

Antibiotic use in livestock sector set to rise: study

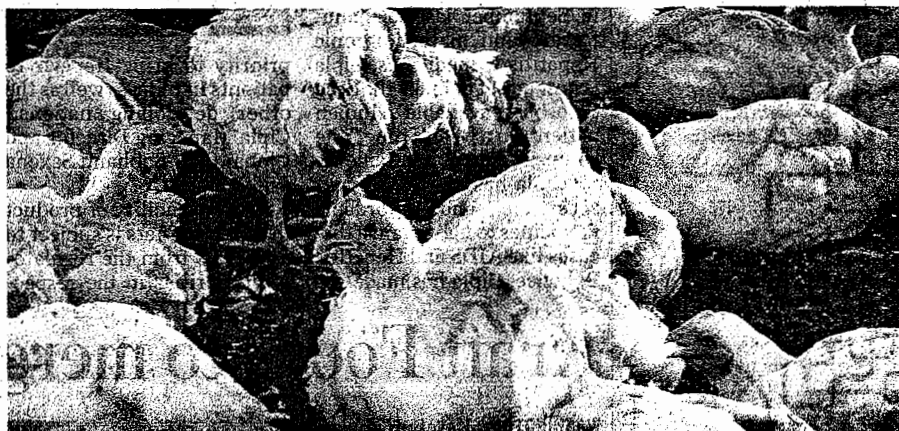
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With rising incomes fuelling more demand for meat, India needs to worry about antibiotic usage in growing animals for food, especially poultry, according to a recent study. Such antibiotic use could contribute to the spread of drug-resistant microbes, which are already a major public health problem.

The issue of antibiotic consumption by the livestock sector is a global one, but particularly so for emerging economies, according to a paper published online earlier this month by the *Proceedings of the National Academy of Sciences (PNAS)*.

Greater affluence in low- and middle-income countries was driving "an unprecedented growth in demand for animal protein," noted a team of researchers in the paper. More intensive livestock production systems brought with it greater use of antibiotics, which are administered not just to treat sick animals but also at sub-therapeutic doses as growth promoters and to keep animals from catching disease.

The researchers used statistical models that combined antimicrobial use in a number of high-income countries with data about livestock densities to map global antimicrobial utilisation in 2010. They then projected the antimicrobial use to 2030.



THE THREAT: Antibiotic usage in growing animals for food, especially poultry, is worrisome says the recent study. - PHOTO: M. BALAJI

They found that the global consumption of antibiotics for production of animals would rise by 67 per cent over those 20 years. In the 'BRICS' - Brazil, Russia, India, China and South Africa - antimicrobial consumption would go up 99 per cent, up to seven times the projected population growth in those countries.

In India, antimicrobial consumption for meat production could more than double by 2030, according to Thomas P. Van Boeckel, a postdoctoral researcher at Princeton University and first author of the paper.

At least 23 per cent of this increase is attributable to more intensive production systems and the rest to more animals being grown, he said in an email. Moreover, such antimicrobial consumption in India would be growing at a

little over four per cent a year while its human population grew at only around one per cent annually.

There could be a rise of 477 per cent in antimicrobial use by the poultry sector between 2010 and 2030, while it would be 164 per cent for pig farming. "Thus it is really in the poultry sector that things should be kept under close scrutiny and where the efforts to limit consumption should be targeted," remarked Dr. Van Boeckel.

"Given the significant increases we have seen in infections that are not treatable using common antibiotics, we should take the issue of unnecessary antibiotic consumption very seriously, whether in humans or in animals," said Ramanan Laxminarayan, a senior author of the paper and director of the Center for Disease Dynamics,

Economics & Policy at Washington, D.C. in the U.S. in an email. He is also Vice President, Research and Policy, at the Public Health Foundation of India in Gurgaon.

"Most people are probably not aware that the meat they consume comes from animals that are fed a steady low dose of antibiotics to increase their weight gain and compensate for poor hygiene on farms," he added.

"Globally, intensive livestock farming has increased food production at a low cost per unit produced, but perhaps at an unrecognised price paid in increased antimicrobial resistance," the researchers observed in the *PNAS* paper. They called for "urgent and concerted action in all countries" to limit the overuse and abuse of antimicrobials in food animal production.

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