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Biotechnology for animal (poultry) production in a changing world: A must for developing nations

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Biotechnology is widely used in animal production with numerous other potential applications. It can be applied for improving animal performance through better nutrition, enhanced production potential or improved health status. Plant biotechnology can produce crops which are embedded with improved nutritional value or incorporate vaccines or antibodies into feeds that will cheaply and effectively protect the animals against diseases. Transgenic manipulation of commensal gut or rumen micro-organisms has considerable potential for improving nutrition, gut development and health in animals. Accelerated growth and leaner carcasses in meat animals and increased milk production in dam cows is achieved by the administration of recombinant somatotropin (SI) and by controlling the expression of the gene with ad hoc promoters thereby preventing severe impairment of the health status of transgenic animals. The paper also unfolds some biotechnologically generated possibilities through the production of genetically modified (GO) crops, value-added traits, added-value feed stuffs (quality traits) as well as the production of dietary enzymes and production of transgenic animals for use in animal production with particular bias on poultry. Animal breeding is another application. While developed nations are leading the way, developing countries are lagging behind due to a number of factors such as lack of man power, poor infrastructure /laboratories, misplaced priorities and lack of self will by both the Government and Management of the various institutions in developing nations. A drastic adjustment and redemptive action by developing and developed nations respectively is suggested as a way forward.

Biography

Damwesh Sila Daniel has completed his Masters in Animal Production and Range Management with a distinction in Research in 2012 from Modibbo Adama University of Technology, Nigeria. He has been an Instructor in Biology at Nakam Memorial School, Panyam, Nigeria. He has published 4 papers in reputed journals, was a Member of Animal Science Association of Nigeria (ASAN) and Supervisor of International Young Inventors Competitions (IEYI, IIDC) in Indonesia, Thailand and Taiwan.

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