Tesco Antibiotic Use Commitments – 2019/20 Report

Tesco is part of the Food Industry Initiative on Antimicrobials which has the stated vision of ‘Retailers, manufacturers, processors and food service companies coming together to promote and support responsible antimicrobial use and action on antimicrobial resistance’. The intention of this initiative is to support and engage with existing industry groups working in this area, ensuring work is aligned, avoiding duplication of effort and it has 3 key working groups on Responsible Use, Data and Research & Development.

The Tesco antibiotic use commitments were developed and published in 2017 to ensure responsible antibiotic use is a key area of focus for our supply chains. These commitments were developed with our supply chain and industry experts.

1. **We restrict the use of the highest priority “critically important” antibiotics for human health** (fluoroquinolones, 3rd and 4th generation cephalosporin’s and colistin) as defined by the European Medicine Agency in our supply chain and make sure these antibiotics are used only as a treatment of last resort, where no other viable treatment is available to prevent animal welfare issues. We are working with our suppliers to reduce the use of other critically important antibiotics, including macrolides.

   **Progress:**

   The Tesco Welfare Approved standards for all meat and eggs restrict the use of highest priority “critically important” antibiotics (HPCIs). We continue to see a reduction in the use of HPCIs and the complete elimination of key classes (e.g. Colistin) in the pig and poultry sectors. However, these key classes remain available to our supply chains where there is no other viable treatment to ensure animal welfare is not compromised.

2. **We work with our suppliers to make sure there is no unauthorised use of veterinary medicines, including antibiotics, in our supply chain.**

   **Progress:**

   No unauthorised use of veterinary medicines, including antibiotics, is permitted in our supply chains under our Tesco Welfare Approved (TWA) standards. We verify this through our independently audited animal welfare programme and have found all farms to be compliant.

3. **We do not allow the routine use of antibiotics for prophylactic purposes in our supply chain.** Preventative treatment is only allowed where animals are diagnosed at high risk of bacterial disease and must only occur under prescription by a veterinarian on the basis of
epidemiological and clinical knowledge in line with Responsible Use of Medicines in Agriculture Alliance (RUMA).

Progress:

The Tesco Welfare Approved (TWA) standards ban the routine use of antibiotics for prophylactic purposes for meat and shell eggs.

Across the Tesco Sustainable Dairy Group and Tesco Cheese Group selective dry cow therapy was introduced in August 2018 to reduce the routine use of antibiotics to prevent mastitis. Tesco’s target is for farms to increase the proportion of cows receiving selective dry cow therapy by at least 10% of the herd per year until all eligible animals are only receiving teat sealant and no antibiotic treatment. Reducing antibiotic dry cow therapy is a key area to reducing total antibiotic use in our dairy supply chain.

4. We measure antibiotic use in our supply chain. We have made antibiotic usage and records a key feature of our farm audit programme. Visibility of records of any antibiotic usage at Tesco supplying farms is required to enable us to monitor levels of use and to help target reduction strategies.

Progress:

We continue to embed antibiotic reporting across our supply chains. The maturity of reporting varies by sector and by geography. All sectors across our supply base now report usage. This facilitates evaluation of absolute usage and trend changes based on outcome measure data.

Sector-specific reporting can be found in the appendix.

5. We will implement the UK species specific targets for antibiotic reduction (as defined by RUMA and the Veterinary Medicines Directorate) in our supply chain. From 2018, once we have sufficient data to establish a baseline, we will make sure that each of our animal sector supply chains have targeted reduction strategies in place to make sure they meet the specific national target for that species.

Progress:

The global reduction in use in the Tesco supply base either meets or exceeds UK sector equivalents as reported by Veterinary Antimicrobial Resistance and Sales Surveillance (VARSS) which was published in October 2019.
Moving forward there will now be increased focus on maintaining low usage, underlying reasons of use and the implementation of preventative disease programmes (through increased vaccination).

6. We will help build farmers’ capability on antibiotic use and animal health in our supply chain, to help them to reduce use without compromising animal welfare. We will work with our Product Partners, wider suppliers and other bodies to identify the right educational approaches and the best ways to share this knowledge among farmers.

Progress:

This is a key area of focus for each Tesco Sustainable Farming Group. All farmers in our Tesco Sustainable Dairy Group report on a range of animal health and welfare measures, including antibiotic use. Benchmarking and vet-facilitated workshops support them to achieve continuous improvement in this area. Pig and poultry supply chains are provided with data visibility and insight at both individual and group level. This comparative overview and knowledge sharing has helped inform strategic approaches and been instrumental in the reductions in use seen to date.

7. We will support Research and Development (R&D) opportunities that will help drive the reduction of on farm antibiotic use. With our Product Partners we are already working with the Government Agri-tech Centres of Innovation to identify R&D opportunities.

Progress:

We are supporting supplier/manufacturer research trials with regard to the application of alternative hatching technology e.g. hatch-in-house broiler systems where there are early indications of associated improvements in chick welfare and therefore potential further reductions in antibiotic use.

Our Tesco Sustainable Dairy Group R&D committee is focusing on management approaches to help reduce pneumonia in calves; an area where reductions in antibiotic use have proved harder to effect to date.
Appendix

Data sets are available across Tesco livestock supply chains to evidence the quantitative progression against commitments. These vary in terms of maturity of data set but span between 1-5 years depending on sector.

The reporting metric will reflect industry reference values e.g. VARSS which in turn will be a function of species/production specifics. Hence where the whole life reporting impacts directly on the product at consumer level this is summarised on the basis of antibiotic administered relative to weight of animal mg/kg. However, in the case of milk and eggs the focus is on reporting the number of treatment occasions of the hen/dairy cow.

Unless otherwise stated the figures cover the Tesco reporting year i.e. from April to March.

Where an equivalent VARSS figure is available this is included for comparison. VARSS data reflects calendar year.

Poultry

The year-on-year trends for broiler chickens, turkey and duck are illustrated below (Figures 1, 2 and 3).

Figure 1. Antibiotic Use (mg/kg) across Tesco Broiler Supply Chains (all) vs reported VARSS Data
Each of the described sectors shows a trend decrease in total antibiotic use; but as expected after a period of significant reduction reported figures appear to be plateauing consistent with observations from other industry data sets. Nevertheless, total usage in each sector is lower across the Tesco supply base than the equivalent UK VARSS value.

When comparing profiles, both Tesco and VARSS data highlight those sectors where reduction presents a challenge i.e. turkey and also where usage has been low and comparatively static.
i.e. duck. The duck sector is an example of where reporting percentage change is less meaningful and with the required focus being on underpinning clinical considerations and therapeutic choices.

In each of the above the use of 3rd and 4th generation cephalosporins antibiotics are prohibited and the default position is that fluoroquinolones must be excluded except where sensitivity testing indicates that no other treatment option is available (in the interests of safeguarding animal welfare).

**Eggs**

The egg data set is reported in terms of total treatment days per hundred birds (reflecting relative frequency of required therapeutic intervention – Figure 4).

![Figure 4. Total Treatments per 100 Bird Days in Egg Supply Base](image)

Between 2016 and 2019 the Tesco figures for total treatments per 100 bird days was consistent with VARSS data (reflecting the commonality of supply base).

In terms of total treatment days, the Tesco supply base remains below the RUMA target of 1. The relative increase in the last reporting year is indicative of a number of health challenges within the sector as a whole but also reflects changes in therapeutic prescribing patterns.

The use of colistin, fluoroquinolones and 3rd and 4th generation cephalosporins are not permitted in the egg supply base (again with the caveat that quinolones may be used as a treatment of last resort following sensitivity testing).
**Pigs**

Reporting across the pig sector is differentiated in terms of conventional supply (from UK and Denmark) and Continental Meats (Spain and Italy).

![Graph showing antibiotic use in pig supply base (UK/Denmark) vs reported VARSS data]

**Figure 5. Antibiotic Use (mg/kg) in Pork Supply Base (UK/Denmark) vs reported VARSS Data**

There have been significant reductions across the pig sector (Figure 5) since reporting began. As with the poultry supply chains the data includes submissions from geographies with well-established reporting and reduction strategies i.e. VetStat in Denmark, which has contributed to the lower initial figure but again means the greatest reductions have already been achieved and focus is now on patterns of therapeutic prescribing.

The increases seen in the 2019/2020 reporting year are in part a consequence of disease challenges i.e. Swine Dysentery married with a focus on required changes in management approach that need to be implemented to address the EU ban on Zinc Oxide inclusion in pig rations in 2022. Despite this the Tesco supply base still demonstrates a lower usage figure that the UK industry as a whole. But perhaps the most important aspect is that the focus on reducing HPCIA use has been maintained even in the face of disease challenges with negligible use overall and individual suppliers reporting zero use.

Continental Pork is potentially challenging given that the Spanish and Italian pig sectors remain two of the highest users of antibiotic for any species/geography, as illustrated by the last published European Surveillance of Veterinary Antimicrobial Consumption (ESVAC) reference data. However, although total use is slightly elevated relative to the rest of the Tesco supply base (and has increased over the last two years), it is still lower than the UK industry average and HPCIA use remains low (Figure 6). Again, disease challenges and legislative transition is having an impact.
**Dairy**

The data from the Tesco Sustainable Dairy Group (TSDG) demonstrates year-on-year reduction across all key parameters and with no immediate indication of having reached a plateau (Figure 7).

Crucially, the percentage of cows treated with HPCIA therapeutics has decreased and similarly, the proportion of total treatment occasions necessitating HPCIA use has decreased. Perhaps as importantly, from an animal welfare perspective the reduction in Dry Cow Therapy (DCT) and mastitis treatment is indicative of management approaches which are reflective of a pro-active (preventative) rather than re-active (treatment) strategy.

![Figure 6. Antibiotic Use (mg/kg) in Tesco Continental Pork Supply (all) vs ESVAC Data](image)

<table>
<thead>
<tr>
<th>Year</th>
<th>Calculated Total Antibiotic Use</th>
<th>Antibiotic DCT</th>
<th>Mastitis Courses</th>
<th>Injectable Antibiotic Use</th>
<th>HPCIA Use % Cows Critical Antibiotic Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016 Annual %</td>
<td>122%</td>
<td>58%</td>
<td>34%</td>
<td>30%</td>
<td>19%</td>
</tr>
<tr>
<td>2017 Annual %</td>
<td>85%</td>
<td>46%</td>
<td>39%</td>
<td>19%</td>
<td>27%</td>
</tr>
<tr>
<td>2018 Annual %</td>
<td>72%</td>
<td>32%</td>
<td>23%</td>
<td>6%</td>
<td>8%</td>
</tr>
<tr>
<td>2019 Annual %</td>
<td>0%</td>
<td>19%</td>
<td>72%</td>
<td>19%</td>
<td>4%</td>
</tr>
</tbody>
</table>

![Figure 7. Mean Antibiotic Use (% Total Treatment Days) for Dairy Cows](image)
There is no exactly comparable data from VARSS as industry data is expressed as mg/kg use although reference is made to an overall reduction in total treatments of 8%.

**Lamb**

An annual reporting figure is available from our Tesco Sustainable Lamb Group for the first time that details use across flocks and antibiotic usage by percentage of therapeutic class (Figure 8).

![Figure 8. Total Use by % Antibiotic Class for Lamb](image)

In common with other livestock sectors tetracycline (i.e. non HPCIA) antibiotics make up the majority treatment approach. The total use of HPCIA is low and use of Colistin is zero. This is a positive position to start from and Tesco will now report against progression in this sector in subsequent years.

VARSS do not report on usage in the sheep sector for as observed by RUMA

“There is still no centralised system for data collection from sheep farmers so data of antibiotic use in the sheep industry is made up of small data sets – usually collected by private vets or producer groups or for academic purposes”.

The limited number of data sets for the sheep sector is evident and accounts for the variation in reported use. A calculated figure (mg/kg) based on population corrected unit (PCU) has
been derived from sales data across the Tesco Sustainable Lamb Group. As a sales rather than usage figure it is not directly comparable with other reported figures (Figure 9) and is a likely overestimate of total administered but is nevertheless a useful baseline reference in this first year of data collection. Comparative data subsets are those made available to RUMA from two separate producer groups (Group 1 and Group 2) and collated prescribing/sales data from an individual Veterinary Practice. This highlights the challenge in deriving a single harmonised reporting figure in this sector.

Figure 9. Antibiotic sales (mg/kg) in Tesco Sustainable Lamb Group vs RUMA Usage Data Sets