



**TABLE 1: CALCULATING WEIGHT-ADJUSTED ANTIBIOTICS FOR U.S. PIG PRODUCTION**

<b>Milligrams (mg) of medically important antibiotics sold for pig production</b>			
<b>2016 U.S. Sales of Medically Important Antibiotics<sup>1</sup></b>	<b>Estimated Sales for Pig Production<sup>1</sup></b>	<b>Conversion to milligrams</b>	
8,361,740 kg	x 37%	x 1,000,000	<b>3,093,843,800,000 mg</b>
<b>Calculated weight (in kilograms, kg) of pigs to which antibiotics were given</b>			
<b>Number of hogs slaughtered, 2016<sup>2</sup></b>	<b>Average weight of mature hog at slaughter<sup>3</sup></b>		
118,303,900	x 65 kg	7,689,695,000 kg	
<b>Number of breeding animals<sup>2</sup></b>	<b>Average weight of breeding sow<sup>3</sup></b>		
6,090,400	x 240 kg	1,461,696,000 kg	<b>9,151,391,000</b>
<b>Antibiotics used per kilogram of pig:</b>			<b>338 mg/kg<sup>4</sup></b>

Sources:

1) Food and Drug Administration. Summary Report on Antimicrobials Sold or Distributed for Use in Food-Producing Animals, 2016. 7 December 2017. <https://www.fda.gov/downloads/ForIndustry/UserFees/AnimalDrugUserFeeActADUFA/UCM588085.pdf>.

2) U.S. Department of Agriculture, National Agriculture Statistics Service. Overview of U.S. Livestock, Poultry and Aquaculture Production in 2016. Table 6, page 19. [https://www.aphis.usda.gov/animal\\_health/nahms/downloads/Demographics2016.pdf](https://www.aphis.usda.gov/animal_health/nahms/downloads/Demographics2016.pdf). The number of breeding animals slightly overstates the actual number of sows, since it also includes boars. In addition, it should be noted that the number of breeding animals reflects sows and boars on farrowing operations at the end of 2016, and are presumed to have stayed fairly constant over the course of the year. In contrast, the number of slaughtered hogs over the course of the year is much greater than the total U.S. inventory of hogs being raised for slaughter at any point in time (as seen in Figure 3, for example). That is because the average lifespan of a slaughtered hog from farrow to slaughter is about 6 months.

3) To facilitate comparison, we use the same average weights for mature hogs (65 kg) and for sows (240 kg) at the time of treatment as have been used by the European Surveillance of Veterinary Antimicrobial Consumption (ESVAC) project of the European Medicines Agency since 2010. The methodology is laid out in Appendix 2 of the Agency's report 'Trends in the sales of veterinary antimicrobial agents in nine European countries: 2005-2009' (EMA/238630/2011), [http://www.ema.europa.eu/docs/en\\_GB/document\\_library/Report/2013/10/WC500152311.pdf](http://www.ema.europa.eu/docs/en_GB/document_library/Report/2013/10/WC500152311.pdf).

4) We do not make any allowances in the calculation for the import or export of piglets or hogs. Imports/exports are negligible compared to the slaughter of hogs raised domestically. Omitting them should therefore have had minimal impact on the calculated milligrams of antibiotic used per kilogram of pig.