

Declining trend in the use of antibiotics in fattening animals

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Antibiotics are being used less and less in fattening animals. This is the result found by the report, "Treatment Frequency and Antibiotic Consumption Quantities 2018–2021: Trends in Cattle, Pigs, Chickens

and Turkeys Kept for Meat Production," by the German Federal Institute for Risk Assessment (BfR). The BfR is tasked with evaluating the data on antibiotic use provided by the German federal states each year as well as with performing a risk assessment of antibiotic resistance.

In its newly published report, the BfR considers the data from the years 2018 to 2021 and compares them with the year 2017. "The good news is that the overall consumption of [antibiotics](#) is declining in the [farm](#) animal species considered, albeit with fluctuations," says Professor Dr. Annemarie Käsbohrer, Head of the Epidemiology, Zoonoses and Antimicrobial Resistance Unit, who prepared the report.

The occurrence of antibiotic-resistant germs in animals for slaughter is also declining. "However, this decrease differs between animal categories and does not reflect the observed decrease in consumption. We need to obtain a better understanding of the resistance behavior of germs and intensify efforts to reduce it in order to be able to achieve a long-term drop in the resistance rate," says Käsbohrer.

For the report, the BfR focused on four parameters. First, the treatment frequency at the farm level was considered. This value indicates how many days within a six-month period, on average, a substance with antibiotic effect was applied to an animal within an animal category on a farm. These values were calculated for fattening broilers and turkeys, fattening piglets and pigs as well as fattening calves and beef cattle. This also allowed farms to be identified that had not used any antibiotics in the course of a six-month period, so-called zero-user farms. In addition, the BfR investigated in which animal categories antimicrobial substances are employed most frequently (population-wide treatment frequency) and how the consumption quantities developed over the period.

The highest proportion of zero-user farms per half-year was in beef cattle. About 85% of these farms did not use antibiotics in the six-month

period. A little more than half of the farms with fattening calves did not use any antibiotics in a six-month period. In the case of fattening pigs and piglets, zero-user farms that did not use antibiotics within a six-month period comprised about a quarter of the farms. For fattening broilers and turkeys, the proportion of zero-user farms varied between 15 and 20% per half-year.

A [downward trend](#) can be seen in the quantities of consumed antibiotics for all animal categories, albeit not always evenly distributed over the period 2017 to 2021. The largest quantities of antibiotics were still used in fattening pigs, followed by piglets, turkeys, chickens and calves. The consumption quantities for fattening beef cattle are negligible. It was especially welcome to see that in all animal categories a decline was also observed for the antibiotic groups that are particularly important for the treatment of humans.

In most cases, the average frequency of antibiotic administration among individual farms exhibited a decreasing trend, although higher values were found in individual half-years. However, a clear upward trend can be seen in fattening broiler farms between 2017 and 2021. The average treatment frequency at the farm level increased by 4.8 days.

The population-wide treatment frequency reflects this trend. The highest frequency was observed in poultry with an average treatment frequency of between 20 and 25 days, followed by fattening calves and piglets at 10 to 15 days and fattening pigs at around three days.

The BfR has also compared the data now available on the use of antibiotics in fattening animals with the data from resistance monitoring, which is undertaken jointly with the German federal states and the Federal Office for Consumer Protection and Food Safety (BVL). In resistance monitoring, a decrease in the resistance rate was observed more often than an increase for the individual active substances,

although there were differences between the animal species. However, the changes were not necessarily associated with those antibiotic substance classes whose use was reduced the most in the respective animal categories.

From the point of view of the BfR, efforts to reduce the use of antibiotics must therefore be continued and intensified in order to prevent the spread of resistance and to be able to achieve a decrease in resistance rates in the long-term.

The legal basis for the BfR report that has now been published is the Veterinary Drugs Act (TAMG) of January 28, 2022. The law stipulates that farms that keep cattle, pigs, chickens or turkeys for meat production must document the use of antibiotics and report them to the responsible state authorities. This data is transmitted to the BfR in pseudonymized form.

The BfR evaluated the data from the eight half-years, from the first half of 2018 to the second half of 2021, and compared it with the situation in 2017. In the future, the BfR will examine annually how the treatment frequency and the consumption quantities of antibiotics develop over time. This is an important building block for assessing the effect of the German government's antibiotics minimization strategy and the risk of transmission of resistant bacteria from animal husbandry to humans.

The aim of the antibiotics minimization strategy is to reduce the use of antibiotics in animal husbandry in order to counteract the development of resistance in germs that can spread to humans. If people come into contact with antibiotic-resistant germs, then antibiotic therapies required for the treatment of diseases may no longer work. The evaluation of the data on the use of antibiotics and the [risk assessment](#) of the development of germ resistance provides the basis for the competent authorities to implement consumer protection policy.

More information: "Treatment Frequency and Antibiotic Consumption Quantities 2018-2021: Trends in Cattle, Pigs, Chickens and Turkeys Kept for Meat Production" (In German).

[www.bfr.bund.de/cm/343/therapi ... 018-2021-bericht.pdf](http://www.bfr.bund.de/cm/343/therapi...018-2021-bericht.pdf) (2.5 MB)

Provided by BfR Federal Institute for Risk Assessment

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