comment from farmers was that younger vets better embraced the need for reduction in antibiotic use on farms. The results of the benchmarking study and these interviews indicate that an organic approach represents an existing framework for low usage and a potential resource for sharing best practice around very low antibiotic use more widely. If this catches the interest of vets coming into the industry, then it improves the chances of farmers and vets with an interest in low antibiotic use to develop mutually beneficial relationships as referred to by several of the interviewees. Subsequent engagement with other farmers and discussion groups to share beneficial husbandry practices creates a virtuous circle of knowledge exchange in which both farmers and vets gain respect for what each has to contribute to continued reduction in antibiotic use in the future.

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