TEXTBOOK ON DIMENSIONS OF AGRICULTURAL EXTENSION

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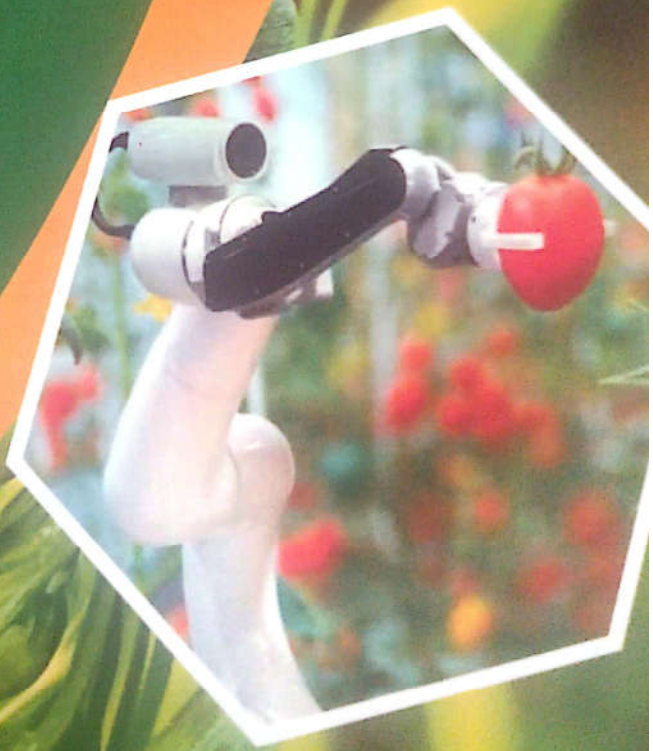

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Dr. Kumar is actively engaged in teaching and guiding undergraduate, postgraduate, and Ph.D. students in Agriculture. His impressive academic record includes publishing 30 research papers, 24 research abstracts, two newsletters, 15 popular extension articles and brochures, five book chapters, and three books. Additionally, he has participated in three ICAR trainings, seven Faculty Development Programmes (FDP), and four professional development courses.

Dr. Kumar's outstanding contributions to education, research, and extension work in agriculture have earned him several prestigious awards, including the Best Thesis Award, Young Scientist Awar, Best Oral Presentation Awardee, and Young Extension Worker Award. Under his supervision, eight students have completed their research at the postgraduate level, and four students are currently pursuing their Ph.D. His work in villages around Lucknow is truly inspiring! By teaching and conducting extension activities, he's making a significant impact on the community. His initiatives include health campaigns, awareness rallies, and community engagement programs such as Kisan Chaupal, Kisan Pathshalas, and Kisan Goshthis.

Dr. Mustfa Hussain is an expert in the field of Marketing Management, Supply Chain and Agribusiness etc. He has total 9 years of experience in academics at various levels. Dr. Hussain has done MBA in HR and Marketing from Uttar Pradesh Technical University in 2008 and Ph.D. in Management and Agribusiness Management from College of Agribusiness Management, G. B. Pant University of Ag. and Tech., Pantnagar in 2013. He has total 20 publication as research papers and book chapters. Currently he is serving Integral University as Associate Professor. More than 30 students have been guided under his supervision for their research at PG level while 2 students are being supervised at Ph.D. level.

Dr. Akanksha Singh is currently working as an Assistant Professor (Agriculture Extension) in Department of Agriculture, IIAST, Integral University, Lucknow. She has received her B.Sc. Agriculture from Institute of Agricultural Sciences, Banaras Hindu University (B.H.U) (2017) with an OGPA of 8.72, M.Sc. (Ag.) Extension Education from Department of Extension Education, Institute of Agricultural Sciences, Banaras Hindu University (B.H.U) (2019) with an OGPA of 9.11 and Ph.D. (Agricultural Extension and Communication) from Sardar Vallabh Bhai Patel University of Agriculture and Technology, Meerut (2022) with an OGPA

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ARTIFICIAL INTELLIGENCE FOR EXTENSION ADVISORY SERVICE

— *Sunil Kumar, Mustfa Hussain*

ABSTRACT

In recent years, the agricultural landscape has witnessed a transformative shift in the way farmers access information and improve their practices. This evolution is primarily attributed to the integration of Artificial Intelligence (AI) into the realm of agricultural extension services. AI, with its ability to process vast amounts of data and generate actionable insights, has the potential to revolutionize how extension advisory services are delivered to farmers. This article explores the various aspects of leveraging AI in agricultural extension services and its implications for rural development.

Keywords: *Artificial Intelligence, Farmers, Agriculture, Extension, Advisory services.*

Introduction

Artificial intelligence (AI) refers to the ability of a computer or a computer-enabled robotic system to process information and produce outcomes in a manner similar to the thought process of humans in learning, decision making and solving problems.

1. AI holds the promise of driving a food revolution and meeting the increased demand for food (global need to produce 50% more food and cater to an additional 2 billion people by 2050 as compared to today).
2. It also has the potential to address challenges such as inadequate demand prediction, lack of assured irrigation, and overuse / misuse of pesticides and fertilizers. Some use cases include improvement in crop yield through real time advisory, advanced detection of pest attacks, and prediction of crop prices to inform sowing practices.