



Strengthening Resilience in Animal Agriculture in a World with Emerging Threats

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With emerging threats

The demand for animal protein is steadily increasing and experts predict that in the year 2050 consumption of animal by-products such as eggs, meat, and milk will double to meet the evolving preferences of people. Consequently, the socioeconomic roles of animal farmers are also growing in importance as the population rises, revenues inflate, and urbanization intensifies in all regions, hence efficient and sustainable animal production systems are imperative.

Animal farming contributes largely to rural livelihoods and the country's economy. It aids as a supplementary source of revenue to millions of farmers and employment opportunities across all sectors and subsectors of agriculture benefiting those involved in forage production, feed manufacturing, veterinary care, and processing trades. Additionally, this dwelling acts as a family safety net for small farmholders or backyard raisers in developing countries, offering an alternative asset that can be sold during periods of economic struggles, disasters, and emergencies. However, meeting sustainable animal agriculture is being challenged by several driving factors including global environmental changes, suitable arable lands that would accommodate grazing animals, potable water sources, highly nutritious fodders and crops, and pestilences afflicting animals and humans.

Currently, the prominent emergence and re-emergence of diseases are a pressing concern that highlights the need for rigid surveillance, and strategic interventions. The dynamic nature of pathogens to propagate and develop to become infectious and

communicable is ascribed to climate change, misuse of antibiotics, human-animal interactions, and many other aspects, which have heightened the threats to livestock, poultry, and other commodities, thereby affecting the overall food chain. The emergence of novel diseases and the resurfacing of previously controlled ones have a direct and indirect economic upshot to multiple sectors including trade, agriculture, healthcare, and tourism.

African swine fever, a highly contagious disease in pigs, resulted in mass culling operations among affected regions. Additionally, avian Influenza has overwhelmingly devastated poultry trades and poses possible zoonotic transmission to humans. On the other hand, rabies although preventable remains a public health concern most especially in developing countries where access to immunization and responsible pet ownership are not well advocated.

The pondering question is - are we ready to face the larger picture? This calls for reflection on the readiness, resilience, and adaptability of animal scientists, veterinarians, public health workers, and others with vital roles in a coordinated one-health approach. The grander picture extends beyond controlling individual outbreaks; it entails strengthening the monitoring and surveillance, efficient biosecurity protocols, improving and refining diagnostic capabilities, capitalizing on research, and policy support for long-term goals to save and serve the interest of the farmers - the heart of the agricultural sector. Ultimately, the challenge is not just about addressing these concerns - it is also about re-assuring and building a future where food security, environmental sustainability, and public health are safeguarded against inevitable circumstances.