SDa Autoriteit Diergeneesmiddelen

Usage of Antibiotics in Agricultural Livestock in the Netherlands in 2025

June 2026

Reader's guide

This is the SDa report on antibiotic usage in agricultural livestock in the Netherlands in 2025, prepared by the SDa expert panel.

The report is preceded by a cover letter by the SDa board. Additional information, including data on the amounts of antibiotics used in the various livestock sectors and information on veterinarians' prescription patterns, can be found in the appendix to the report, which is available online.

Utrecht, June 2026

Re: SDa report *Usage of Antibiotics in Agricultural Livestock in the Netherlands in 2025*

Dear Reader,

The Netherlands Veterinary Medicines Institute (SDa) is pleased to present you with the report *Usage of Antibiotics in Agricultural Livestock in the Netherlands in 2025*. In this publication, the SDa expert panel reports on antibiotic use in the Dutch broiler, cattle, duck, goat, layer, pig, rabbit, turkey and veal farming sectors in 2025. With this letter, we would like to inform you of recent developments relating to the use and sales of antibiotics. We consider it important to place these developments in their proper context.

Total use and sales of antibiotics in the monitored livestock sectors in the Netherlands
First, we note that both antibiotic use in the monitored livestock sectors and national sales of antibiotics declined in 2025. Sales of antibiotics were 6.8% lower than in 2024. The amount of antibiotics sold in 2025 represents a 77.2% reduction compared with sales in the 2009 reference year. Given the slight increase (of 4%) in sales in 2024 and the subsequent decrease in 2025, antibiotic sales appear to be stabilizing. This is a positive development. It also signals the need for livestock farms and veterinarians whose antibiotic usage levels or prescribing levels are still relatively high to take further steps toward reducing these levels. We strongly encourage these parties to embrace this responsibility.

Use of antibiotics that are of critical importance for public health
With regard to antibiotics classified as critically important, and colistin in particular, we note that use of these antibiotics remained consistently low in 2025. Thanks to the targeted efforts of the pig farming sector, colistin use has been reduced to a level that is 62.2% lower than the 2020 level. This is a tangible achievement and demonstrates that

joint efforts do indeed deliver results. Joint efforts in the layer farming sector also appear to be yielding results. After increasing for two consecutive years, colistin use in laying hens declined in 2025 and is now at its lowest level since 2018. If this downward trend continues, colistin use in laying hens could fall below the European Medicines Agency's benchmark threshold.

Antibiotic use varies by livestock sector

At the same time, several observations warrant attention. For example, antibiotic use in the broiler farming sector unexpectedly increased by 24.7%, which raises some questions. A constructive dialogue with the *poultry farming sector* has not yet identified the underlying causes, so further analysis is needed. The sector has established a working group to investigate the possible causes. We expect that the findings will provide practical guidance for poultry farmers and their veterinarians.

The *veal farming sector* also continues to warrant attention, as antibiotic use in this livestock sector has remained relatively high for several years. The current approach to reducing the use of antibiotics needs to be reassessed. Only a new, more effective approach will enable the sector to reduce its antibiotic use.

Based on the data currently available, antibiotic use in the *goat farming sector* increased slightly compared with 2024, but remained low. However, there is still some concern regarding the availability of antibiotic usage data. For dairy goat farms, it is unclear whether the prescription data are complete. With respect to non-dairy goat farms, uncertainties remain regarding the data recorded, due in part to missing animal numbers and unclear or inconsistent categorization. A planned audit should provide greater clarity regarding data quality, thereby enabling a well-founded assessment of the situation.

In contrast, developments in the *pig farming sector* are encouraging. Following an earlier increase, antibiotic use in this livestock sector has declined to its previous level. This demonstrates that targeted reduction efforts can deliver results, and deserves recognition. Antibiotic use in the *cattle farming sector* remained low and stable in 2025. It shows the sector's ability to consistently maintain low levels of antibiotic use over several years.

Veterinarians’ prescription patterns vary by livestock sector

Joint efforts by the livestock sectors and veterinarians remain key to further reducing the prevalence of persistently high antibiotic usage levels. *Veterinarians* active in the goat farming sector are requested to ensure that all required data are entered into the appropriate databases. Veterinarians active in the poultry and veal farming sectors in particular are requested to develop and implement action plans together with livestock farmers in order to reduce the number of farms with persistently high usage levels.

We trust that we have provided you with a clear overview of the current situation and the steps needed to achieve further progress.

On behalf of the SDa board,

Yours sincerely,

H.M. Meijdam, LLM	H.M.G. Schreurs, DVM, PhD
Chair	Director

Autoriteit Diergeneesmiddelen

REPORT

Usage of Antibiotics in Agricultural Livestock in the Netherlands in 2025

Trends and benchmarking of livestock farms and veterinarians

SDa expert panel

June 2026

Preface

This is the SDa report *Usage of Antibiotics in Agricultural Livestock in the Netherlands in 2025*. It was prepared by the SDa expert panel to provide transparency and insight into antibiotic use at Dutch livestock farms. It presents the SDa expert panel's main findings on antibiotic use in the Dutch livestock sector in 2025. With its report, the SDa aims to promote prudent antibiotic use by providing Dutch livestock farmers and veterinarians with insight into antibiotic usage levels and prescription patterns, respectively. This year's report also addresses the implementation of the EU's Veterinary Medicinal Products Regulation and the forthcoming changes to the classification of antibiotics.

In recent years, the annual report has also included information on livestock farms with persistently high antibiotic usage levels (i.e., $DDDA_F$ values that have exceeded the action threshold for at least two consecutive years). This has enabled the SDa to observe trends in the proportions of farms with persistently high usage levels. These trends are also discussed in this year's report. Underlying data on the various livestock sectors and veterinarians active in these sectors are included in the appendix, which is available online.

Colophon

Members of the SDa expert panel:

I.M. van Geijlswijk, PhD, hospital pharmacist–clinical pharmacologist, Pharmacy Department of the Faculty of Veterinary Medicine, Utrecht University

Prof. D.J.J. Heederik, PhD, epidemiologist and chair of the SDa expert panel, Institute for Risk Assessment Sciences, Faculty of Veterinary Medicine, Utrecht University

A.J. van Hout-van Dijk, DVM, PhD, veterinarian/senior researcher, Royal GD, Deventer

Prof. L. Mughini-Gras, DVM, PhD, veterinarian/epidemiologist, RIVM's Centre for Infectious Disease Control, Bilthoven, and Institute for Risk Assessment Sciences, Faculty of Veterinary Medicine, Utrecht University

Research staff:

P. Sanders, ir., secretary of the SDa expert panel, SDa

N. Schipper, ir., data analyst, SDa

Disclaimer

This report has been prepared on the basis of data provided by third parties. The SDa can report only on the basis of the data made available to it. Responsibility for the accuracy and completeness of the data provided rests with the data providers. The SDa accepts no liability for any inaccuracies or omissions in this report that result from the provision of inaccurate or incomplete data.

Autoriteit Diergeneesmiddelen

Contents

Summary

Key messages

- In 2025, total antibiotic use and national sales of antibiotics both declined. Over the longer term, the rate of decline in antibiotic use has been decreasing, and use appears to be stabilizing. When looking at antibiotic use by livestock sector, a mixed picture emerges, with most sectors showing a further decline but some showing stabilization or an increase. This picture is reflected in differences in the prescription patterns of veterinarians across the sectors concerned. This underscores how important continued efforts by livestock farmers and veterinarians are for prudent antibiotic use.
- In the broiler farming sector, antibiotic use increased by almost 25% in 2025.
- The veal farming sector continues to require attention, as antibiotic use in this livestock sector has remained relatively high for several years.
- Following an earlier increase, antibiotic use in the pig farming sector declined to a level similar to that of 2023, and most pig farms recorded antibiotic usage levels consistent with acceptable use.
- The quality of the goat farming sector's antibiotic usage data still requires attention; there is a degree of uncertainty regarding the results for this livestock sector.
- Antibiotic use in the dairy cattle and non-dairy cattle farming sectors remained low and stable in 2025, with antibiotic usage levels consistent with acceptable use.

Sales and use of antibiotics in the monitored livestock sectors

In 2025, total national sales of antibiotics, expressed in kilograms of active substances, were 6.8% lower than the year before. Between 2022 and 2024, total sales had increased by 8.6%. Longer-term developments suggest that total sales are stabilizing. The amount of antibiotics sold in 2025 represents a 77.2% reduction compared with sales in the 2009 reference year. Total antibiotic use in all monitored livestock sectors combined, expressed in kilograms of active substances, also declined over the past year.

Trends in antibiotic use by livestock sector

Overall antibiotic use, measured in $DDDA_{NAT}$ (Defined Daily Doses Animal at the national level), varies across the livestock sectors. A broadly similar picture can be observed when looking at antibiotic use for the various types of farms and production categories within the livestock sectors, measured in $DDDA_{F}$ (Defined Daily Doses Animal at the farm level). In several livestock sectors, antibiotic usage levels are in line with benchmark thresholds representing acceptable use. A number of livestock sectors are still benchmarked by means of provisional benchmark thresholds, indicating that it cannot yet be determined what level of antibiotic use can be considered acceptable. For certain types of farms or production categories, persistently high usage levels remain a regular occurrence, with no distinct improvements over recent years.

Main food-producing livestock sectors

Antibiotic use in the **veal farming sector** has remained stable at a relatively high level since 2020 (15.8 $DDDA_{NAT}$ in 2025). In 2025, none of the four types of veal farms (white veal farms, rosé veal starter farms, rosé veal fattening farms, and rosé veal combination farms) realized a distinct reduction in antibiotic use. With the exception of white veal farms, the proportion of farms with persistently high usage levels is relatively high in this livestock sector. It should be noted, however, that no benchmark threshold representing acceptable use has yet been established for white veal farms. The veal farming sector is in the final phase of implementing a new calculation method, which, among other things, will provide group-based information on the amounts of antibiotics used in veal calves. This is expected to increase awareness among veal farmers and veterinarians and, over time, contribute to a reduction in antibiotic use. The substantial between-farm differences indicate that there is scope for further reductions. Adjustments with regard to the veal production chain also offer opportunities for further reductions in antibiotic use.

Antibiotic use in the **broiler farming sector** increased by 24.7%, from 5.2 $DDDA_{NAT}$ in 2024 to 6.5 $DDDA_{NAT}$ in 2025. The causes of this increase are still being investigated. There are indications that the quality of supplied chicks has declined, which may have led to increased antibiotic use during the first week of life. Further investigation into the possible causes, followed by targeted measures, is needed to restore the downward trend in antibiotic use.
There is a substantial difference in antibiotic use between conventional broiler breeds and slower growing broiler breeds. The increase in the sector's overall antibiotic use can largely be attributed to increased use among broiler farms with conventional breeds. Antibiotic use at farms with slower growing breeds also increased in 2025, but remained

low. Most farms with slower growing breeds did not use any antibiotics in 2025, whereas median antibiotic use at farms with conventional breeds increased by 50.7%, to 9.5 $DDDA_F$. In 2025, the majority of broiler farms with conventional breeds had usage levels above the SDa-defined action threshold, and nearly a third had persistently high usage levels. The broiler farming sector and the Ministry of Agriculture, Fisheries, Food Security and Nature have agreed on the application of transitional benchmark thresholds to facilitate a gradual transition toward the SDa-defined action threshold. When benchmarked using the higher, sector-negotiated action threshold of 20 $DDDA_F$, 27% of broiler farms with conventional breeds had action zone usage levels in 2025, and 7% had persistently high usage levels.
Antibiotic use at broiler parent/grandparent stock rearing farms and parent/grandparent stock production farms is generally low, although some farms had high usage levels in 2025.

Following an increase in 2024, antibiotic use in the **pig farming sector** declined to 6.0 $DDDA_{NAT}$ in 2025, bringing it back to a level comparable to that of 2023. Antibiotic use at farms with sows and suckling piglets remained low, declining to a mean $DDDA_F$ of 2.8. Mean antibiotic use at farms with fattening pigs remained low and stable, at 2.3 $DDDA_F$. Both production categories saw approximately 90% of farms recording target zone usage levels for 2025.
For farms with weaner pigs, the mean and median $DDDA_F$ values both declined to their lowest levels to date (14.5 and 6.0 $DDDA_F$, respectively). The proportion of farms in the action zone declined slightly, from 15% in 2024 to 14% in 2025, and the proportion of farms with persistently high usage levels declined to 6%. Nevertheless, 2025 still saw a relatively large proportion of farms with extremely high usage levels (> 50 $DDDA_F$).

Due to data quality issues, last year's SDa report did not include data on antibiotic use in the **goat farming sector**. Since then, steps have been taken to address these issues, and new data have been submitted. The goat farming sector's 2025 antibiotic usage data are presented on a provisional basis, pending an audit by an independent external organization that will evaluate the implemented process improvements. The SDa expert panel expects the goat farming sector, in collaboration with veterinarians, to take further steps to improve the quality of its data, as some of the previously identified data quality issues still persist. Based on the submitted data, antibiotic use in the goat farming sector is low, with many farms not using any antibiotics.

In 2025, antibiotic use in the **dairy cattle and non-dairy cattle farming sectors** was low (3.0 and 0.3 $DDDA_{NAT}$, respectively) and similar to the 2024 levels. Each of the four types of cattle farms (i.e., dairy cattle farms, rearing farms, suckler cow farms, and beef farms) saw more than 90% of farms recording target zone usage levels.

Antibiotic use in the **layer farming sector** was low in 2025. Most layer farms did not use any antibiotics. Antibiotic use at pullet rearing farms remained low and stable in 2025. The majority (63%) of layer parent/grandparent stock rearing farms did not use any antibiotics in 2025, but some farms had usage levels exceeding 20 $DDDA_{F}$.

Smaller food-producing livestock sectors

In 2025, antibiotic use in the **turkey farming sector** declined to 5.0 $DDDA_{NAT}$. However, given the limited number of farms and the differences between the sector-provided animal numbers and those provided by Statistics Netherlands (CBS), these results should be interpreted with some caution. Of the 29 farms in this livestock sector, 7 had action zone usage levels and 4 had persistently high usage levels in 2025. The turkey farming sector and the Ministry of Agriculture, Fisheries, Food Security and Nature have agreed on the application of transitional benchmark thresholds to help turkey farmers move toward their 10 $DDDA_{F}$ SDa-defined benchmark threshold in a more gradual fashion. When benchmarked against the transitional action threshold, 2 turkey farms had persistently high usage levels in 2025.

Antibiotic use in the **rabbit farming sector** remained stable but relatively high in 2025 (22.1 $DDDA_{NAT}$). The SDa-defined action threshold was exceeded by 7 of the 27 rabbit farms, 5 of which had also recorded usage levels above this benchmark threshold for 2024 and are therefore referred to as farms with persistently high usage levels.

Antibiotic use in the **duck farming sector** was very low in 2025, with the majority of duck farms not using any antibiotics.

Use of critically important agents

Use of fluoroquinolones and third- and fourth-generation cephalosporins in the Dutch livestock sector remained stable at a very low level in 2025. The dairy cattle farming sector was the only monitored livestock sector in which third- and fourth-generation cephalosporins were used, and only to a very limited extent.

Colistin use continued to decline in 2025 and was 6.0% lower than the year before. In the pig farming sector, colistin use declined by 9.0% and was well below the 2020 level (62.2% lower). The weaner pigs production category is the main contributor to colistin use in the pig farming sector. Following several increases, colistin use in laying hens declined by 22.1% in 2025, yet still exceeded the European Medicines Agency's

benchmark threshold. The layer farming sector is therefore urged to take action in order to bring colistin use in laying hens below EMA's benchmark threshold.
Use of other quinolones (i.e., quinolones other than fluoroquinolones) increased, particularly in the broiler farming sector (by 30.7%) and the veal farming sector (by 9.1%). In the other livestock sectors, use of other quinolones remained very limited.

Veterinarians' prescription patterns

Starting from the 2025 reporting period, the SDa uses the $DDDA_{VET}$ as its indicator for benchmarking and monitoring veterinarians' prescription patterns. Veterinarians' $DDDA_{VET}$ results are based on data from all livestock farms concerned, including those with persistently high usage levels.

For several production categories (dairy cattle, non-dairy cattle, slower growing broilers, sows/suckling piglets, and fattening pigs), veterinarians' 2025 prescribing levels were low, with limited inter-veterinarian variation.
For the weaner pigs production category, veterinarians' prescribing levels were similar to those reported for 2024 (median $DDDA_{VET}$ values of 9.5 and 9.3 for 2025 and 2024, respectively). However, differences between individual veterinarians increased in 2025, with the 95th percentile (i.e., the prescribing level exceeded by the 5% of veterinarians with the highest $DDDA_{VET}$ values) rising from approximately 57 to 68 $DDDA_{VET}$. This indicates greater inter-veterinarian variation, suggesting there is scope for further reductions in prescribing levels. Among veterinarians of weaner pigs, 19% recorded action zone prescribing levels for 2025.

No downward trends in prescription patterns are evident among veterinarians active in the veal farming sector. In each of the rosé veal production categories, more than 40% of veterinarians recorded action zone prescribing levels for 2025. Among veterinarians of white veal calves, 10% recorded action zone prescribing levels. All production categories in the veal farming sector show considerable inter-veterinarian variation in $DDDA_{VET}$ values.

In parallel with the broiler farming sector's increase in antibiotic use observed at farm level, prescribing levels for conventional broiler breeds increased (from a median $DDDA_{VET}$ of 7.0 to 10.2), while prescribing levels for slower growing broiler breeds remained low (at a median $DDDA_{VET}$ of 0.7). In addition, 56% of veterinarians of conventional broiler breeds had action zone prescribing levels. When benchmarked using the transitional benchmark thresholds agreed between the broiler farming sector and the Ministry of Agriculture, Fisheries, Food Security and Nature, 6% of veterinarians of conventional broiler breeds recorded action zone prescribing levels for 2025, and 32% recorded signaling zone prescribing levels.

Within the production categories dairy cattle, non-dairy cattle combined, sows and suckling piglets, and fattening pigs, the majority of veterinarians had prescribing levels that were considered acceptable, as they did not exceed the respective benchmark thresholds representing acceptable use.

Developments in antibiotic monitoring

Expansion of antibiotic monitoring

Following the entry into force of Regulation (EU) 2019/6 (the Veterinary Medicinal Products Regulation; VMPR) in 2022, EU member states are to collect data on the sales and use of antimicrobials (including antibiotics) used in animals and report the data to the European Medicines Agency (EMA). The VMPR provides for a phased expansion of antibiotic usage monitoring, with additional animal species to be included at specific time points. As of 2027, member states' reporting obligations will be expanded to include the following food-producing animal populations: sheep, goats, ducks, geese, laying hens, farmed fish, and horses. In the Netherlands, the goat, duck and laying hen reporting categories are already covered by the current monitoring process. The Ministry of Agriculture, Fisheries, Food Security and Nature is currently working on the implementation of antibiotic monitoring for sheep and horses, in consultation with the SDa and the sectors concerned.
As of 2030, member states will also have to report use data (collected during the preceding calendar year) for companion animals (i.e., dogs and cats) and fur animals.

For the animal populations to be added, the SDa expert panel recommends recording prescription data in line with those already recorded for the monitored livestock sectors (date, animal species and/or category or stage concerned, prescriber, EAN, and number of packages). This report provides some brief recommendations on the monitoring and benchmarking approach for the additional animal populations.

Monitoring of antibiotic use across Europe
In 2025, EMA published its second report on sales and use of antimicrobials in Europe, containing data for 2024. In terms of sales, the Netherlands recorded 24.5 mg/kg of animal biomass, below the weighted average of 44.8 mg/kg of animal biomass for the participating countries. Whereas previously only sales data were available, the 2024 European Sales and Use of Antimicrobials for veterinary medicine (ESUAvet) annual surveillance report also includes quantitative use data by animal species and animal categories. However, in many countries, data collection is still under development and incomplete, which limits reliable assessment of the reported use data. The Netherlands is among the countries with a well-developed monitoring system and high coverage of use data.

New classification of antibiotics: the NWVAB classification
As of 2026, the NWVAB classification replaces the WVAB guideline. The new classification is currently being implemented through the establishment of NWVAB standards for specific animal species and categories. The NWVAB classification is broadly aligned with the European AMEG categorization, in which antimicrobials are assigned to one of the following four categories, according to their importance for animal and human health and the risks of antimicrobial resistance: A (“Avoid”), B (“Restrict”), C (“Caution”), and D (“Prudence”).
The NWVAB categories are as follows:

- A (“Afzien”, antibiotics in this category are not authorized for veterinary use in the EU)
- B (“Beperken”, third-choice antibiotics under the WVAB classification)
- C (“Conditioneel”, second-choice antibiotics under the WVAB classification)
- D (“Doelmatig”, first-choice antibiotics under the WVAB classification)

An important change compared with the WVAB guideline is that the new classification system assigns certain antibiotic classes to higher risk categories, with more restrictive conditions for use. Quinolones other than fluoroquinolones (referred to as “other quinolones”) and polymyxins (colistin) move from second-choice antibiotics to NWVAB Category B. Short-acting macrolides and lincosamides, considered first-choice antibiotics under the WVAB guideline, are also assigned to a higher risk category, namely NWVAB Category C. This reclassification will affect the distribution of antibiotic use across classification categories. In the SDa report on the usage of antibiotics in 2026, use data will be presented according to both classification systems.

Terms and definitions

AMEG	Expert group of the European Medicines Agency (EMA) that categorizes antibiotics based on their potential risk to public health due to antimicrobial resistance, and the need for their use in veterinary medicine.
Benchmark threshold	For livestock farms: a value set by the SDa against which a livestock farm's antibiotic use (in Defined Daily Doses Animal at the farm level, $DDDA_F$) is compared. Benchmark thresholds are established for each type of farm or production category within a particular livestock sector. There are two different types of benchmark thresholds: benchmark thresholds representing acceptable use, and provisional benchmark thresholds. For veterinarians: the value against which the amount of antibiotics prescribed by a particular veterinarian is compared. Benchmark thresholds for veterinarians correspond to the $DDDA_F$-based benchmark thresholds for the types of farms or production categories concerned.
Benchmark threshold representing acceptable use	This type of benchmark threshold reflects a usage level deemed to be acceptable for the type of farm or production category concerned. The types of farms and production categories that are benchmarked against benchmark thresholds representing acceptable use are characterized by low or very low usage levels, limited variation in $DDDA_F$ values between individual livestock farms, and limited usage level fluctuations over time. The SDa establishes only one benchmark threshold representing acceptable use per type of farm or production category: the action threshold. Livestock farms with $DDDA_F$ values exceeding this threshold are required to take action in order to reduce their antibiotic usage levels.
Biomass	The European Medicines Agency's (EMA) measure for the total animal biomass at risk of being treated with antimicrobial agents, as used in EMA's ESUAvet reports. Biomass is calculated based on the number of animals slaughtered in a given year (adjusted for imports and exports) or, in the case of livestock not kept for meat production (e.g., dairy cattle), based on the number of live animals present within the livestock sector concerned. Biomass is used as the denominator for indicators of antimicrobial use, such as milligrams of active substance per kilogram of biomass (mg/kg biomass). Compared with the population correction unit (PCU), biomass uses revised standard weights.

Cattle farming sector	In this report, the term “cattle farming sector” includes the dairy cattle farming sector (i.e., dairy cattle farms) and the non-dairy cattle farming sector (i.e., suckler cow farms, rearing farms, and beef farms). It does not include the veal farming sector (i.e., white veal farms, rosé veal starter farms, rosé veal fattening farms, and rosé veal combination farms), unless stated otherwise.
$DDDA_F$	The Defined Daily Dose Animal at the farm level. The $DDDA_F$ is used to express the amount of antibiotics used at a particular livestock farm. The $DDDA_F$ is calculated by first determining the total number of treated kilograms for a particular livestock farm for a given year (based on the antibiotics supplied to the farm concerned), and then dividing this number by the average number of kilograms of livestock present on the farm. The dimension of the $DDDA_F$ indicator is DDDA/animal-year. In the initial SDa reports, the notation ADDD/Y was used.
$DDDA_{NAT}$	The Defined Daily Dose Animal at the national level. The $DDDA_{NAT}$ is used to express the amount of antibiotics used within a particular livestock sector in the Netherlands. The $DDDA_{NAT}$ is calculated by first determining the total number of treated kilograms within a particular livestock sector for a given year, and then dividing this number by the average number of kilograms of livestock present within the sector concerned. The dimension of the $DDDA_{NAT}$ indicator is DDDA/animal-year.
$DDDA_{VET}$	The Defined Daily Dose Animal at the veterinarian level. The $DDDA_{VET}$ is used to express a veterinarian's antibiotic prescribing level for a particular production category for a given year. To calculate the $DDDA_{VET}$, the first step is to determine, for the production category concerned, the total number of treated kilograms for which a particular veterinarian prescribed antibiotics during a specific year (the overall number of treated kilograms for all livestock farms that had a registered one-to-one relationship with this veterinarian in the year concerned). This number is then divided by the average number of kilograms of livestock present, based on all livestock farms that had a registered one-to-one relationship with the veterinarian concerned, including those with persistently high usage levels – which were not included when determining the veterinarian’s VBI value. Because the $DDDA_{VET}$ includes livestock farms with persistently high usage levels, it is better suited for monitoring trends in veterinarians’ overall prescription patterns.

Diergenees-middelen-standaard	The *Diergeneesmiddelenstandaard* (also referred to as *DG-standaard*) is an online veterinary medicinal products database managed by the SDa. It includes all antimicrobial veterinary medicinal products authorized for use in food-producing and companion animals in the Netherlands, with the corresponding number of treated kilograms of target species * days. The *Diergeneesmiddelenstandaard* forms the basis for the SDa expert panel's analysis of the amounts of antibiotics used within food-producing livestock sectors in terms of Defined Daily Doses Animal per animal-year ($DDDA_F$ and $DDDA_{NAT}$) and its analysis of veterinarians' prescription patterns (in terms of $DDDA_{VET}$).
EUROSTAT	The statistical office of the European Union.
Livestock farms with persistently high usage levels	Livestock farms whose $DDDA_F$ values have exceeded their action threshold for two years in a row. Besides supporting sector-based usage level monitoring, identification of livestock farms with persistently high usage levels is required when determining a veterinarian's VBI value, as those farms are excluded from the SDa's VBI calculations.
Mass balance	A comparison between the kilograms of active substances sold according to recorded sales data and the kilograms of active substances used according to veterinarian-reported delivery data (delivery records).
NWVAB	*Nederlandse Werkgroep Veterinair AntibioticaBeleid* (Dutch veterinary antibiotic policy working group). It develops classifications for antibiotics used in animals, based on the EMA/AMEG categorization and adapted to the Dutch context. Its classification system forms the basis for veterinary standards in the Netherlands.
PCU	The Population Correction Unit. The PCU is used by the European Medicines Agency as a unit of measurement for animal biomass. It is calculated based on the number of animals slaughtered in a given year (adjusted for imports and exports) or, in the case of livestock not kept for meat production (e.g., dairy cattle), based on the number of live animals present within the livestock sector concerned. The PCU is now used only for monitoring progress toward the Farm to Fork target of a 50% reduction in antimicrobial sales from the 2018 baseline by 2030.
Poultry farming sector	In this report, the term "poultry farming sector" includes all monitored types of poultry farms (i.e., broiler farms, turkey farms, duck farms, layer farms, pullet rearing farms, rearing farms for layer or broiler parent/grandparent stock, and production farms for layer or broiler parent/grandparent stock), unless specified otherwise.

Provisional benchmark threshold	This type of benchmark threshold reflects a usage level not yet consistent with acceptable use. Following their implementation, provisional benchmark thresholds are adjusted on a regular basis while the livestock farms concerned move toward more acceptable usage levels. Types of farms and production categories benchmarked against provisional benchmark thresholds are characterized by relatively high mean $DDDA_F$ values, wide $DDDA_F$ distributions and substantial usage level fluctuations over time. The SDa establishes only one provisional benchmark threshold per type of farm or production category: the action threshold. Livestock farms with $DDDA_F$ values exceeding this threshold are required to take action in order to reduce their antibiotic usage levels.
Rabbit farming sector	In this report, the term “rabbit farming sector” refers to meat rabbit farms, and rabbit farming sector data pertain to all rabbits present on meat rabbit farms (i.e., breeding does with kits, weaned meat rabbits, and replacement breeding does). Collectively, these rabbits are referred to as “meat rabbits”.
Transitional benchmark thresholds	Benchmark thresholds that livestock sectors have agreed with the Ministry of Agriculture, Fisheries, Food Security and Nature in order to facilitate a gradual transition toward SDa-defined benchmark thresholds.
Treated kilograms	The number of kilograms of a particular type of livestock that can be treated with a single packaging unit of the antibiotic concerned.
VBI (as used from 2021 to 2024)	The Veterinary Benchmark Indicator. The VBI reflects a veterinarian’s antibiotic prescribing level with respect to a particular production category in one of the livestock sectors. The VBI is determined by first calculating, for the production category concerned, the total number of treated kilograms for which the veterinarian prescribed antibiotics during a given year (the overall number of treated kilograms for all livestock farms that had a registered one-to-one relationship with this veterinarian in the year concerned) and then dividing this number by the average number of kilograms of livestock present for all livestock farms concerned. Livestock farms with persistently high usage levels are not included in VBI calculations.

Veterinary antibiotic use at the national level

Sales of antibiotics

In 2025, total sales of antibiotics, expressed in kilograms of active substances, were 6.8% lower than the year before. In 2023 and 2024, total sales had increased by 4.5% and 4.0%, respectively. Longer-term developments suggest that total sales are stabilizing. The amount of antibiotics sold in 2025 represents a 77.2% reduction compared with sales in the reference year of 2009 (see Figure 1).

Use of antibiotics

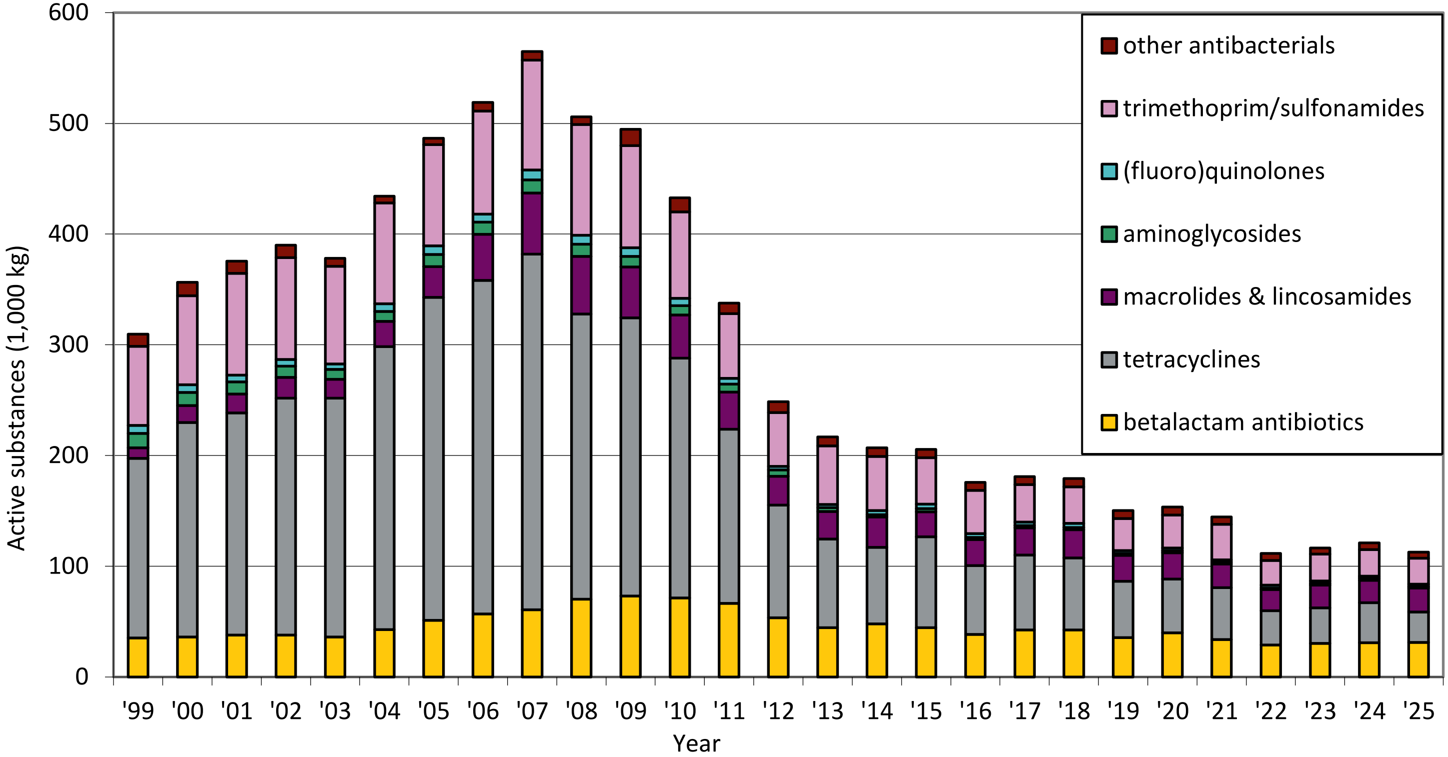
Total antibiotic use in the monitored livestock sectors, expressed in kilograms of active substances, was 7.7% lower than in 2024. The total live weight of agricultural livestock declined by 1.9% in 2025, accounting for a small part of the decrease in both antibiotic use and sales. Figure 2 shows each livestock sector's contribution to the total amount of active substances used in the monitored sectors combined.
Antibiotic use expressed in kilograms of active substances provides only limited insight into the actual exposure to antibiotics in a particular type of livestock, as the animals' weight, dosing differences between active substances, and the properties of the active substances are not taken into account. Antibiotic use expressed in Defined Daily Doses Animal at the national level ($DDDA_{NAT}$) is a more accurate indicator of the average exposure to antibiotics within a particular livestock sector (see Figure 4).

Comparison of the amounts of antibiotics sold and used

In 2025, total sales of antibiotics amounted to 112,876 kg. The total amount of antibiotics prescribed in the monitored livestock sectors was 99,803 kg, accounting for 88% of the kilograms of antibiotics sold. As in 2024, just over 13,000 kg of the antibiotics sold could not be attributed to recorded antibiotic use in livestock sectors subject to SDa monitoring. Part of this discrepancy can be accounted for by antibiotic use in animals currently not subject to SDa monitoring, such as sheep, horses and companion animals. Within the total volume of veterinary antibiotics sold, it is possible to identify the substances authorized exclusively for use in non-food-producing animals and horses. Sales of these substances amounted to 4,365 kg (3.9% of the total volume sold) in 2025, and have fluctuated between 4,000 and 4,900 kg since 2018.
Stockpiling by wholesalers or veterinary practices can also contribute to discrepancies between the amounts of antibiotics sold and used. The amount of antibiotics sold in a given year is influenced by expected price developments in the following year, potentially resulting in stockpiling and temporary fluctuations in sales figures. The discrepancy between the total amounts of antibiotics used and sold is expected to decrease overall

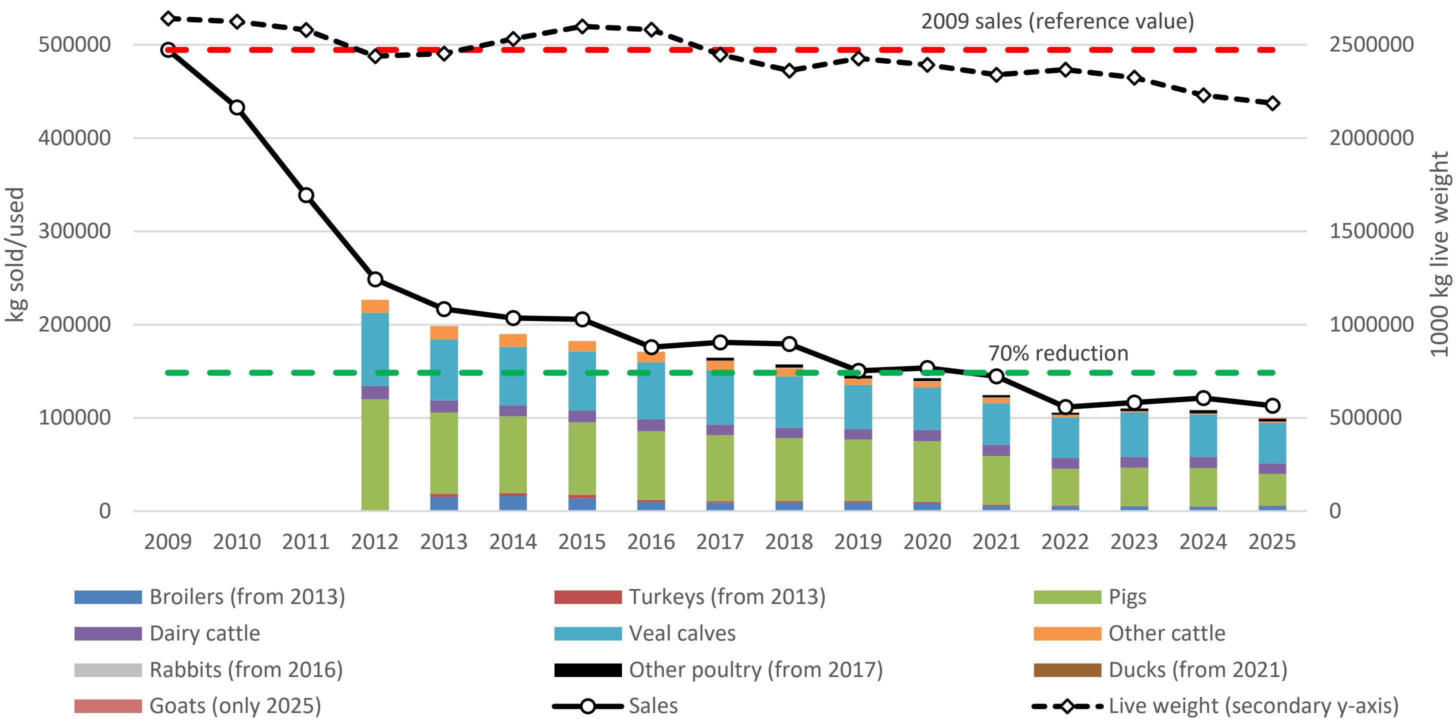
over the coming years as usage monitoring is expanded to include additional animal species.
Imported antimicrobial veterinary medicinal products that may be used under the cascade in the event of shortages of products authorized in the Netherlands continue to pose a challenge. Data on the use of these products in the Netherlands must be recorded for reporting purposes. In 2025, imported antimicrobial veterinary medicinal products accounted for 808 kg of antibiotic use (0.8% of the total amount of antibiotics used). It is also possible that other EU member states import veterinary medicinal products that were initially sold through a Dutch distribution channel. It is expected that EMA's European Antimicrobial Sales and Use (ASU) data monitoring platform will provide better insight into such cross-border flows of veterinary medicinal products in the near future.

Figure 1. Developments in sales of antibiotics over the 1999-2025 period, in kilograms of active substances (x 1,000) (source: FIDIN), by main pharmacotherapeutic group



Autoriteit Diergeneesmiddelen

Figure 2. Long-term developments in kilograms of active substances sold and used. The bars show the kilograms used, broken down by monitored livestock sector, and the black dotted line shows the total live weight of agricultural livestock* in the sectors subject to SDa monitoring in 2025 for the years concerned



** The sum of the numbers of animals in monitored livestock sectors multiplied by their respective standardized body weights*

Use of critically important agents

Fluoroquinolones and third- and fourth-generation cephalosporins

Use of fluoroquinolones and third- and fourth-generation cephalosporins in the Dutch livestock sector is low and stable. In 2025, the dairy cattle farming sector was the only monitored livestock sector in which third- and fourth-generation cephalosporins were used, and only to a very limited extent (0.0003 $DDDA_{NAT}$). Fluoroquinolones were used vary sparingly, if at all, in the monitored livestock sectors, with a maximum of 0.16 $DDDA_{NAT}$, which was recorded for the turkey farming sector. The target value for livestock farms' use of these third-choice antibiotics is 0.

Colistin

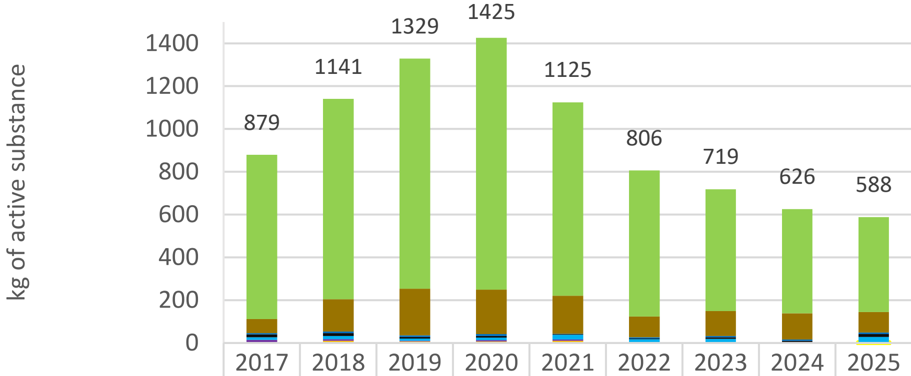
In 2025, colistin use (in kilograms of active substance) continued to decline and was 6.0% lower than the year before (see Figure 3). No or virtually no colistin was used in the broiler, turkey, dairy cattle, veal, non-dairy cattle, goat, and rabbit farming sectors. Colistin use in the pig farming sector continued to decline, with a 9.0% reduction compared to the 2024 level. Recorded colistin use in this livestock sector peaked in 2020 and has dropped by 62.2% since then. The weaner pigs production category is the main contributor to colistin use in this sector, with mean use for farms with this production category amounting to 0.7 $DDDA_{F}$ in 2025. Colistin was used at 18.0% of farms with weaner pigs. For this subset of farms, mean colistin use amounted to 4.1 $DDDA_{F}$ (see Table A61 in the appendix).

Following two years of increases, colistin use in laying hens declined by 22.1% in 2025 (see Figure 3). Laying hens are the only animal category exceeding EMA's benchmark threshold of 1 mg/PCU, with colistin use amounting to 1.5 mg/PCU (see the Terms and definitions section for a description of this unit of measurement). The improvement measures implemented in the layer farming sector appear to be yielding results, although further reductions in colistin use remain desirable.

Quinolones

In addition to the agents discussed above, the EMA Antimicrobial Advice ad hoc Expert Group's (AMEG) categorization also lists "other quinolones" as Category B antibiotics, that is, antibiotics that are critically important in human medicine (EMA, 2020). Use of flumequine (a quinolone) induces resistance mechanisms similar to those induced by enrofloxacin (a fluoroquinolone) (Swinkels et al., 2025). Quinolones are used on a regular basis in the broiler and veal farming sectors (see Table A1 in the appendix). In 2025, quinolone use in the broiler farming sector increased by 30.7%, reaching 1.08 $DDDA_{NAT}$. In the veal farming sector, quinolone use increased by 9.1%, to 0.36 $DDDA_{NAT}$. In the other livestock sectors, quinolones are used sparingly or not at all.

Figure 3. Colistin use in kilograms of active substance from 2017 to 2025, by animal category



	2017	2018	2019	2020	2021	2022	2023	2024	2025
Pigs	767	935	1075	1175	905	683	570	487	443
Laying hens	66	152	218	209	177	97	117	122	95
Broilers	5	7	8	9	3	5	5	7	8
Other poultry*	13	13	7	7	2	3	8	5	14
Veal calves	13	15	11	13	23	14	15	3	25
Dairy cattle	12	8	4	5	5	4	3	2	3
Non-dairy cattle	2	8	4	8	11	1	0	0	0
Meat rabbits	0	1	3	0	0	0	0	0	0
Turkeys	0	0	0	0	0	0	1	0	0
Ducks					0	0	0	0	0
Total	879	1141	1329	1425	1125	806	719	626	588

* In this figure, the "Other poultry" category includes layer pullets, layer parent/grandparent stock, and broiler parent/grandparent stock.

Antibiotic use by livestock sector

This chapter discusses antibiotic use in the various livestock sectors, addressing both developments in antibiotic use and farm-level benchmarking results. The main food-producing livestock sectors (sectors comprising at least 250 livestock farms each) are discussed first, followed by the smaller food-producing livestock sectors.

Figure 4 shows the long-term $DDDA_{NAT}$ developments for the various livestock sectors. A sector's $DDDA_{NAT}$ value reflects the number of days per animal-year that animals in the livestock sector concerned were treated with antibiotics.

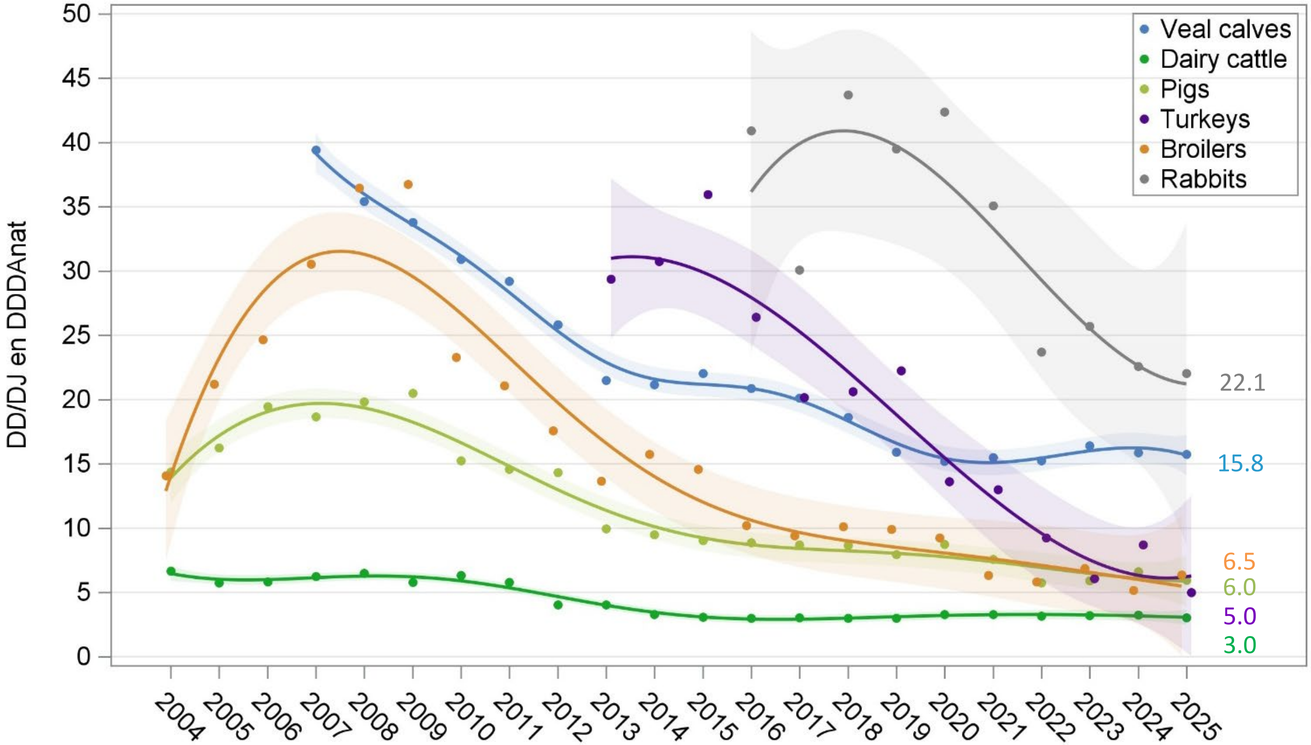
In addition to livestock sectors' $DDDA_{NAT}$-based antibiotic use data, the sections below also include information on antibiotic usage trends and benchmarking results for the various types of farms or production categories within these sectors. When presenting farm-level data on antibiotic use, $DDDA_F$ values are used. The SDa uses the following two types of $DDDA_F$-based benchmark thresholds:

1. Benchmark thresholds representing acceptable use, which do not have to be adjusted for several years following their implementation.
2. Provisional benchmark thresholds, which may be adjusted on a regular basis over the coming years.

For some livestock sectors (i.e., the broiler, pig and turkey farming sectors), transitional benchmark thresholds have been agreed with the Ministry of Agriculture, Fisheries, Food Security and Nature in order to facilitate a gradual transition toward the respective SDa-defined benchmark thresholds. The sector-negotiated transitional benchmark thresholds for the types of farms/production categories concerned, and their respective periods of validity, are presented in Tables A63 to A66 in the appendix.

Particular attention is paid to livestock farms at the tail end of their sector's $DDDA_F$ distribution, i.e., farms with antibiotic usage levels above the applicable benchmark threshold. While occasional exceedances may occur, persistently high usage levels (i.e., $DDDA_F$ values that have exceeded the SDa-defined action threshold for at least two consecutive years) are undesirable.

Figure 4. Long-term developments in antibiotic use, presented as so-called spline curves with point estimates and 95% confidence intervals for each year. Underlying data are available in the appendix*



* Based on historical data from 2004 to 2010 (in DD/AY) and SDa data from 2011 to 2025 (in $DDDA_{NAT}$)

Main food-producing livestock sectors

Veal farming sector

In 2025, antibiotic use in the veal farming sector amounted to 15.8 $DDDA_{NAT}$, similar to the year before. Since 2020, the sector's antibiotic use has been stable but relatively high, at 15-16 $DDDA_{NAT}$ (see Figure 4).

Developments in the veal farming sector
The veal farming sector is in the final phase of implementing a new calculation method, which, among other things, will provide group-based information on the amounts of antibiotics used in veal calves. The SDa expert panel expects this will contribute to greater awareness among veal farmers and, over time, lead to a downward trend in their antibiotic use.

A new calculation method alone will probably not be sufficient to realize substantial usage level reductions in the veal farming sector. Certain aspects of the veal production chain likely need to be addressed as well. Several pilot studies have been conducted to investigate measures aimed at achieving improved calf health during the early stages of life on dairy cattle farms and better coordination between the dairy cattle and veal farming sectors. Preliminary results indicate positive effects on antibiotic use in the veal farming sector (VVK, 2025). The results of the pilot studies are expected to be published in the near future. This will allow definitive conclusions to be drawn regarding the effects of the measures investigated. Implementation of the measures will require commitment and sustained effort from both the dairy cattle and veal farming sectors.

Antibiotic use by type of farm
In 2025, none of the four types of veal farms (white veal farms, rosé veal starter farms, rosé veal fattening farms, and rosé veal combination farms) realized a distinct reduction in the amount of antibiotics used. Antibiotic use at white veal farms has been relatively stable since 2018, with mean usage levels of approximately 20 $DDDA_{F}$ (see Figure 7a). White veal farms still show substantial between-farm differences in antibiotic usage levels (Figure 5), and individual farms show considerable year-to-year usage level fluctuations (Figure A4 in the appendix). Achieving stable antibiotic usage levels continues to be a challenge for many white veal farmers, whose antibiotic usage levels vary considerably from year to year. The white veal farms reporting category currently comprises both the starter and fattening production stages, whereas these stages are reported separately for rosé veal farms. The new calculation method will also distinguish

between the two production stages within the white veal farms reporting category.

Mean antibiotic use at rosé veal starter farms has been hovering around the 70-75 DDDA$_F$ level since 2019. 2025 saw a slight decline in rosé veal starter farms' mean usage level and less pronounced differences in usage levels between individual farms (Figures 6 and 7b). However, hardly any farms recorded low antibiotic usage levels.

Mean antibiotic use at rosé veal fattening farms has increased slightly over recent years, to 4.6 DDDA$_F$. Between-farm differences in antibiotic usage levels also remain relatively large (Figure 7c).
For rosé veal combination farms (with both starter and fattening production stages), mean antibiotic use in 2025 amounted to 16.9 DDDA$_F$. They too show substantial between-farm differences in antibiotic usage levels.

Figure 5. 2025 DDDA$_F$ distribution for white veal farms (N = 654). The red line represents the SDa-defined provisional benchmark threshold

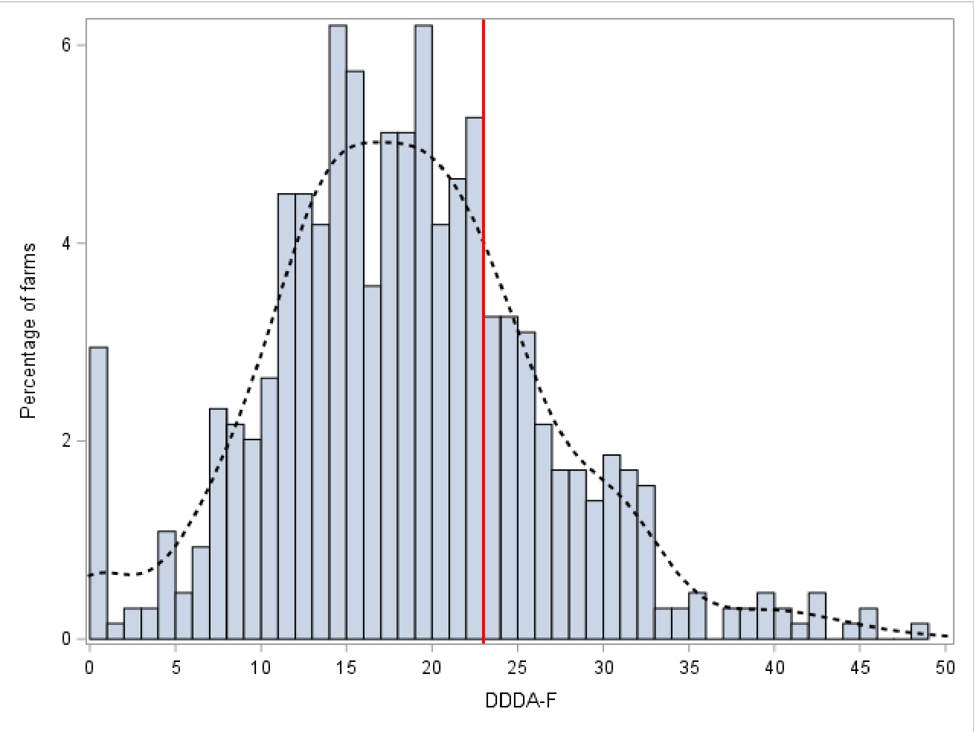
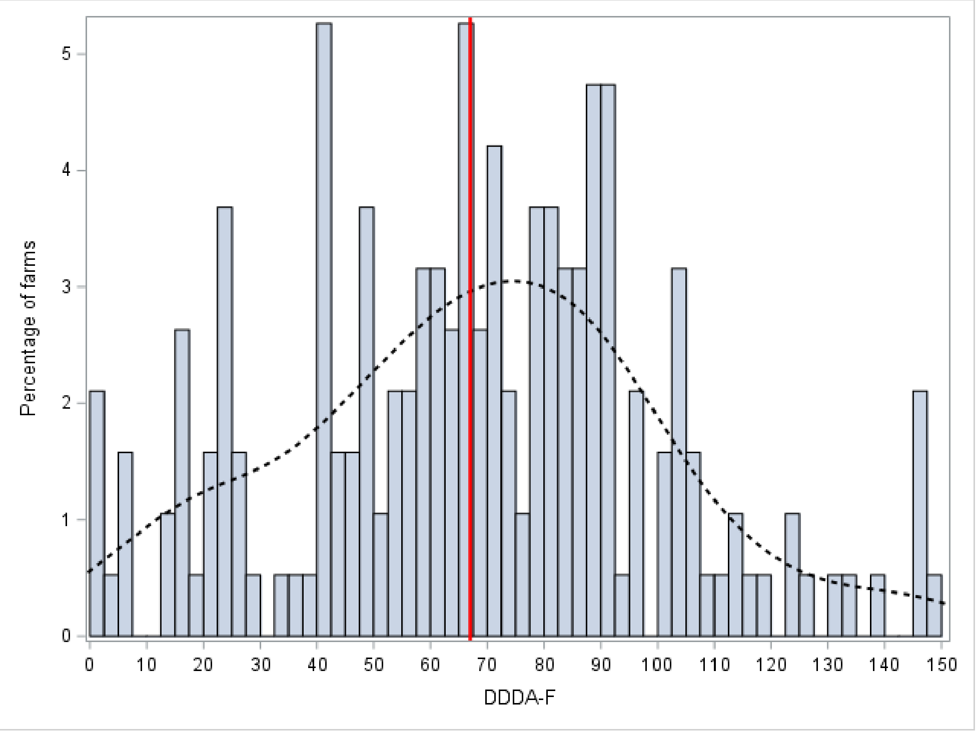
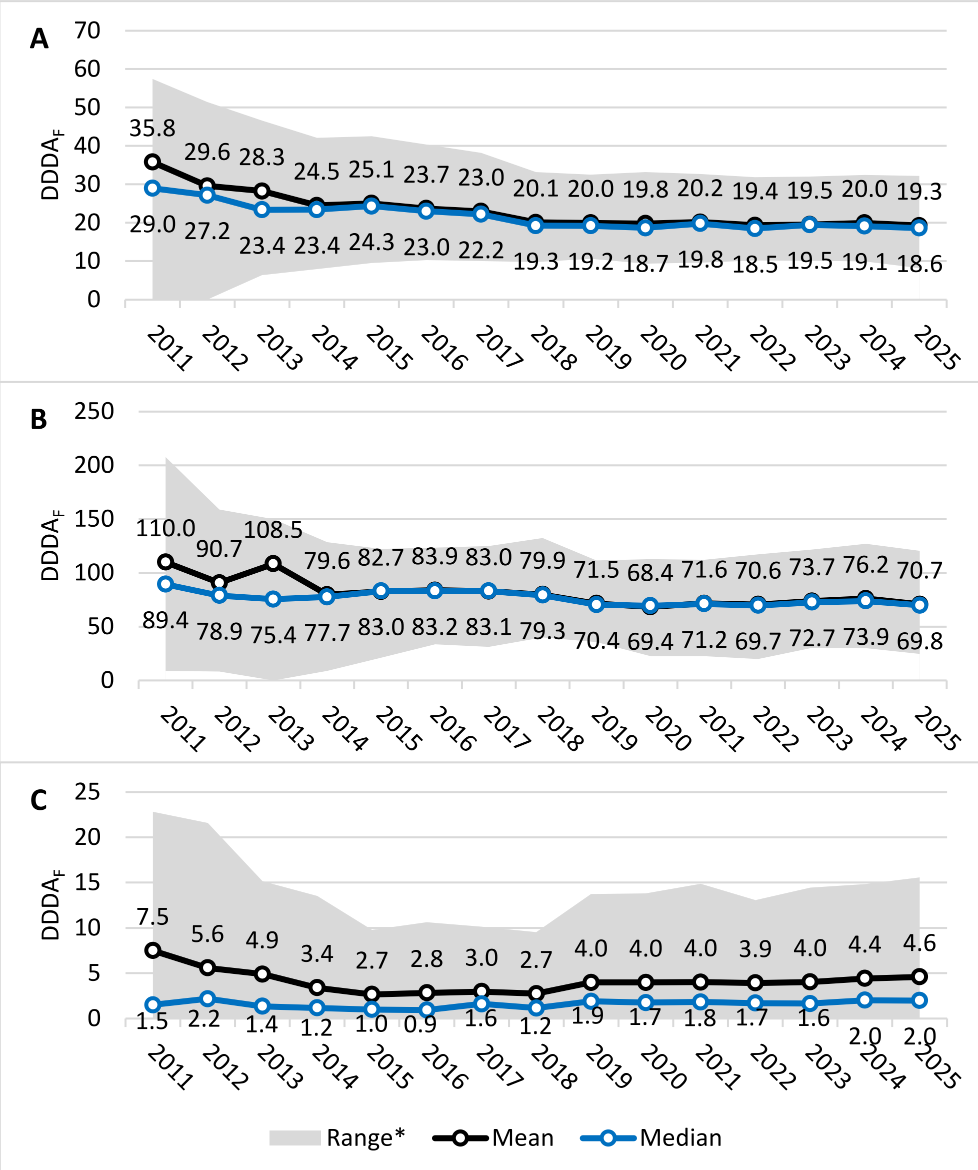


Figure 6. 2025 DDDA$_F$ distribution for rosé veal starter farms (N = 193). The red line represents the SDa-defined provisional benchmark threshold



Figures 7a to 7c. Long-term DDDA$_F$ trends for (a) white veal farms, (b) rosé veal starter farms, and (c) rosé veal fattening farms. The graphs show the mean and median DDDA$_F$ values and DDDA$_F$ ranges for the years concerned



* The gray area represents the middle 90% of farms, with its lower limit corresponding to the 5th percentile and its upper limit corresponding to the 95th percentile.

Benchmarking

For white veal farms, rosé veal starter farms and rosé veal fattening farms, the proportion of farms with persistently high usage levels decreased in 2025, following two years of increases (see Table 1). In contrast, for rosé veal combination farms, the proportion of farms with persistently high usage levels increased from 19% in 2024 to 49% in 2025.

White veal farms are benchmarked using a provisional benchmark threshold of 23 $DDDA_F$. Reduction efforts for white veal farms should be aimed at across-the-board usage level reductions.

The majority of rosé veal starter farms recorded action zone usage levels for 2025; on the average farm, antibiotic veterinary medicinal products were used for more than 67 days per year. In 2025, 42% of rosé veal starter farms had persistently high usage levels (Table 1).

Rosé veal fattening farms are benchmarked by means of a 4 $DDDA_F$ benchmark threshold representing acceptable use. Although most rosé veal fattening farms have low antibiotic usage levels, a substantial group of farms with high or persistently high usage levels remains.

Rosé veal combination farms are benchmarked using a provisional benchmark threshold of 12 $DDDA_F$. Almost half of the farms with action zone usage levels in 2024 also recorded action zone usage levels for 2025.

Addressing persistently high usage levels

The veal farming sector's coaching program for farmers with persistently high usage levels, which was introduced in 2023, has not resulted in the intended reduction in the number of farms with persistently high usage levels. The coaching program uses a step-by-step approach to reduce antibiotic use at a limited selection of farms with persistently high usage levels, focusing on those with the highest $DDDA_F$ values: 15 white veal farms, 25 rosé veal starter farms, and rosé veal fattening farms with $DDDA_F$ values above 6. As a first step, an advisory team is assembled, comprising the veal farmer, the farmer's veterinarian, and the farmer's feed consultant or a representative of the legal owner of the calves. Among other things, this advisory team prepares an action plan aimed at reducing the amount of antibiotics used at the farm concerned. If, after 1.5 years, the desired reduction has not been achieved, an external process supervisor is added to the advisory team (SBK, 2024).

The current approach, under which only a selection of farms is included in the coaching program, does not appear to be sufficiently effective in reducing the number of farms with persistently high usage levels. The SDa expert panel therefore recommends extending the coaching program to all farms with persistently high usage levels and evaluating the methodology used. In light of the persistently large between-farm differences in the veal farming sector and the limited progress made, a greater sense of urgency is warranted.

Table 1. 2024 and 2025 benchmarking results for veal farms according to the SDa-defined action threshold, by type of farm

Number of farms	Type of farm							
	White veal farms		Rosé veal starter farms		Rosé veal fattening farms		Rosé veal combination farms	
	2024	2025	2024	2025	2024	2025	2024	2025
In target zone	491 (69%)	481 (74%)	82 (41%)	85 (44%)	299 (64%)	281 (62%)	21 (33%)	22 (33%)
In action zone	216 (31%)	173 (27%)	120 (59%)	108 (56%)	165 (36%)	171 (38%)	43 (67%)	44 (67%)
With persistently high usage levels	75 (11%)	65 (10%)	86 (43%)	81 (42%)	128 (28%)	117 (26%)	12 (19%)	32 (49%)

Broiler farming sector

Following years of steady decline, antibiotic use in the broiler farming sector unexpectedly increased by 24.7%, from 5.2 $DDDA_{NAT}$ in 2024 to 6.5 $DDDA_{NAT}$ in 2025. The sector is still looking for explanations for this increase, but there are indications that the quality of supplied chicks has declined. Additional usage data provided by the sector confirm that antibiotic use during the first week of life increased substantially compared with 2024, although these data do not allow a direct cause to be identified. The average body weight at time of treatment decreased by 9% compared with 2024. However, in terms of $DDDA_{NAT}$, increased antibiotic use at a younger age has only a limited effect because $DDDA_{NAT}$ values for the broiler farming sector are based on a standardized body weight of 1 kilogram. During the first week of life in particular, broilers' standardized body weight is higher than their actual body weight at the time of treatment.
In addition, the proportion of slower growing broiler breeds decreased from 55.3% to 51.8%. This shift may also have contributed, to a limited extent, to the increase in overall antibiotic use, as antibiotic use in slower growing breeds is lower than in conventional breeds. Approximately 5% of the $DDDA_{NAT}$ increase may be attributed to a methodological difference in the determination of animal numbers between Statistics Netherlands (point-in-time count) and the sector (annual measurement). Further investigation by the broiler farming sector is needed to identify the causes of this increase and to restore the downward trend in antibiotic use. The sector has established a working group to this end.

An increase in the use of second-choice antibiotics to 3.7 $DDDA_{NAT}$ (57.6% of the sector's overall antibiotic use) also gives cause for concern. The broiler farming sector should take into account that these antibiotics will be subject to a more restrictive classification following implementation of the NWVAB classification in 2026.

Antibiotic use by type of farm

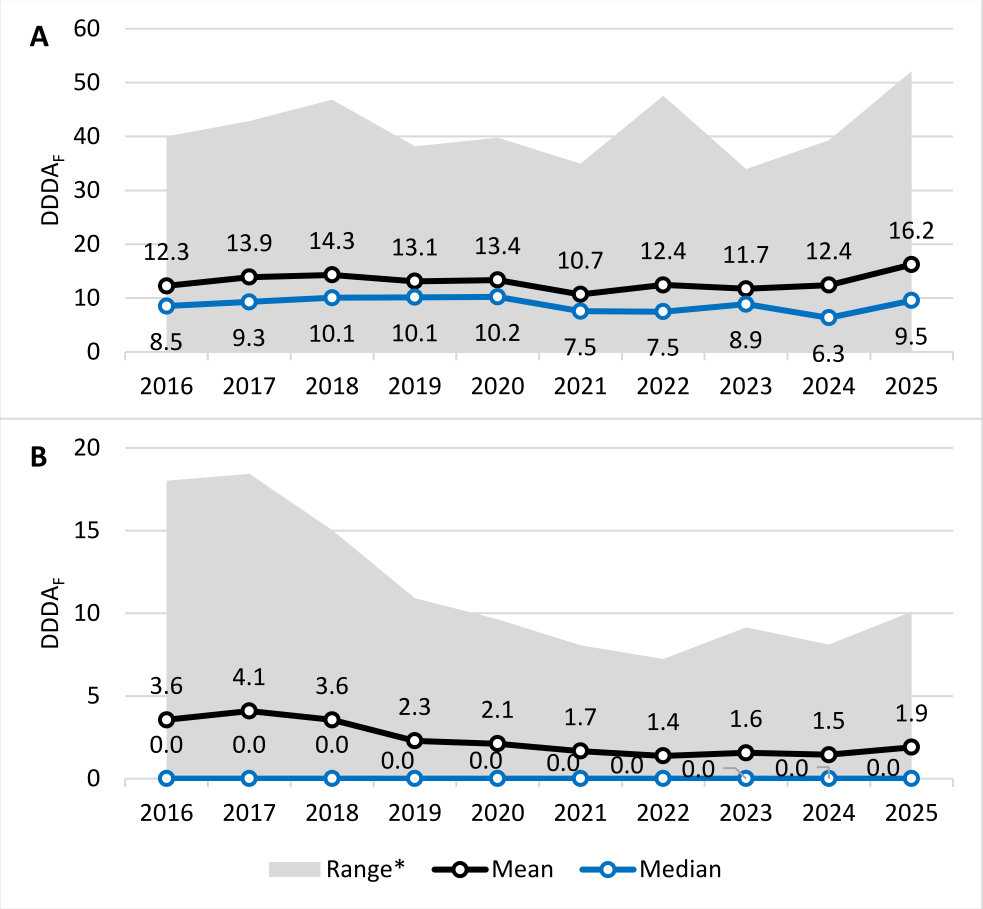
In the broiler farming sector, a distinction is made between two categories: conventional broiler breeds and slower growing broiler breeds. Conventional broiler breeds are mainly produced for the food service industry (e.g., restaurants, catering operations and institutions) and for export, whereas slower growing broiler breeds are primarily intended for the Dutch food retail sector.

In 2025, median antibiotic use at broiler farms with conventional breeds increased by 50.7%, to 9.5 $DDDA_F$, the highest level since 2020. Mean antibiotic use increased from 12.4 to 16.2 $DDDA_F$. The mean DDDAF value may be affected by a small number of farms

with very high calculated $DDDA_F$ values, which may include non-specialized farms (i.e., broiler farms with both conventional and slower growing breeds). At farms with both types of breeds, conventional broilers may be kept for only part of the year. Because $DDDA_F$ values are calculated on an annual basis, antibiotic use during this relatively short period would then be extrapolated to a full year. This can result in high calculated $DDDA_F$ values, which affect the sector mean. However, this has little or no effect on the median. Table A15 in the appendix presents summary statistics for antibiotic use at farms with only conventional broiler breeds and those with both conventional and slower growing broiler breeds.
Antibiotic use at broiler farms with slower growing breeds increased but remained low (see Figure 8b), with 66% of farms not using any antibiotics in 2025.

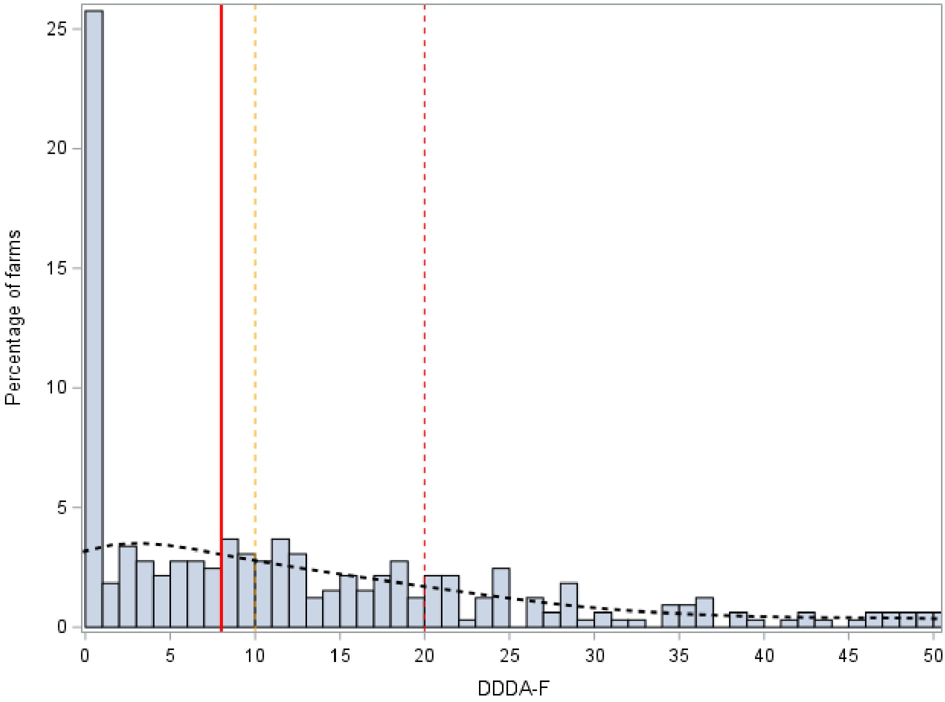
In 2025, mean antibiotic use at broiler parent/grandparent stock rearing farms was 5.1 $DDDA_F$, with relatively large differences in usage levels between individual rearing farms (Figure A17 in the appendix). At 2.7 $DDDA_F$, mean antibiotic use at parent/grandparent stock production farms was low, with limited between-farm differences in usage levels (Figure A18 in the appendix). These rearing and production farms do not contribute to the broiler farming sector's $DDDA_{NAT}$ value.

Figures 8a and 8b. Long-term $DDDA_F$ trends for (a) broiler farms with conventional breeds, and (b) broiler farms with slower growing breeds. The graphs show the mean and median $DDDA_F$ values and $DDDA_F$ ranges for the years concerned



* The gray area represents the middle 90% of farms, with its lower limit corresponding to the 5th percentile and its upper limit corresponding to the 95th percentile.

Figure 9. 2025 DDDA$_F$ distribution for broiler farms with conventional breeds (N = 326). The red solid line represents the SDa-defined action threshold. The orange and red dotted lines represent the transitional benchmark thresholds negotiated by the livestock sector.



Benchmarking

In 2019, the broiler farming sector's benchmark threshold representing acceptable use was set at 8 DDDA$_F$, irrespective of the type of breed.

As agreed with the Ministry of Agriculture, Fisheries, Food Security and Nature, this benchmark threshold is phased in over several years, with separate implementation processes for the two types of broiler farms (i.e., those with conventional breeds and those with slower growing breeds). Details on the phased implementation of this benchmark threshold are available in the appendix (Tables A63 and A64). Effective from 2024, the signaling and action thresholds for broiler farms with conventional breeds were reduced from 12 and 24 DDDA$_F$ to 10 and 20 DDDA$_F$, respectively.

The proportion of farms with conventional breeds with usage levels within the SDa-defined target zone (< 8 DDDA$_F$) decreased from 55% in 2024 to 44% in 2025. Of the

183 farms with action zone usage levels in 2025, a majority (95 farms) had also recorded action zone usage levels for 2024, which means they are considered to have persistently high usage levels when benchmarked using the SDa-defined action threshold (Table 2). On the other hand, 134 broiler farms with conventional breeds managed to stay below the 8 $DDDA_F$ benchmark threshold representing acceptable use in both 2024 and 2025. For broiler farms with conventional breeds, the SDa-defined action threshold of 8 $DDDA_F$ is regarded as a distant goal to work toward, and the broiler farming sector is currently still using higher benchmark thresholds. When benchmarked using the higher sector-negotiated signaling and action thresholds of 10 and 20 $DDDA_F$, respectively, 27% of broiler farms with conventional breeds recorded action zone usage levels for 2025, and 22% recorded signaling zone usage levels (Table 2). A small majority of farms recorded target zone usage levels for 2025.

Broiler farms with conventional breeds show greater between-farm variability in antibiotic use than broiler farms with slower growing breeds. The $DDDA_F$ distribution for farms with conventional breeds has a long tail of farms with usage levels several times higher than the benchmark threshold representing acceptable use (Figure 9). This pattern has been evident since 2016 (Figure 8a). In 2025, the median usage level once again exceeded the 8 $DDDA_F$ benchmark threshold representing acceptable use.

Among broiler farms with slower growing breeds, 8% exceeded the SDa-defined action threshold in 2025, and only a few farms had persistently high usage levels (Table 3). The introduction of slower growing breeds has clearly had a substantial positive effect on the usage of antibiotics in the broiler farming sector.

Based on these results, reduction efforts should primarily target broiler farms with conventional breeds with high or persistently high usage levels. Further reductions should be achievable, given the substantial variation among farms and the consistently large proportion of farms with $DDDA_F$ values consistent with acceptable use.

Table 2. 2024 and 2025 benchmarking results for broiler farms with conventional breeds, according to both the SDa-defined action threshold and sector-negotiated transitional benchmark thresholds

Type of benchmark threshold(s)	2025 benchmark threshold	Number of farms	Broiler farms with conventional breeds	
			2024	2025
SDa-defined	8 $DDDA_F$	In target zone	153 (55%)	143 (44%)
		In action zone	127 (45%)	183 (56%)
		With persistently high usage levels	88 (31%)	95 (29%)
Sector-negotiated (transitional)	Signaling threshold: 10 $DDDA_F$	In target zone	169 (60%)	165 (51%)
		In signaling zone	57 (20%)	72 (22%)
	Action threshold: 20 $DDDA_F$	In action zone	54 (19%)	89 (27%)
		With persistently high usage levels	7 (3%)	22 (7%)

Table 3. 2024 and 2025 benchmarking results for broiler farms with slower growing breeds, according to both the SDa-defined action threshold and sector-negotiated transitional benchmark thresholds

Type of benchmark threshold(s)	2025 benchmark threshold	Number of farms	Broiler farms with slower growing breeds	
			2024	2025
SDa-defined	8 $DDDA_F$	In target zone	562 (95%)	544 (92%)
		In action zone	31 (5%)	47 (8%)
		With persistently high usage levels	5 (1%)	10 (2%)
Sector-negotiated (transitional)	Signaling threshold: 8 $DDDA_F$	In target zone	562 (95%)	544 (92%)
		In signaling zone	17 (3%)	32 (5%)
	Action threshold: 12 $DDDA_F$	In action zone	14 (2%)	15 (3%)
		With persistently high usage levels	3 (1%)	3 (1%)

Pig farming sector

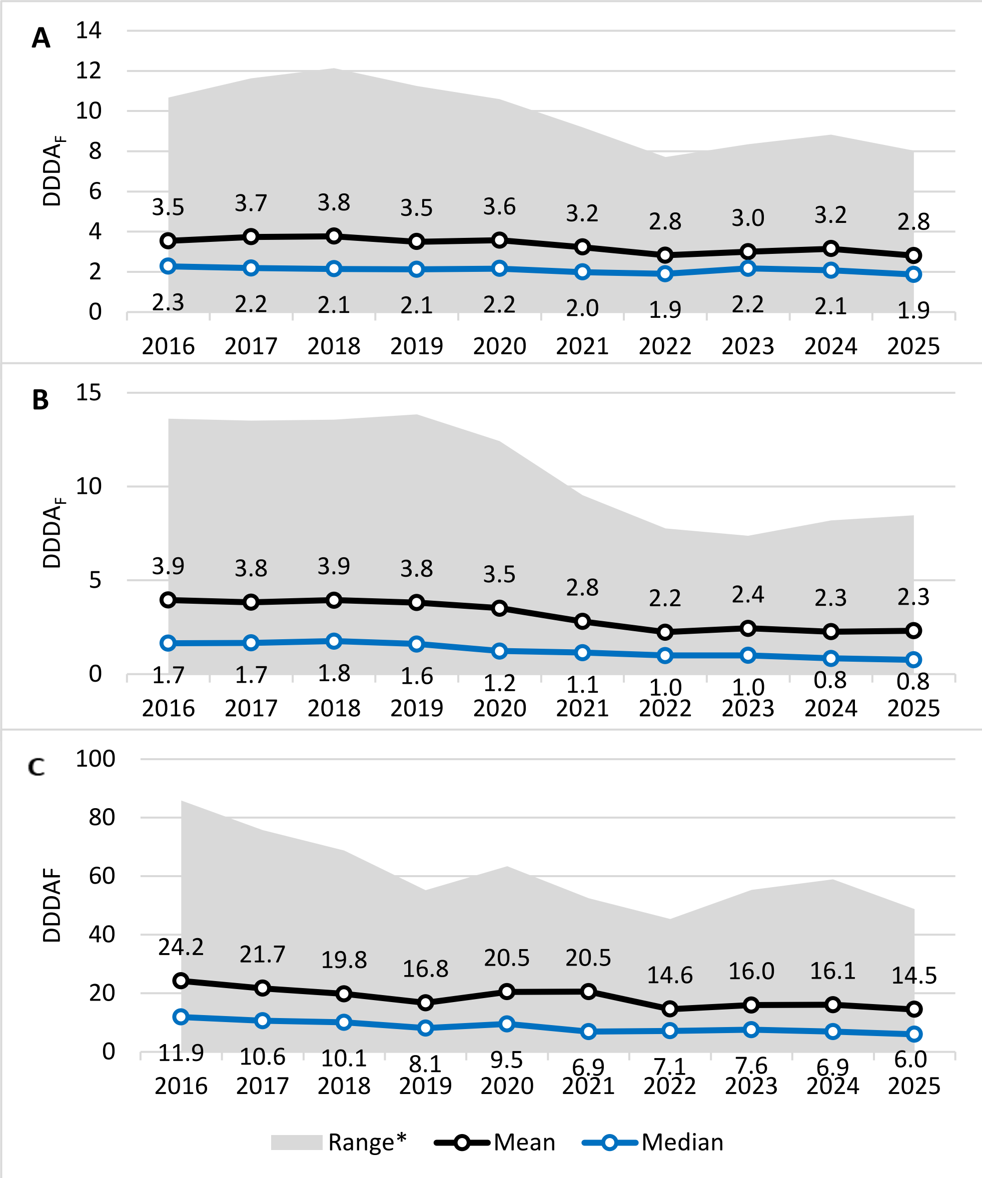
Following an increase in 2024, antibiotic use in the pig farming sector declined by 9.7% (0.6 $DDDA_{NAT}$) in 2025, to 6.0 $DDDA_{NAT}$, bringing it back to a level comparable to that of 2023.

Antibiotic use by production category

In 2025, antibiotic use at farms with sows and suckling piglets remained low, declining to a mean $DDDA_F$ of 2.8 (Figure 10a). Antibiotic use at farms with fattening pigs remained low and stable (Figure 10b).

Antibiotic use at farms with weaner pigs has declined substantially since 2016. In 2025, the mean and median $DDDA_F$ values both declined to their lowest levels to date (Figure 10c). Nevertheless, the number of farms with high or extremely high usage levels remains relatively high, considerably affecting the mean $DDDA_F$ value for this production category. In 2025, 60 farms with weaner pigs had usage levels above 50 $DDDA_F$. If these farms were to be excluded from the data set, this would lower the production category's mean $DDDA_F$ value from 14.5 to 8.8.

Figures 10a to 10c. Long-term $DDDA_F$ trends for (a) farms with sows and suckling piglets, (b) farms with fattening pigs, and (c) farms with weaner pigs. The graphs show the mean and median $DDDA_F$ values and $DDDA_F$ ranges for the years concerned



Benchmarking
The sows and suckling piglets production category and the fattening pigs production category are both benchmarked using a 5 $DDDA_F$ benchmark threshold representing acceptable use. In 2025, the proportion of farms in the action zone declined to 11% for the sows and suckling piglets production category, and to 10% for the fattening pigs production category.

The proportion of farms with persistently high usage levels remained low and unchanged for both production categories, at 4% for sows and suckling piglets and 3% for fattening pigs (Tables A24 and A29 in the appendix).

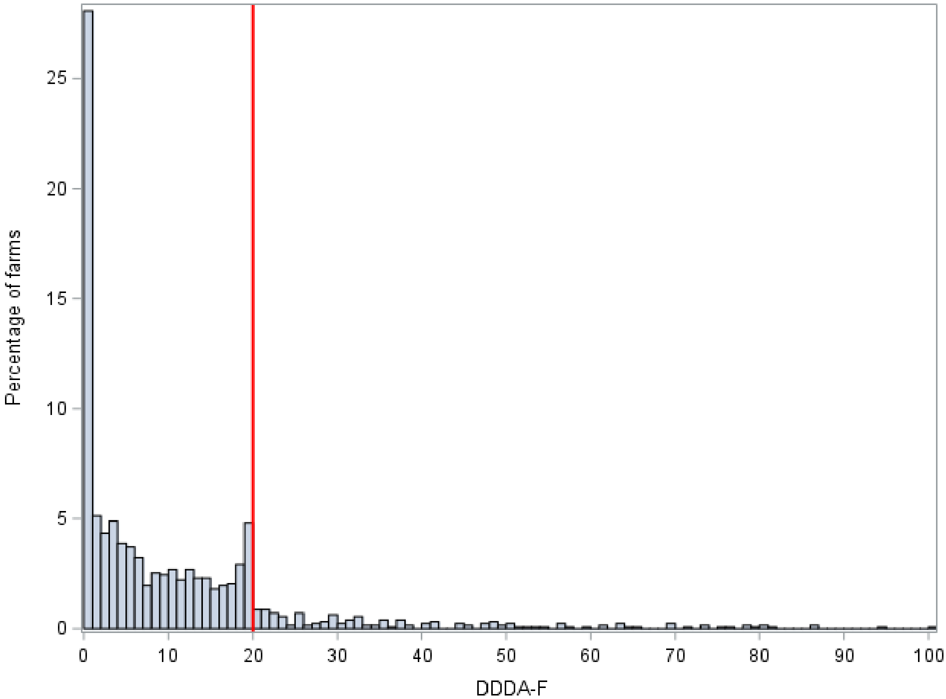
The weaner pigs production category's 2025 usage data are benchmarked by means of a 20 $DDDA_F$ provisional benchmark threshold. For this production category, the proportion of farms with action zone usage levels declined slightly, from 15% in 2024 to 14% in 2025 (Table 4). The proportion of farms with persistently high usage levels declined to 6%. Notably, the proportion of farms with usage levels just below their 20 $DDDA_F$ benchmark threshold remained relatively high, as was the case in 2023 and 2024 (Figure 11).

As of 2026, the weaner pigs production category will be benchmarked using a new provisional benchmark threshold of 15 $DDDA_F$ for a 3-year period. This new SDa-defined benchmark threshold will be evaluated in 2029. Reduction efforts should focus primarily on farms occasionally or persistently recording usage levels well above the new 15 $DDDA_F$ benchmark threshold.

Table 4. 2024 and 2025 benchmarking results for farms with weaner pigs, according to the SDa-defined action threshold

Number of farms	**Weaner pigs production category**	
	2024	**2025**
In target zone	1,139 (85%)	1,087 (86%)
In action zone	197 (15%)	179 (14%)
With persistently high usage levels	89 (7%)	76 (6%)

Figure 11. 2025 DDDA$_F$ distribution for farms with weaner pigs (N = 1,268). The red line represents the SDa-defined action threshold



Goat farming sector

No data on antibiotic use in the goat farming sector were included in last year's SDa report. This was due to issues with the completeness and quality of the data, which had also been noted in earlier reports. Last year, it became clear that these issues result in a systematic underestimation of farm-level antibiotic use. In addition, uncertainties remain regarding the data recorded for non-dairy goat categories (i.e., fattening kids, rearing goats, and goats kept as a hobby), due in part to missing animal numbers and unclear or inconsistent categorization.

Since the previous report, steps have been taken to improve data quality and completeness, and (partially) corrected 2024 data have been submitted. In addition to addressing the data recording issues in the goat farming sector, the SDa expert panel recommended conducting an audit of the quality and completeness of the sector's antibiotic usage data. Pending the outcome of this audit, the SDa expert panel presents the goat farming sector's 2024 and 2025 usage data on a provisional basis.

Antibiotic use by animal category

A distinction is made between dairy goats and other animal categories (i.e., non-dairy goats) within the goat farming sector. In 2025, mean antibiotic use at dairy goat farms amounted to 1.6 $DDDA_F$. Antibiotic use increased slightly compared with the 2024 level, but remained low.

For the other animal categories in the goat farming sector, data quality issues persist. For example, for 60 farms animal numbers for 2025 are missing and in many cases no animal category was provided either. The farms concerned are expected to be mainly non-dairy goat farms.

The data presented in Table 5 show that, among goat farms with complete data, antibiotic use is low for most animal categories. However, antibiotics are still used regularly in rearing goats, and some farms with rearing goats recorded relatively high usage levels.

Table 5. 2024 and 2025 DDDA$_F$ data for goat farms, by animal category

Animal category	Year	N	Mean	Median	P75	P90
Dairy goats	2024	353	1.0	0.5	1.3	2.5
	2025	342	1.6	0.6	1.7	3.0
Rearing goats	2024	17	7.1	1.3	5.3	29.0
	2025	16	7.4	4.7	11.5	15.1
Unspecified	2024	47	3.6	0.8	1.7	11.2
	2025	42	3.3	0.6	1.9	6.8
Fattening kids	2024	1	0.0	0.0	0.0	0.0
	2025	1	0.0	0.0	0.0	0.0
Goats kept as a hobby	2024	5	0.9	0.0	0.2	4.3
	2025	4	11.1	0.3	22.2	43.8

Cattle farming sector

Antibiotic use in the dairy cattle farming sector is consistently low, at a level of approximately 3.0 $DDDA_{NAT}$. In the non-dairy cattle farming sector (i.e., suckler cow farms, rearing farms, and beef farms), antibiotic use remained virtually unchanged from the 2024 level, at just 0.3 $DDDA_{NAT}$.

Antibiotic use by type of farm

Mean antibiotic use at dairy cattle farms has remained low at approximately 2 $DDDA_F$ since 2014. In addition to their consistently low mean $DDDA_F$ values, dairy cattle farms are also characterized by relatively minor between-farm differences in usage levels and limited year-to-year usage level fluctuations at individual farms.

Most suckler cow farms, rearing farms, and beef farms did not record any antibiotic use for 2025, and mean antibiotic use at non-dairy cattle farms remained below 1 $DDDA_F$.

Benchmarking

Each of the four types of cattle farms (i.e., dairy cattle farms, rearing farms, suckler cow farms, and beef farms) saw more than 90% of farms recording target zone usage levels for 2025. Persistently high usage levels were rare. Full benchmarking results can be found in Tables A34, A37, A40, and A43 in the appendix.

Layer farming sector

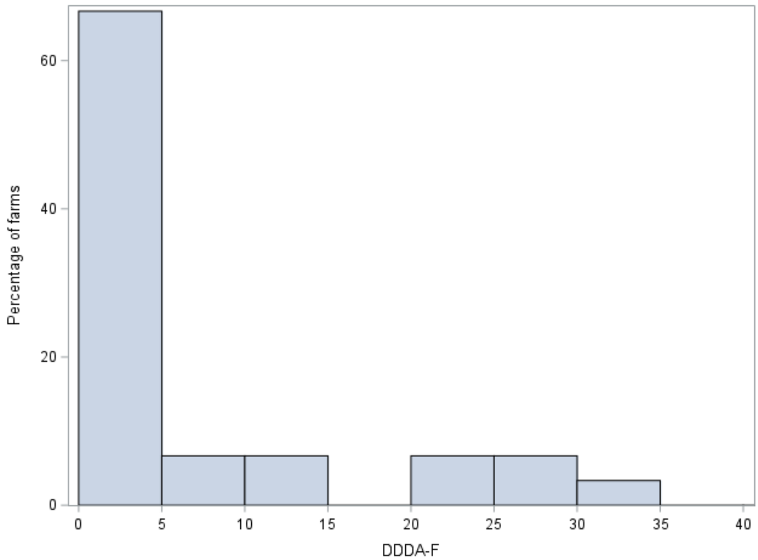
Antibiotic use by type of farm

Antibiotic use at layer farms is stable at a low level. In 2025, mean antibiotic use amounted to 1.4 $DDDA_F$. Most farms (80.5%) did not record any antibiotic use for 2025.

At a number of layer farms, colistin use was still relatively high. This remains a source of concern. Mean colistin use declined over the past year (from 0.51 to 0.42 $DDDA_F$), and the proportion of farms using colistin declined from 9.2% in 2024 to 6.8% in 2025.

Antibiotic use at pullet rearing farms also remained low and stable in 2025.
While the majority (63%) of layer parent/grandparent stock rearing farms did not use any antibiotics in 2025, some farms had usage levels exceeding 20 $DDDA_F$. It is important to prevent such usage levels from becoming persistent. However, at present, the elevated usage levels appear to be occasional, as none of these farms recorded usage levels above 20 $DDDA_F$ for 2024. Following the sharp increase in 2024, mean antibiotic use declined to 9.0 $DDDA_F$ in 2025. Given the considerable between-farm variation, further reductions in antibiotic use appear to be achievable (Figure 12). Antibiotic use at layer parent/grandparent stock production farms remained low in 2025, with limited between-farm variation.

Figure 12. 2025 $DDDA_F$ distribution for layer parent/grandparent stock rearing farms (N = 30)



Autoriteit Diergeneesmiddelen

Smaller food-producing livestock sectors

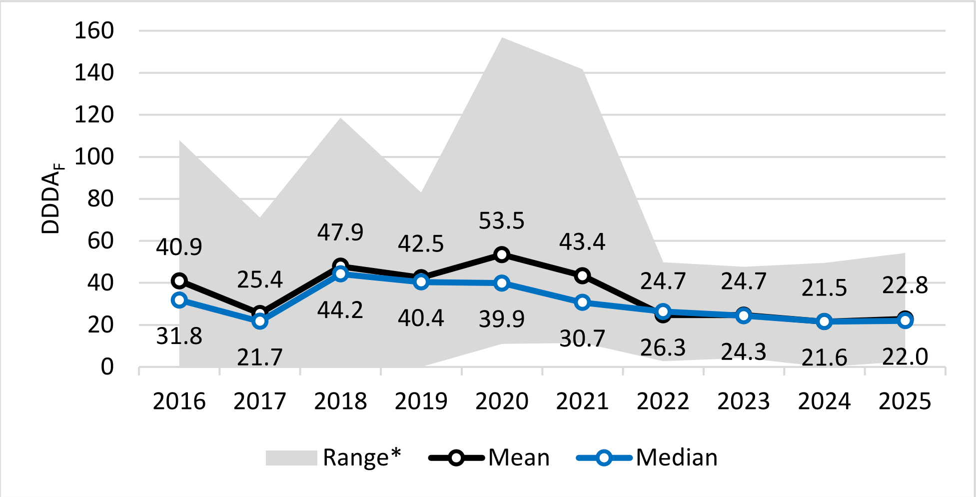
Rabbit farming sector

In 2025, antibiotic use in the rabbit farming sector amounted to 22.1 $DDDA_{NAT}$, similar to the 2024 level (22.6 $DDDA_{NAT}$). This represents a 46.1% reduction from the 2016 level.

At farm level, mean antibiotic use increased from 21.5 to 22.8 $DDDA_F$, while median antibiotic use increased from 21.6 to 22.0 $DDDA_F$. In 2025, between-farm variation among rabbit farms was similar to previous years and it has now remained stable for several years (Figure 13).

The difference between the sector's $DDDA_{NAT}$ and $DDDA_F$ results is related to the different calculation methods. $DDDA_{NAT}$ is a weighted measure, with larger farms contributing more heavily than smaller farms, whereas $DDDA_F$ is an unweighted measure, with all farms contributing equally. This suggests that the reduction observed at sector level (in $DDDA_{NAT}$) may be driven by changes at larger farms, even though mean antibiotic use at farm level (in $DDDA_F$) did not decrease.

Figure 13. Long-term $DDDA_F$ trends for rabbit farms. The graph shows the mean and median $DDDA_F$ values and $DDDA_F$ ranges for the years concerned



* The gray area represents the middle 90% of farms, with its lower limit corresponding to the 5th percentile and its upper limit corresponding to the 95th percentile.

Benchmarking

Since 2022, the rabbit farming sector has been benchmarked using a provisional benchmark threshold of 30 $DDDA_F$. In 2025, the proportion of rabbit farms with antibiotic usage levels below this SDa-defined action threshold decreased to 74% (Table 6). Of the 7 rabbit farms that exceeded this action threshold, 5 had also recorded usage levels above the SDa-defined action threshold for 2024 and are therefore referred to as farms with persistently high usage levels. When interpreting the rabbit farming sector's benchmarking results, the scale of the sector should be taken into consideration. In 2025, this livestock sector comprised only 27 farms.

Table 6. 2024 and 2025 benchmarking results for rabbit farms according to the SDa-defined action threshold

Number of farms	Rabbit farms	
	2024	2025
In target zone	24 (77%)	20 (74%)
In action zone	7 (23%)	7 (26%)
With persistently high usage levels	5 (16%)	5 (19%)

Turkey farming sector

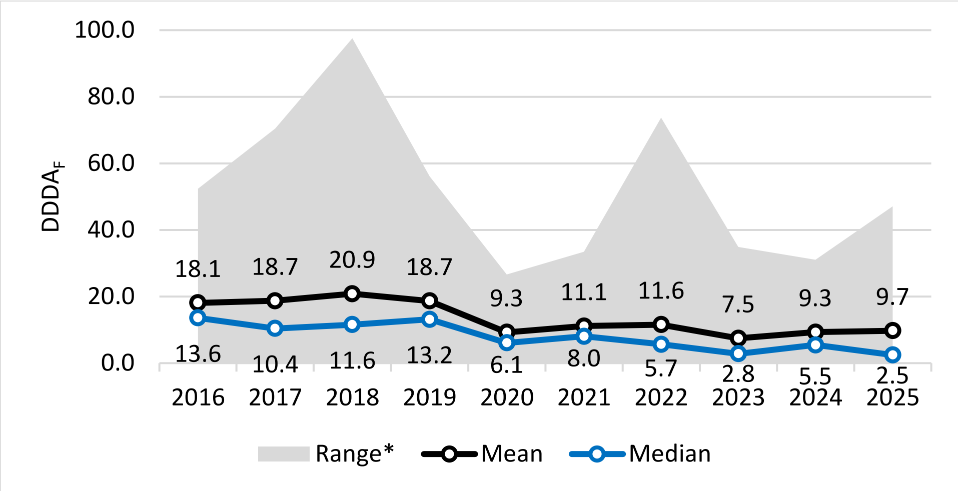
In 2025, the turkey farming sector comprised only 29 active farms. The sector's $DDDA_{NAT}$ value fell by 42.4% to 5.01, the lowest level recorded since monitoring began. However, given the limited number of farms and the differences in production systems between farms, these results should be interpreted with some caution.

The relative contribution of second-choice antibiotics to the turkey farming sector's overall antibiotic use increased from 38.1% in 2024 to 49.3% in 2025, while the relative contribution of first-choice antibiotics declined (see Table A1 in the appendix).

At farm level, median antibiotic use decreased by 54.5%, while mean antibiotic use increased (by 4.3%). In 2025, between-farm variation was higher than the year before (Figure 14). Three farms recorded usage levels above 45 $DDDA_F$, and these farms have a substantial impact on the sector's $DDDA_F$ results. Since 2016, farm-level antibiotic use has fluctuated but shown an overall downward trend (Figure 14).

The difference between farm-level ($DDDA_F$-based) and sector-level ($DDDA_{NAT}$-based) antibiotic use is due to differences in calculation methods. $DDDA_{NAT}$ calculations are based on a standardized body weight, whereas $DDDA_F$ calculations are based on animals' weight at the time of treatment. In 2025, animals' weight at the time of treatment decreased, which is not taken into account in the sector's $DDDA_{NAT}$ calculation. In addition, $DDDA_{NAT}$ is a weighted measure, unlike $DDDA_F$. Accordingly, larger farms carry more weight in the $DDDA_{NAT}$ calculation. The way animal numbers are determined also differs between $DDDA_{NAT}$ and $DDDA_F$ calculations. The animal numbers used in $DDDA_{NAT}$ calculations are obtained from Statistics Netherlands (CBS) and are higher than those provided by the turkey farming sector.

Figure 14. Long-term $DDDA_F$ trends for turkey farms. The graph shows the mean and median $DDDA_F$ values and $DDDA_F$ ranges for the years concerned



* The gray area represents the middle 90% of farms, with its lower limit corresponding to the 5th percentile and its upper limit corresponding to the 95th percentile.

Benchmarking

The SDa-defined provisional benchmark threshold for the turkey farming sector has been established at 10 $DDDA_F$. The number of turkey farms in the action zone decreased from 10 in 2024 to 7 in 2025, and the number of farms with persistently high usage levels decreased to 4 (see Table 7).

To help turkey farmers move toward their 10 $DDDA_F$ benchmark threshold in a more gradual fashion, the turkey farming sector and the Ministry of Agriculture, Fisheries, Food Security and Nature have agreed on the application of transitional benchmark thresholds (Table A65 in the appendix). Based on the 2025 transitional action threshold of 12 $DDDA_F$, the same 7 farms still fall within the action zone. No turkey farms recorded usage levels within the sector-negotiated signaling zone (10-12 $DDDA_F$).

Last year, the SDa expert panel recommended an accelerated reduction of the transitional benchmark thresholds, and it continues to stand by this recommendation. However, the turkey farming sector has decided to adhere to the phasing previously agreed with the Ministry of Agriculture, Fisheries, Food Security and Nature, partly due to developments within the sector, such as the declining number of farms.

Reduction efforts in the turkey farming sector should be aimed at reducing antibiotic use at farms with high or persistently high $DDDA_F$ values, and at reducing the use of second-choice antibiotics. If the 4 turkey farms with usage levels in excess of 30 $DDDA_F$ were excluded from the dataset, mean antibiotic use would decrease to 3.9 $DDDA_F$. These

4 farms recorded usage levels well above both the SDa-defined action threshold and the sector-negotiated transitional action threshold.

Table 7. 2024 and 2025 benchmarking results for turkey farms, according to both the SDa-defined action threshold and sector-negotiated transitional benchmark thresholds

Type of benchmark threshold(s)	2024 benchmark threshold	2025 benchmark threshold	Number of farms	Turkey farms	
				2024	2025
SDa-defined	**10 $DDDA_F$**	**10 $DDDA_F$**	**In target zone**	20 (67%)	22 (76%)
			In action zone	10 (33%)	7 (24%)
			With persistently high usage levels	7 (24%)	4 (14%)
Sector-negotiated (transitional)	**Signaling threshold: 12 $DDDA_F$** **Action threshold: 16 $DDDA_F$**	**Signaling threshold: 10 $DDDA_F$** **Action threshold: 12 $DDDA_F$**	**In target zone**	22 (73%)	22 (76%)
			In signaling zone	2 (7%)	0 (0%)
			In action zone	6 (20%)	7 (24%)
			With persistently high usage levels	1 (3%)	2 (7%)

Duck farming sector

This is the second SDa report with antibiotic usage data on the duck farming sector. At present, there is no legal requirement to record the amounts of antibiotics used in this sector. Delivery record data for the years 2021-2025 were voluntarily recorded by veterinarians and provided to the SDa by the sector. The dataset includes delivery record data for three types of farms: fattening duck farms, rearing and production farms, and production-only farms. The duck farming sector comprises a total of 37 farms.
Antibiotic use in the duck farming sector is very low. Antibiotics are used only occasionally at duck farms. In 2025, 79% of the 28 fattening duck farms did not use any antibiotics (see Table A57 in the appendix). Mean antibiotic use at fattening duck farms amounted to 0.9 $DDDA_F$. Both rearing and production farms and production-only farms recorded no antibiotic use for 2025.

Veterinarians’ prescription patterns

For both its benchmarking of veterinarians and monitoring of trends in prescription patterns, the SDa uses the $DDDA_{VET}$. A veterinarian’s $DDDA_{VET}$ value represents the number of days per year that the average animal in a population under the veterinarian’s care was treated with antibiotics. The $DDDA_{VET}$ differs from the former VBI (see the Terms and definitions section for a description of this term) in that it is based on data from all livestock farms, including those with persistently high usage levels.

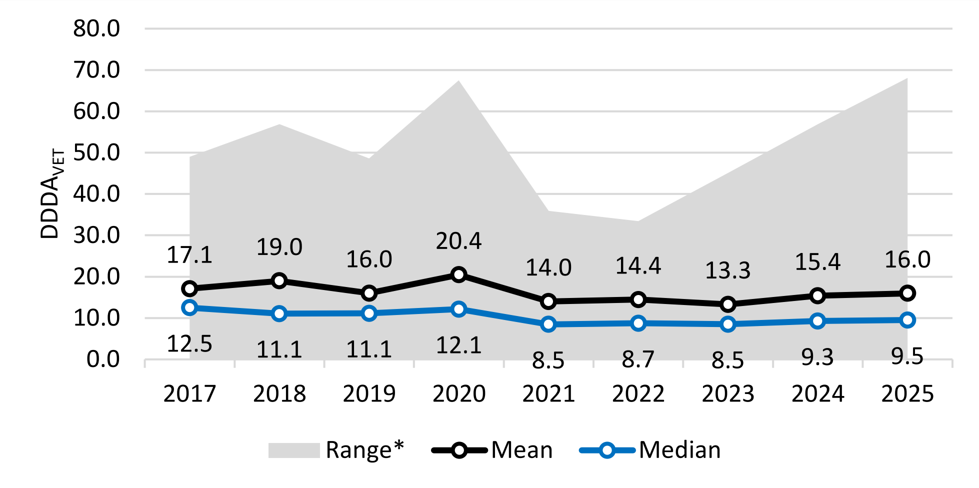
Prescription pattern trends

In 2025, veterinarians active at **dairy cattle** farms, **non-dairy cattle** farms, and farms with **slower growing broiler breeds** showed prescription patterns comparable to those reported for 2024: their prescribing levels remained low, and differences between individual veterinarians were limited (see Figures A55, A56 and A57, respectively, in the appendix).

Among veterinarians of **sows and suckling piglets** and veterinarians of **fattening pigs**, prescribing levels declined and were also low, and they also showed relatively little inter-veterinarian variation (Figures A59 and A60 in the appendix).

For the **weaner pigs** production category, veterinarians’ mean $DDDA_{VET}$ value was similar to the one reported for 2024, but differences between individual veterinarians increased (Figure 15). Given the extent of this inter-veterinarian variation, a further reduction in prescribing levels appears feasible.

Figure 15. Long-term DDDA$_{VET}$ trends for veterinarians of weaner pigs. The graph shows the mean and median DDDA$_{VET}$ values and DDDA$_{VET}$ ranges for the years concerned

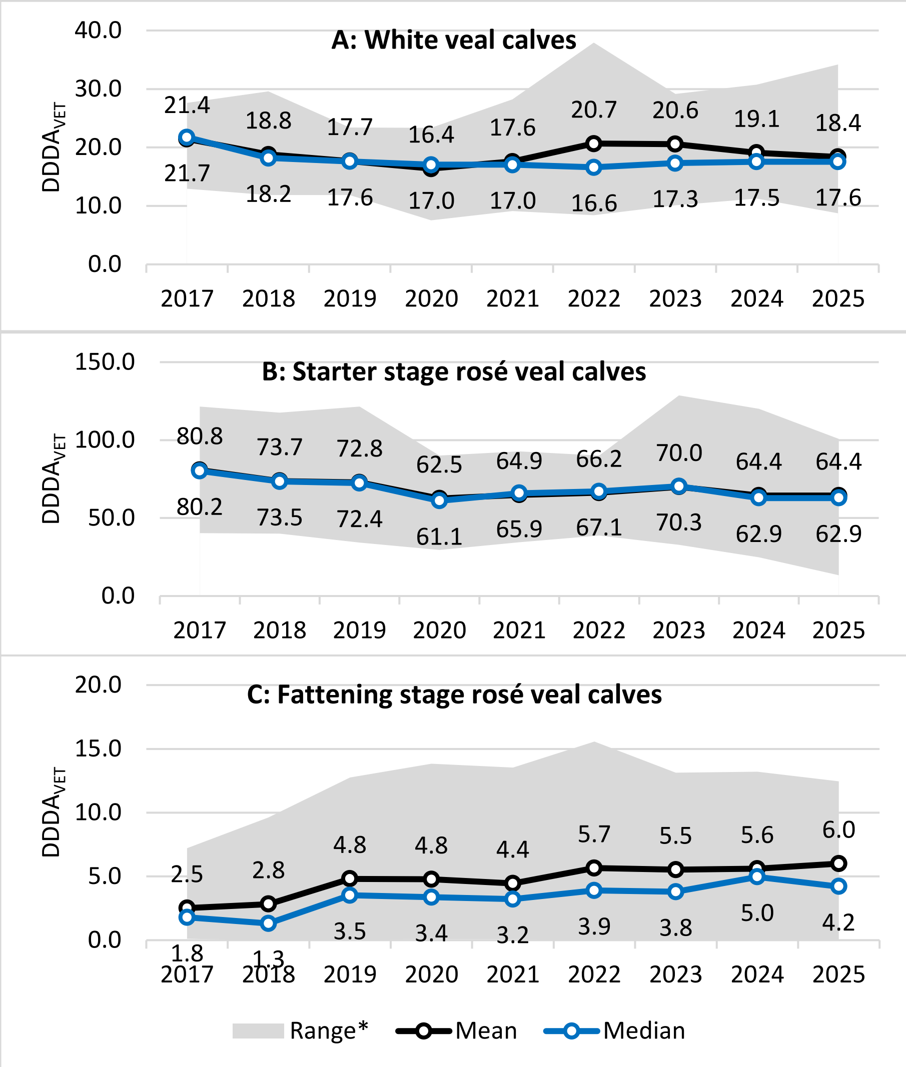


* The gray area represents the middle 90% of veterinarians, with its lower limit corresponding to the 5th percentile and its upper limit corresponding to the 95th percentile.

In 2025, veterinarians active in the veal farming sector showed prescription patterns comparable to those reported for previous years (see Figures 16a to 16c). No long-term downward trend is evident in any of the production categories.

DDDA$_{VET}$ results for veterinarians of **white veal calves** show relatively high prescribing levels, with considerable variation between individual veterinarians (Figure 16a). DDDA$_{VET}$ results for veterinarians of **starter stage rosé veal calves** are also characterized by high prescribing levels and substantial inter-veterinarian variation (Figure 16b). Among veterinarians of **fattening stage rosé veal calves**, prescribing levels trended upward from 2017 to 2022 but have stabilized since 2023. Their DDDA$_{VET}$ values also continue to show considerable variation between individual veterinarians (Figure 16c, and Table 8).

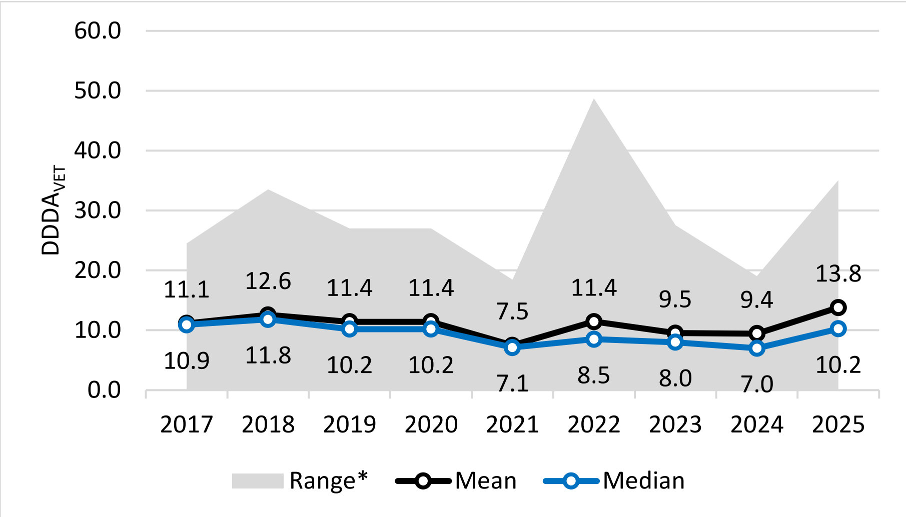
Figures 16a to 16c. Long-term DDDA$_{VET}$ trends for veterinarians of veal calves. The graphs show the mean and median DDDA$_{VET}$ values and DDDA$_{VET}$ ranges for the years concerned



* The gray area represents the middle 90% of veterinarians, with its lower limit corresponding to the 5th percentile and its upper limit corresponding to the 95th percentile.

Among veterinarians of **conventional broiler breeds**, prescribing levels increased sharply over the past year: their median $DDDA_{VET}$ value rose by 45.7% to its highest level since 2020. In 2025, the mean $DDDA_{VET}$ value reached its highest level since 2017, the year in which the distinction between conventional and slower growing broiler breeds was introduced. This increase has largely negated the limited long-term improvement achieved over the preceding years (Figure 17).

Figure 17. Long-term $DDDA_{VET}$ trends for veterinarians of conventional broiler breeds. The graph shows the mean and median $DDDA_{VET}$ values and $DDDA_{VET}$ ranges for the years concerned



* The gray area represents the middle 90% of veterinarians, with its lower limit corresponding to the 5th percentile and its upper limit corresponding to the 95th percentile.

Only a few veterinarians were active in the **turkey farming sector**. Their median $DDDA_{VET}$ value decreased to 4.0 $DDDA_{VET}$ in 2025, following an increase the year before. This decline was, however, accompanied by increased inter-veterinarian variation in prescribing levels.

Table 8. 2025 DDDA$_{VET}$ data, by production category. Provided are the mean and median DDDA$_{VET}$ values, and the 75th and 90th percentiles

Livestock sector	Production category	N	Mean	Median	P75	P90
Broiler farming sector	Conventional breeds	62	13.8	10.2	15.4	21.2
	Slower growing breeds	60	1.2	0.7	1.9	2.9
Turkey farming sector	Turkeys	11	13.1	4.0	14.9	29.3
Pig farming sector	Sows/suckling piglets	140	2.9	2.3	3.6	5.2
	Weaner pigs	139	16.0	9.5	16.7	31.4
	Fattening pigs	167	2.2	1.8	2.9	4.5
Veal farming sector	White veal calves	58	18.4	17.6	20.2	24.3
	Starter stage rosé veal calves	54	64.4	62.9	77.9	95.5
	Fattening stage rosé veal calves	88	6.0	4.2	8.3	10.6
	Calves at rosé veal combination farms	34	15.1	15.0	20.6	29.8
Cattle farming sector	Dairy cattle	652	2.3	2.3	2.7	3.0
	Cattle at rearing farms	194	0.5	0.0	0.4	1.3
	Suckler cows	643	0.6	0.4	0.8	1.4
	Beef bulls	326	0.7	0.3	0.8	1.6
	Non-dairy cattle combined	650	0.6	0.4	0.8	1.4

Benchmarking of veterinarians

Starting from the 2025 reporting period, the SDa has adopted the $DDDA_{VET}$ as its benchmark indicator for veterinarians. Previously, the VBI was used for benchmarking veterinarians. Unlike $DDDA_{VET}$ calculations, VBI calculations did not include data from farms with persistently high usage levels.

Table 9 presents veterinarians' $DDDA_{VET}$-based benchmarking results. The distribution of veterinarians across the target and action zones shows clear differences between production categories. Benchmark thresholds representing acceptable use are printed in bold.

Within the broiler farming sector, the proportion of veterinarians of conventional broiler breeds recording action zone prescribing levels increased substantially, from 38% in 2024 to 56% in 2025. When using the sector-negotiated transitional benchmark thresholds, the proportion of veterinarians in the action zone is lower, at 6% (see Table 10). However, even when using the less stringent sector-negotiated benchmark thresholds, a substantial number of veterinarians have prescribing levels outside the target zone. In contrast, almost all veterinarians of slower growing broiler breeds (98%) have target zone prescribing levels.

In 2025, only 11 veterinarians were active in the turkey farming sector, of whom 64% recorded target zone prescribing levels. The remaining 36% recorded action zone prescribing levels. When using the turkey farming sector's transitional benchmark thresholds, the number of veterinarians with prescribing levels outside the target zone remains unchanged at 4 (Table 10).

Across the production categories in the pig farming sector, the majority of veterinarians recorded target zone prescribing levels, with 89%, 81% and 92% for the sows and suckling piglets, the weaner pigs, and the fattening pigs production categories, respectively. Consequently, in each production category, the proportion of veterinarians in the action zone is relatively limited (8-19%), with the weaner pigs production category accounting for the largest proportion. The action threshold for the weaner pigs production category will be lowered to 15 $DDDA_{VET}$ with effect from 2026. A further reduction in antibiotic prescribing levels is therefore needed to prevent an increase in the proportion of veterinarians in the action zone.

The veal farming sector shows greater variation in veterinarians' 2025 benchmarking results. Among veterinarians of white veal calves, 90% recorded target zone prescribing levels, and 10% recorded action zone prescribing levels. For the starter stage rosé veal calves production category, the corresponding proportions are 57% and 43%, respectively. Among veterinarians of fattening stage rosé veal calves and veterinarians of calves at rosé veal combination farms, the proportion recording action zone prescribing levels (52% and 59%, respectively) exceeds the proportion recording target zone prescribing levels (48% and 41%, respectively). This indicates that a relatively large proportion of veterinarians exceeded the benchmark threshold for the respective production category. Additional efforts by both veterinarians and farmers are needed to reduce antibiotic prescribing levels in the veal farming sector.

Within the cattle farming sector, the vast majority of veterinarians (99% for the dairy cattle production category and 95% for the non-dairy cattle production category) recorded target zone prescribing levels for 2025.

Table 9. 2025 benchmarking results for veterinarians according to the DDDA$_{VET}$-based benchmarking method. Benchmark thresholds representing acceptable use are printed in bold

Livestock sector	**Production category**	**Benchmark threshold**	**N**	**Target zone**		**Action zone**	
				N	**%**	**N**	**%**
Broiler farming sector	Conventional breeds	**8**	62	27	44%	35	56%
	Slower growing breeds	**8**	60	59	98%	1	2%
Turkey farming sector	Turkeys	10	11	7	64%	4	36%
Pig farming sector	Sows/suckling piglets	**5**	140	124	89%	16	11%
	Weaner pigs	20	139	113	81%	26	19%
	Fattening pigs	**5**	167	154	92%	13	8%
Veal farming sector	White veal calves	23	58	52	90%	6	10%
	Starter stage rosé veal calves	67	54	31	57%	23	43%
	Fattening stage rosé veal calves	**4**	88	42	48%	46	52%
	Calves at rosé veal combination farms	12	34	14	41%	20	59%
Cattle farming sector	Dairy cattle	**5**	652	648	99%	4	1%
	Non-dairy cattle combined	**2**	650	620	95%	30	5%

Table 10. Benchmarking results for veterinarians in livestock sectors with transitional benchmark thresholds, according to the DDDA$_{VET}$-based benchmarking method

Livestock sector	Production category	Benchmark thresholds	Target zone N	Target zone %	Signaling zone N	Signaling zone %	Action zone N	Action zone %
Broiler farming sector	Conventional breeds	10 + 20	38	61%	20	32%	4	6%
	Slower growing breeds	8 + 12	59	98%	1	2%	0	0%
Turkey farming sector	Turkeys	12 + 16	7	64%	2	18%	2	18%

Developments in antibiotic monitoring

Implications of Regulation (EU) 2019/6 for antibiotic monitoring in the Netherlands

On January 28, 2022, Regulation (EU) 2019/6 of the European Parliament and of the Council of 11 December 2018 on veterinary medicinal products entered into force, repealing the directive on the Community code relating to veterinary medicinal products, Directive 2001/82/EC (EUR-Lex, 2019). Regulation (EU) 2019/6, commonly referred to as the Veterinary Medicinal Products Regulation (VMPR), sets out that all EU member states are to collect data on the sales and use of antimicrobials (including antibiotics) used in animals and are to report the data to the European Medicines Agency (EMA).

Expansion of antibiotic usage monitoring

The VMPR provides for a phased expansion of antibiotic usage monitoring, with additional animal species to be included at specific time points. The animal populations that, under the VMPR, became subject to mandatory reporting as of **2024** were already covered by the existing national monitoring process in the Netherlands.

As of **2027**, data on the use of antimicrobials in goats, sheep, ducks, geese, laying hens, farmed fish, and all horses (including those not intended for human consumption) during the preceding calendar year will also have to be reported. The goat, duck, and laying hen reporting categories are already covered by the SDa's current monitoring process, and the SDa is currently working with the Ministry of Agriculture, Fisheries, Food Security and Nature on the implementation of antibiotic monitoring for sheep and horses. As an initial step, a survey will be conducted to lay the foundation for comprehensive monitoring with regard to these animal populations. The SDa advises on the implementation of comprehensive antibiotic monitoring for the additional animal populations to be included as of 2027.

As of **2030**, member states will also have to report on antimicrobial use, during the preceding calendar year, in companion animals (i.e., dogs and cats) and fur animals.

Expansion of antibiotic sales monitoring

To minimize the administrative burden at all levels, EMA has established a sales monitoring database within its Union Product Database (UPD). Marketing authorization holders are required to submit annual volume of sales data for each of their veterinary medicinal products to this database for pharmacovigilance purposes. EMA subsequently extracts the sales data for antimicrobial veterinary medicinal products from the UPD for inclusion in its Antimicrobial Sales and Use (ASU) database, after which member states are required to validate the data. The Ministry of Agriculture, Fisheries, Food Security and Nature serves as the formal rapporteur for the Netherlands. On behalf of the Ministry, the SDa validates and, where necessary, amends the data in collaboration with FIDIN, the Dutch federation of the veterinary pharmaceutical industry.

European reporting of antimicrobial sales and use data

At the end of 2025, EMA published its second European Sales and Use of Antimicrobials for Veterinary Medicine (ESUAvet) report, containing data for 2024 (EMA, 2025). This report builds on the first ESUAvet report and again includes both sales and use data on antimicrobials used in livestock in the EU, Iceland and Norway.

In EMA's ESUAvet report, antimicrobial sales are standardized using milligrams sold per kilogram of animal biomass (mg/kg). This denominator (kg of animal biomass) is comparable to the PCU, but covers more animal population categories and uses revised standard weights (using live weights at slaughter rather than average weights for animals with a short production cycle). Consequently, the mg/kg indicator is not directly comparable to the mg/PCU indicator, which continues to be used for monitoring long-term sales trends and progress toward the European antimicrobial sales reduction target.

The collection of use data by animal species and animal categories is still under development. Although member states are required to report use data for cattle, pigs, chickens and turkeys, data coverage and quality still vary between countries. The reported use data should therefore be interpreted with appropriate caution.

Key findings from the ESUAvet report for 2024:

- Compared to 2023, EU sales of antimicrobials for food-producing animals increased by 5.1% in 2024. This followed an increase in EU sales in 2023.
- This increase suggests that the declining trend in EU sales observed between 2010 and 2022 may be slowing down.
- EU sales in 2024 represent a 24.3% reduction compared to sales in 2018, EMA's reference year. The antimicrobial sales reduction target is a 50% reduction from the 2018 reference value by 2030.

- AMEG category B antimicrobials (third- and fourth-generation cephalosporins, fluoroquinolones, other quinolones, and polymyxins) accounted for 6.0% of total EU sales, compared with 5.4% of total EU sales in 2023.
- In the Netherlands, total sales of antimicrobial veterinary medicinal products for food-producing animals amounted to 24.5 mg/kg of animal biomass in 2024. This places the Netherlands below the weighted average of the participating countries (44.8 mg/kg of animal biomass) (see Figure 18).
- In 2024, sales of AMEG category B antimicrobials remained low in the Netherlands, with sales of third- and fourth-generation cephalosporins amounting to less than 0.001 mg/kg, sales of quinolones amounting to 0.39 mg/kg, and sales of polymyxins amounting to 0.14 mg/kg of animal biomass. Sales of quinolones and polymyxins were slightly lower than the year before, even though sales of quinolones were still relatively high (Figure 19).
- The availability of antimicrobial use data by animal species is improving. However, differences in national data collection systems and data coverage mean that the available data are not yet fully representative.
- Further improvements in data quality and data coverage are needed to enable reliable assessment of trends in actual antimicrobial use by animal species and animal categories.

In the Netherlands, relatively detailed data on antibiotic use at livestock farms and antibiotic prescribing by veterinarians are available, in part due to the country's established sector-specific databases and SDa monitoring. However, the European findings highlight that the international comparability of antimicrobial use data is still limited by differences in definitions, denominators and data coverage.

This indicates that European data are primarily suited to monitoring overall trends, whereas the underlying national monitoring systems remain essential for detailed analyses and for guiding antibiotic use.

Figure 18. Total sales of antimicrobial veterinary medicinal products (in mg/kg) for food-producing animals per country, as reported in the ESUAvet report for 2024. Total sales for the Netherlands are indicated in orange

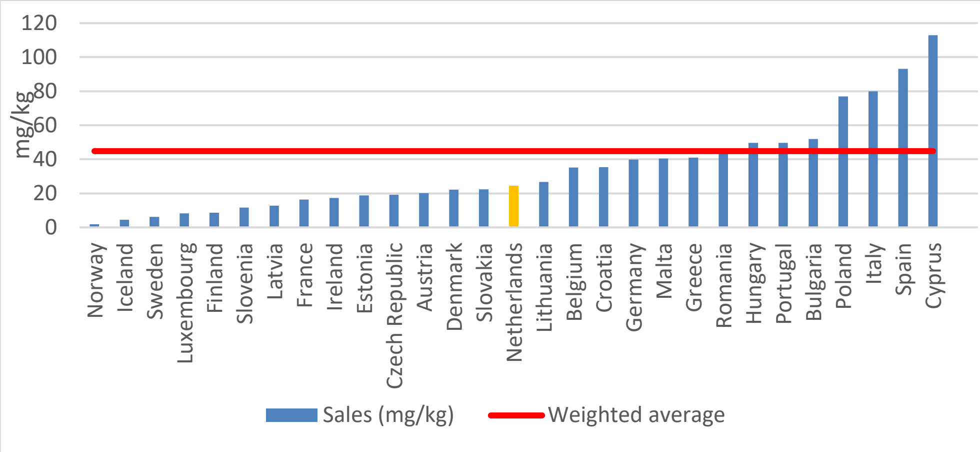
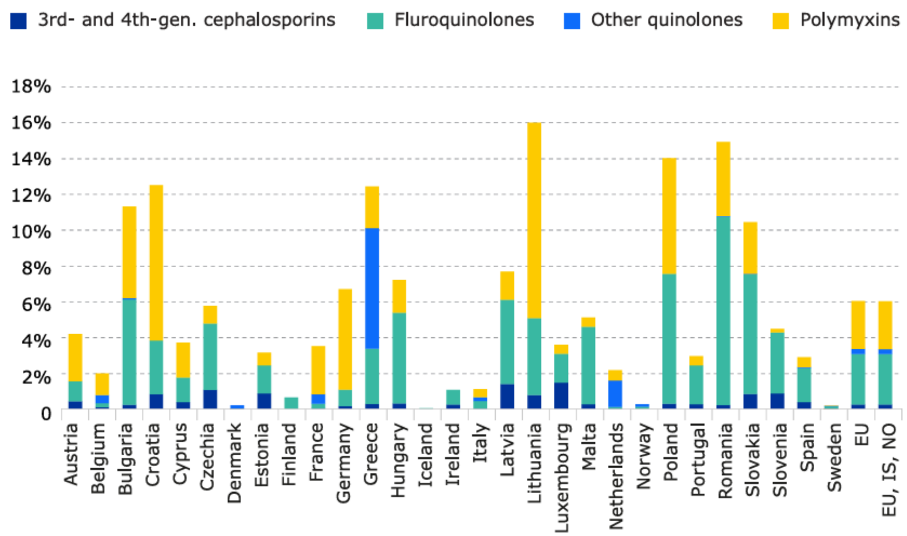


Figure 19. Proportion of total sales (in mg/kg) of third- and fourth-generation cephalosporins, fluoroquinolones, other quinolones, and polymyxins of total antimicrobial veterinary medicinal product sales for food-producing animals in 29 European countries in 2024



Source: Figure 13 in *European Sales and Use of Antimicrobials for veterinary medicine (ESUAvet). Annual surveillance report for 2024* (EMA/CVMP/ESUAVET/376993/2025).

New classification of antibiotics: the NWVAB classification

As of 2026, the NWVAB classification replaces the classification of antibiotics for veterinary use set out in the 2010 WVAB guideline. This revision was prompted by Regulation (EU) 2019/6 (the Veterinary Medicinal Products Regulation, VMPR) entering into force and the introduction of the EMA's AMEG categorization. The AMEG categorization balances the importance of antimicrobials for veterinary medicine against the importance of antimicrobials for human medicine, while also taking into account currently known antimicrobial resistance challenges in both fields. The NWVAB classification forms the basis of antimicrobial standards (formerly known as *formularia*) for specific animal species and categories. These NWVAB standards are being developed specifically for the Netherlands, in line with the recommendations in the AMEG scientific advice (EMA, 2020). The NWVAB classification follows the AMEG categorization, with a few exceptions. Like the AMEG categorization, the NWVAB classification categorizes antibiotics into Category A ("Afzien"; AMEG: "Avoid"), Category B ("Beperken"; AMEG: "Restrict"), Category C ("Conditioneel"; AMEG: "Caution"), and Category D ("Doelmatig"; AMEG: "Prudence"). This replaces the previous classification system, which categorized veterinary antibiotics into first-, second- and third-choice antibiotics (NWVAB, 2025).

The NWVAB classification differs from the AMEG categorization in two important respects. First, amphenicols are categorized as Category D antibiotics in the NWVAB classification because in the Netherlands they remain available for empirical therapy. Second, amoxicillin (without clavulanic acid) is categorized as a Category C antibiotic, reflecting its continued role as a second-choice antibiotic in the Netherlands. This reflects the Dutch approach to preventing the emergence and spread of ESBL-producing resistant bacteria, for which prudent use of amoxicillin is a key principle.

An important change compared with the WVAB guideline is that certain antibiotic classes are assigned to higher risk categories, with more restrictive conditions for use (see Table 11). For example, quinolones other than fluoroquinolones (referred to as "other quinolones") and polymyxins (colistin) for systemic use (oral and injectable), which are considered second-choice antibiotics under the WVAB guideline, are assigned to NWVAB Category B ("*Beperken*") because their potential to select for resistant bacteria is now considered greater than was assumed 20 years ago. Short-acting macrolides and lincosamides, considered first-choice antibiotics under the WVAB guideline, are also assigned to a higher risk category, namely NWVAB Category C ("*Conditioneel*").

This reclassification will have practical implications for antibiotic use in the Dutch livestock sectors. Other quinolones (of which only flumequine is available) are currently used on a regular basis in broilers and to a lesser extent in veal calves. Under the WVAB classification, they are considered second-choice antibiotics. With the introduction of the NWVAB classification, their use falls under the more restrictive NWVAB Category B. The SDa has already regarded colistin as a third-choice antibiotic for some time, a designation comparable to NWVAB Category B. Short-acting macrolides, which move from first-choice antibiotics to the more restrictive NWVAB Category C, are regularly used in the veal and rabbit farming sectors.

The implementation of this new classification will take place in phases as NWVAB standards for specific animal species and categories are established, with the first standards expected in the summer of 2026. The new classification will be integrated into the SDa's monitoring and reporting activities, as well as into sector-specific reports for livestock farmers and veterinarians. In its report on the usage of antibiotics in 2026, the SDa will present use data according to both classification systems.

Table 11. Antibiotic classes for which the categorization changes upon implementation of the NWVAB classification

Antibiotic class	WVAB classification	NWVAB classification
Polymyxins	2nd-choice antibiotics	Category B
Other quinolones	2nd-choice antibiotics	Category B
Short-acting macrolides (excluding those for poultry)	1st-choice antibiotics	Category C
Lincosamides	1st-choice antibiotics	Category C
Spectinomycin	2nd-choice antibiotic	Category D

Appendix

The appendix to this report contains underlying data regarding the various livestock sectors and veterinarians active in these sectors. The appendix is available on the SDa website.

References

EUR-Lex. 2019. Regulation (EU) 2019/6 of the European Parliament and of the Council of 11 December 2018 on veterinary medicinal products and repealing Directive 2001/82/EC. Version of January 28, 2022. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02019R0006-20220128&qid=1690816010498.

European Medicines Agency (EMA). 2020. *Categorisation of antibiotics in the European Union*. EMA/CVMP/CHMP/682198/2017. https://www.ema.europa.eu/en/documents/report/categorisation-antibiotics-european-union-answer-request-european-commission-updating-scientific-advice-impact-public-health-animal-health-use-antibiotics-animals_en.pdf

European Medicines Agency (EMA). 2025. *European Sales and Use of Antimicrobials for veterinary medicine (ESUAvet). Annual surveillance report for 2024*. EMA/CVMP/ESUAVET/376993/2025. https://www.ema.europa.eu/en/documents/report/european-sales-use-antimicrobials-veterinary-medicine-annual-surveillance-report-2024_en.pdf

Nederlandse Werkgroep Veterinair AntibioticaBeleid (NWVAB). 2025. *NWVAB-classificatie van antibiotica voor veterinaire toepassing* [NWVAB classification of antibiotics for veterinary use]. Version 6. https://www.knmvd.nl/app/uploads/2025/12/NWVAB-classificatie_V6.pdf

Stichting Brancheorganisatie Kalversector (SBK). 2024. *Toelichting traject (externe) begeleiding voor rode bedrijven* [Explanation of the external coaching program for rosé veal farms]. https://www.kalversector.nl/resources/uploads/2024/04/240401-Toelichting-traject-externe-begeleiding-voor-rode-bedrijven-versie-3.pdf.

Swinkels, A. F., Fischer, E. A., Korving, L., Christodoulou, R., Wagenaar, J. A., & Zomer, A. L. 2024. Flumequine, a fluoroquinolone in disguise. *NPJ Antimicrob Resist.* 2(1):28. https://doi-org.utrechtuniversity.idm.oclc.org/10.1038/s44259-024-00044-5

Vereniging van Kalverhouders (VVK). 2025, December 29. Veel variatie in Hb-gehalte bij pasgeboren kalveren [Considerable variation in Hb levels in newborn calves]. *Ons Kalf*. https://www.dekalverhouder.nl/nieuws/2025/12/29/veel-variatie-in-hb-gehalte-bij-pasgeboren-kalveren

SDa, the Netherlands Veterinary Medicines Institute
Yalelaan 114
3584 CM Utrecht
The Netherlands

Telephone: +31 (0)88 03 07 222
Email: info@autoriteitdiergeneesmiddelen.nl
www.autoriteitdiergeneesmiddelen.nl

Usage of Antibiotics in Agricultural Livestock in the Netherlands in 2025
Trends and benchmarking of livestock farms and veterinarians
SDa/1166/2026
The Netherlands Veterinary Medicines Institute, 2026