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Animals**

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# Improved immunity and disease resistance reduces antibiotic use in higher welfare chicken

**The intertwined relationship between antibiotics, public health and chicken production has far-reaching implications for both animal welfare and human health**

Antibiotics have been widely used in chicken production to enhance growth and prevent diseases, yet their misuse and overuse has contributed to antibiotic-resistant bacteria, impacting animals and humans alike.<sup>1,2</sup> The transmission of antibiotic-resistant bacteria from animals to humans raises concerns about the emergence of difficult-to-treat infections.<sup>3</sup> In 2019, approximately 4.95 million deaths were associated with antimicrobial resistance (AMR) globally.<sup>4</sup> Therefore, Humane World for Animals urges a shift toward higher welfare chicken breeds with better natural immunity and disease resistance to reduce reliance on antibiotics.

## **The Better Chicken Commitment complements international policy advances on antibiotic use**

The Global Action Plan on AMR was adopted in 2015 by the World Health Assembly. Under a One Health approach, countries committed to the development and implementation of national action plans. The World Organisation for Animal Health (WOAH), the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Environment Program (UNEP) have all endorsed the Global Action Plan. As of 2023, 178 countries have developed national action plans on anti-microbial resistance,<sup>5</sup> and enacted supporting legislation. For example, since 2017 in the United States, medically important antimicrobials are no longer permitted in the feed or drinking water of animals used for food production without veterinary oversight and medically important antibiotics are not permitted for growth promotion. This is a significant change, as antimicrobials were previously used for decades in U.S. animal agriculture.<sup>6,7</sup> China has also enacted a ban of all growth-promoting drugs used as feed additives, except for traditional Chinese medicine. Veterinary drug manufacturers were ordered to stop production, and imports are not permitted.<sup>8,9</sup> EU legislation goes even further, prohibiting the routine use of antibiotics in animal farming since 2022, including preventative (prophylactic) group treatments.<sup>10,11</sup> The Feed Additives Regulation, which came into effect in January 2006, bans the use of antibiotics for growth promotion, allowing their use only for medicinal purposes under veterinary supervision.<sup>12</sup>

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in the Netherlands, where most chickens grown for grocery retailers are slower growing breeds, used no antibiotics at all by 2022.

## Improving chicken welfare reduces antibiotic use

Conventional chickens kept for meat production have been bred to grow so quickly that their health is compromised. The rapid body weight gain causes unintended side effects including painful<sup>13,14,15</sup> and debilitating walking difficulty.<sup>16,17,18,19</sup> Conventional birds are less active and spend more time sitting in contact with the litter,<sup>20,21</sup> which can cause more contact dermatitis (lesions on the legs, breast and feet), especially if the litter is wet.<sup>22,23</sup> Fast growing birds are also more susceptible to bacterial diseases (including necrotic enteritis,<sup>24</sup> salmonella,<sup>25,26,27</sup> and pathogenic *Enterococcus cecorum*).<sup>28</sup> There may also be a difference in immune response to parasites. In one study of infected chickens, the slower-growing Ranger Classic breed had reduced intestinal *E. maxima* compared to the Ross 308 breed.<sup>29</sup> It is no surprise that faster growing chickens have higher mortality rates.<sup>30,31</sup> Conversely, slower-growing chickens, have better immunity,<sup>32,33</sup> are more robust and require fewer antibiotics.<sup>35,35</sup> In the Netherlands, where most chickens grown for grocery retailers are slower growing breeds, 80% of farms supplying this sector reported no antibiotic use at all by 2022.<sup>36</sup> Therefore, instead of using conventional breeds which are often fed antibiotics to stave off sickness, it is highly recommended that producers shift to healthier chicken breeds, which grow at a slower rate and are less susceptible to sickness. This would help reduce the use of antibiotics and mitigate the development of antibiotic-resistant pathogens, as well as improve the welfare of billions of animals.

The Better Chicken Commitment (BCC) is a set of science-based welfare criteria agreed by animal welfare organizations worldwide to improve the lives of chickens raised for meat.<sup>37</sup> The BCC initiatives in Europe, Brazil, Australia/New Zealand the United States, Canada and the United Kingdom set out minimum standards for producers and businesses that produce or sell chicken meat, aiming to address the most urgent welfare issues in chicken production. The BCC requires the use of slower growing chicken breeds, birds with demonstrated animal welfare improvements. Humane World for Animals urges the chicken industry to adopt the Better Chicken Commitment.

*"The science is clear: chickens raised for meat suffer immensely under conventional production methods. The ECC criteria directly address the most pressing welfare issues and will meaningfully improve the health of millions of animals in Europe."*

— Dr. Sara Shields, Director, Farm Animal Welfare Science, Humane World for Animals

**Chickens raised conventionally are bred for extremely rapid weight gain.<sup>38</sup>**



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