Farm animal production and human health

Human health is inextricably linked with farm animal welfare and industrial farm animal production. Data suggests that human health is negatively affected when animal welfare is compromised, an outcome that results from environmental degradation, the use of non-therapeutic levels of antibiotics for growth promotion, and other consequences of the intensification of production.

Even if dietary patterns shift to reduce meat and fish consumption, these animal source foods will very likely be part of the diet of the future. Industrial production, modified from the current intensified systems, will still be required to feed the world in 2050 and beyond. This paper suggests that sustainable intensification is possible and, further, that many human health consequences of intensified industrial production can be eliminated or reduced if farm animal welfare is improved. Recirculating water-based fish production exemplifies these positive outcomes, as many new systems can be operated at industrial levels without the use of antibiotics and produces a product that protects the environment.

Raising commercial quantities of animal source foods while respecting the welfare of animals is possible. Sustainable intensification is a means of production that observes The Five Freedoms, a widely accepted set of criteria for animal welfare, and also ensures sustainability in other respects, such as the environment. The Five Freedoms ensure farm animals are able to express normal behaviors and protect them against hunger and thirst; discomfort; pain, injury, and disease; and fear and distress. While The Five Freedoms have been widely accepted and expanded upon in Europe, the United States does not define or regulate the welfare of farm animals.

The intensification of animal production without adequate attention to animal welfare involves practices that have negative effects on human health. These effects include environmental and community costs, as well direct health effects stemming from the use of nontherapeutic levels of antibiotics. Antibiotics and other antimicrobials were introduced into industrial farm animal production more than 40 years ago, first as growth promoters and, more recently, to control and prevent diseases of intensification. While these drugs are the same ones used in human health and disease, in the protocols for animal growth and disease prevention, they are used throughout the lifespan of the animal and at levels that are below therapeutic. This use differs from therapeutic treatment for disease, which the author believes to be morally necessary.

In 2008, The Pew Commission study on the Impact of Industrial Animal Production on Animal Welfare, Environment, Social Justice, and Public Health concluded that the published literature demonstrated that low level nontherapeutic use of antibiotics was largely responsible for the development of antibiotic resistance seen in human and was a significant public health concern. The Commission recommended the nontherapeutic use of antibiotics in food animal production should be stopped. While the FDA has issued a request that producers stop using antibiotics as growth promoters, nontherapeutic levels of antibiotics for disease prevention are still permitted, even though their protocol is the same as that of growth promotion.

As the population increases, the moral imperative is to feed the world with nutritious food that does not compromise the environment, provides at a minimum the 5 Freedoms of animal welfare, and promotes, human health and well-being.

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