3.2.1 Number of papers published per teacher in the Journals notified on UGC website during the year

Title of paper	Name of the author/s	Department of the teacher	Name of journal	Year of publication	ISSN number	Link to the recognition in UGC enlistment of the journal
Using systems biology to increase agricultural production : A critical Review Study	Dr. Ashish Kumar Gupta	Department of Agriculture Science	IJFANS	2023	2330-7876	
Applications of biotechnology in crop improvement and disease resistance	Dr. Ashish Kumar Gupta	Department of Agriculture Science	Eur. Chem. Bull	2023	2063-5346	
The role of biotechnology in sustainable Agriculture and environmental protecti	Dr. Ashish Kumar Gupta	Department of Agriculture Science	Eur. Chem. Bull	2023	2063-5346	
Studies on socio-econimic status of existing agroforestry practices in selected villages of sohawal block of ayodhya district in uttar pradesh.	Dr. Arvind Kumar Tripathi	Department of Agriculture Science	International Journal of Statisics and Applied Mathematics	2023	1037-1043	
Studies on socio-econimic status of existing agroforestry practices in selected villages of sohawal block of ayodhya district in uttar pradesh.	Mr. Ramesh Singh	Department of Agriculture Science	International Journal of Statisics and Applied Mathematics	2023	1037-1043	
Using systems biology to increse agricultural production : A critical Review Study	Mr. Mayank	Department of Agriculture Science	IJFANS	2023	2330-7876	
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Artificial Neural network for Synthesis and Optimization of quad circle	Mr. Neetendra Kumar	Department of Computer Science	International Journal of Applie Engineering and Tech.	2023	2633-4828	
A review on code Complication And virus detection	Mayank Singh	Department of Computer Science	International Journal of Recent technology science and management	2023	2455-9679	

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USING SYSTEMS BIOLOGY TO INCREASE AGRICULTURAL PRODUCTION: A CRITICAL REVIEW STUDY

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Abstract: In recent times, the collecting of huge datasets from numerous plant species' genomes, transcriptomes, proteomes, metabolomes, and epigenomes has become routine technique. However, the vast majority of these datasets in different crop species were studied independently, making it impossible to attain comprehensive understanding of the molecular basis of complex features and biological networks. It takes a systems biology approach, which incorporates integration of various omics data, modelling, and prediction of cellular processes, to understand the flow of biological data that underlies complex traits. In this context, systems biology with integration of multiomics data is crucial and enables a complete knowledge of the complex system with the various levels of biological structure engaging with the external surroundings to generate phenotypic expression. In this article, we'll talk about the most recent developments in the field of various omics investigations, such as integrative & systems biology methodologies, with a focus on the ways in which this research might be used to crop improvement. In addition, we have analysed the challenges and opportunities associated with integrating multiomics data, modelling, and biological knowledge of complex traits that underpin yield & stress tolerance in important cereals and legumes. These subjects were covered in the preceding section.

Introduction:

Cereals and legumes, among other plant foods, play a significant part in the human diet since they provide the appropriate number of calories, proteins, essential amino acids, and minerals. Crop types that are capable of producing larger yields have been generated via intensive breeding efforts over the last one hundred years. Yet, due to rising populations in many parts of the world, there is an urgent need to increase production levels by 50 percent by 2050. This growth in output and productivity presents a challenge when considering the present environmental bounds and the fast-diminishingnormal resources. Arabidopsis (Arabidopsis thaliana (L.) Heynh.) & rice (Oryza sativa L.) are two examples of model plants that have been subjected to significant research to gain a comprehensive grasp of plant genetics and genomics as well as describe the function of certain genes. This is necessary for harnessing genomics to breed a new cohort of climate-ready harvests, which will allow for the production of an abundance of food rich in nutrients. To this end, a strategy known as genomics-assisted breeding has the potential to speed up already established crop improvement operations significantly. Before the age of genomics, the ability to translate or transmission genetic info gathered from one species to additional was relatively restricted. This was mostly due to a lack of sufficient knowledge in genomic info and schemes biology.

The development of next-generation sequencing (NGS) technologies has ushered in a new age of 'big data' by radically altering and quickening the rate at which genomes and transcriptomics data are produced. This has led to a rebellion in the field of genomics. Genomes and transcriptomes from many different plant species have been sequenced using next-generation sequencing technologies developed by companies like Illumina (with their MiSeq/HiSeq system), Roche (with their 454/FLX system),

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Section A-Research paper
ISSN 2063-5346

APPLICATIONS OF BIOTECHNOLOGY IN CROP IMPROVEMENT AND DISEASE RESISTANCE

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Abstract: Biotechnology has become an indispensable tool in modern agriculture, offering innovative solutions to address the pressing challenges of food security and sustainable farming. With a burgeoning global population and mounting environmental threats, the need for crop improvement and disease resistance is paramount. This article explores the myriad applications of biotechnology in agriculture, focusing on genetic modification, marker-assisted breeding, genome editing, and disease resistance. These advancements not only enhance crop traits and yields but also reduce the environmental impact of farming. By harnessing the power of biotechnology, we can better equip ourselves to feed a growing world while preserving the planet's delicate balance.

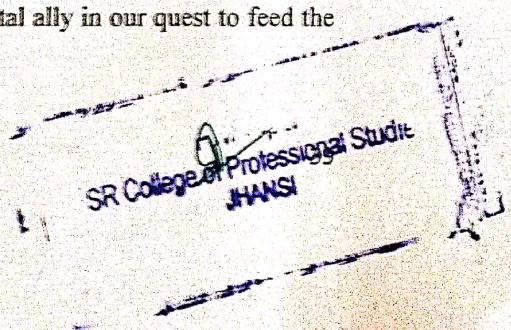
Keywords: Biotechnology, Crop improvement, Disease resistance, Genetic modification, Marker-assisted breeding, Genome editing, Sustainable agriculture, Food security, Environmental impact, Agriculture innovation.

Introduction:

In the ever-evolving landscape of agriculture, biotechnology has emerged as a beacon of hope and innovation. With the global population on a trajectory to exceed 9 billion by 2050, the demand for food production is mounting, while the resources available for farming are dwindling due to climate change, soil degradation, and water scarcity. In this context, biotechnology serves as a powerful tool, offering a multifaceted approach to enhance crop improvement and combat the ever-present threat of diseases that can devastate our vital food supply.

The essence of biotechnology in agriculture lies in its ability to manipulate living organisms at the molecular level. It harnesses the power of genes, proteins, and cellular processes to optimize crop traits, bolster disease resistance, and ultimately elevate agricultural productivity to meet the needs of a growing global community.

Over the decades, biotechnology has evolved from a conceptual framework to a tangible force that shapes the modern agricultural landscape. This article delves into the multifarious applications of biotechnology in crop improvement and disease resistance, highlighting its pivotal role in securing our food future and promoting sustainable practices in the face of profound challenges. In doing so, it underscores the transformational potential of biotechnology, not merely as a scientific discipline but as a vital ally in our quest to feed the world while preserving the delicate equilibrium of our planet.



Section A-Research paper
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THE ROLE OF BIOTECHNOLOGY IN SUSTAINABLE AGRICULTURE AND ENVIRONMENTAL PROTECTION

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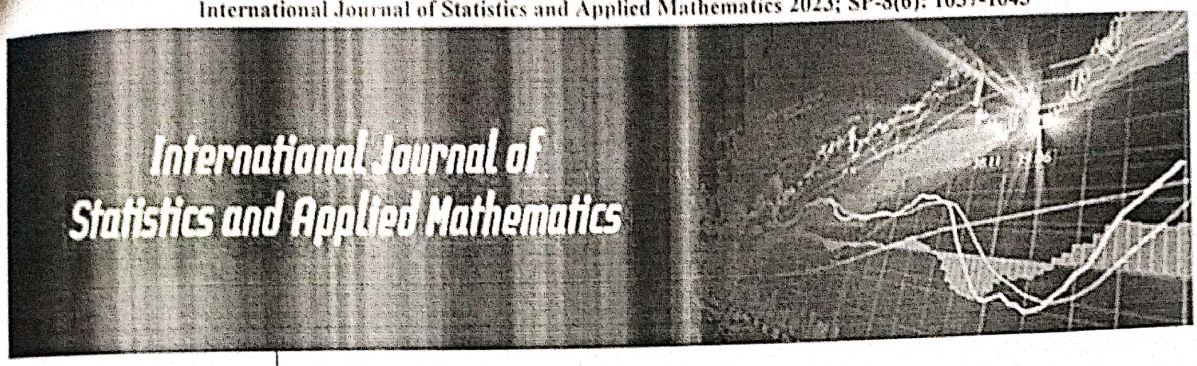
Abstract: Sustainable agriculture is a way of producing food and fiber that meets the needs of the present without compromising the ability of future generations to meet their own needs. It involves balancing economic, environmental, and social aspects of farming and food systems. Biotechnology is a set of techniques and tools that use living organisms or substances from them to modify or create products. Biotechnology has the potential to contribute to sustainable agriculture by enhancing crop productivity, resilience, and quality; reducing the use of harmful chemicals and inputs; and creating new sources of bioenergy and bioproducts. However, biotechnology also poses some challenges and risks, such as ethical, social, and environmental concerns; regulatory and trade barriers; and potential negative impacts on biodiversity and human health. Therefore, it is important to ensure that biotechnology is used in a responsible, safe, and inclusive manner, with adequate public participation, transparency, and oversight. This article provides an overview of the role of biotechnology in sustainable agriculture and environmental protection, highlighting some of the benefits, challenges, and opportunities for its development and application.

Introduction:

Agriculture is one of the most important human activities, providing food, feed, fiber, fuel, and other essential goods and services for billions of people. However, agriculture also faces many challenges, such as increasing population and demand; diminishing natural resources and environmental quality; climate change and variability; pests, diseases, and weeds; and socio-economic inequalities and conflicts. These challenges threaten the sustainability of agriculture, which is defined as "the successful management of resources for agriculture to satisfy changing human needs while maintaining or enhancing the quality of the environment and conserving natural resources" [1] (p. 1).

To address these challenges and achieve agricultural sustainability, it is necessary to adopt an integrated and holistic approach that considers the economic, environmental, and social dimensions of farming and food systems [2]. Such an approach should aim to increase the efficiency and effectiveness of resource use; enhance the resilience and adaptability of crops and livestock; improve the quality and safety of food and fiber; reduce the negative impacts of agriculture on the environment; protect the health and well-being of farmers and consumers; and promote the participation and empowerment of stakeholders [3].

Biotechnology is a broad term that encompasses a range of techniques and tools that use living organisms or substances from them to modify or create products [4]. Biotechnology can be classified into three categories: traditional or conventional biotechnology, which involves the use of microorganisms, plants, or animals for fermentation, breeding, or cross-



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Studies on socio-economic status of existing agroforestry practices in selected villages of Sohawal block of Ayodhya District in Uttar Pradesh

Arvind Kumar Tripathi, SK Verma, Gaurav Kumar, Ramesh Singh, Mayank Jain and Ratnakar Pathak

Abstract
Socio-economic status and livelihood support through traditional agroforestry systems in certain village's of sohawal block on farm production of commercial crops, fruits, vegetables and woody perennials on the same piece of field. Present study revealed that literacy rate of farmers and their family members become gradually increasing from marginal 62% to large 82% category of respondents in this block. Major domesticated animals are cows, goat and buffalo. Through Milk production get additional income to improve economic and social issues of various categories of farmer's. Combination of trees and crops provides sustainable farming approaches in agroforestry provide opportunity to deliver multiple yields from per unit area of land. Present study expressed combination of tree and crops might easily adopted at any kind of land or several locations on given sites and most dominated system is agri-silviculture which is most probably adopted by the farmers other systems such as agri-horti system, agri-silvi-horti systems respectively. Most preferred trees species are *Eucalyptus species, Tectona grandis, Dalbergia sissoo, Madhuka latifoloa and Mangifera indica, Psidium guajava, Emblica officinalis* are common fruit species used for self-consumption and sale. During study identified various land use practices *viz.* agroforestry, fisheries, raising plantations, Orchard. Hence, Agroforestry systems gave better response in terms of vegetation increasing tree cover to fulfil the criteria of 33 % forest on any geographical area recorded to (1988. National forest policy) to the country.

Keywords: Agroforestry systems, sustainable, socio-economic, combination

1. Introduction
Agroforestry is a combination of land-use systems that integrates trees and shrubs on farmlands and rural landscapes with or without animals to increase productivity, profitability, diversity, and ecosystem sustainability, according to the National Agroforestry Policy (2014). Out of the total existing geographical area of 305.60 Mha, India has roughly 69.79 (FSI, 2013) [5] and 25 Mha (Dhanya *et al*., 2013) [3] Mha of forestry and agroforestry land, respectively. Agroforestry is useful for Approximate carbon stocking is 532.5 Mt. Furthermore, a farm field and field bunds provide access to the strewn trees. Half of the carbon store that is held in forests is made available through agroforestry, and recent studies indicate that area under agroforestry in India will grow dramatically in the coming years (NRCAF, 2006) [7].
By increasing the number of trees in the landscapes, the agroforestry system was the main contributor to easing pressure on the forests. Higher potential to boost economic and environmental benefits to the local society for substantial agricultural distribution to obtain food, fodder, lumber, fuel wood, and fibre for the escalating socioeconomic position (Bijalwan *et al*. 2011) [1]. Agroforestry is a system that combines traditional wisdom with contemporary national science and small-minded ideals to increase the likelihood that produced items will be profitable. The solution to the major issue of climate change is the adoption of an agroforestry system, which increases the resilience of the farming system by encouraging farmers to embrace only one crop (Dhyani, 2014) [4]. Agroforestry satisfies the demands for plywood, high-quality paper and pulp-making inputs, small and large-scale house-building timber, protein-rich green livestock feed, fuel wood for local residents' daily needs, and also for environmental improvement through reduced pollution (NRCAF, 2013) [8].

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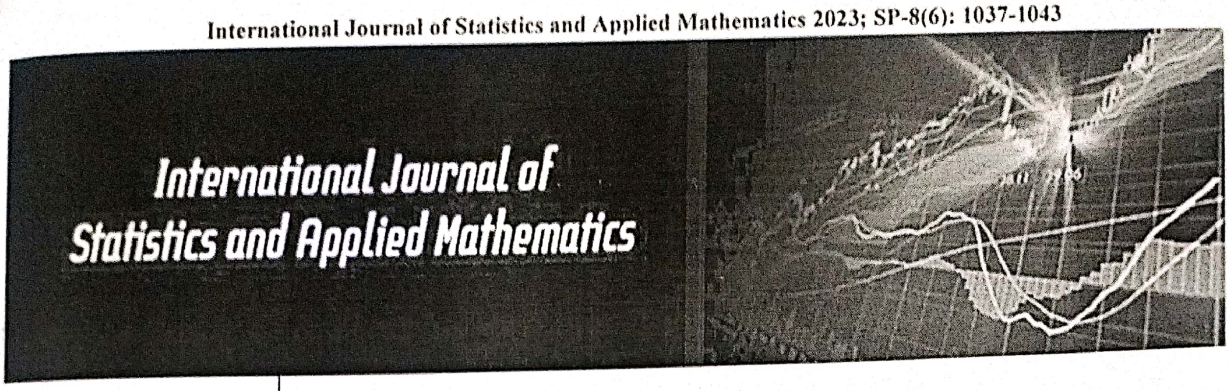

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Section A-Research paper
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International Journal of Applied Engineering & Technology

ARTIFICIAL NEURAL NETWORK FOR SYNTHESIS AND OPTIMIZATION OF QUAD CIRCLE SLOTTED TEXTILE ANTENNA

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ABSTRACT

Using Multilayer Perceptron feed forward back propagation (MLPFFBP-ANN), it is possible to determine the bandwidth of a Flexible antenna. This is accomplished by utilising the technique. In order to put the neural network model into action, the numerous training processes of MLPFFBP-ANN are utilised. All of these procedures are designed to train the neural network. It is the responsibility of the CST software to collect the data that is ultimately utilised for the purpose of training and testing the neural network. When contrasted with the outcomes that were accomplished through the utilisation of CST software, the outcomes that were accomplished through the utilisation of MLPFFBP-ANN were discovered to be quite good. The outcomes that were achieved via the use of CST and the outcomes that were obtained through the utilisation of MLPFFBP-ANN are well aligned.

Keywords: MLPFFBP, *Broad band, Bandwidth, ANN.*

1. INTRODUCTION

It is possible to use the Neural Network models for optimisation that is both efficient and precise, and these models can be generated within the range of training [1-5]. There is a model of the ANN that has been built for the flexible antenna, and it can be shown in Figure 2. Utilising the feed forward network allowed for the successful completion of the task of calculating the bandwidth of the flexible antenna. The MLPFFBP model is used for the work that is being discussed here [6-10]. The network was built with three different layers named as input, hidden and output layers. After receiving input variables, Artificial Neural Networks multiply those values by weights that they have learned. After that, the product of these numbers is utilised as inputs to a "hidden" layer that functions as learned features when it is applied. One of the most well-known algorithms is known as back propagation which is shown in figure 3. In order to determine whether or not the MLPFFBP ANN-based model that has been proposed for the design of the flexible antenna is useful, the goal of this study is to evaluate its effectiveness. The neural network will automatically adjust its weights during training and threshold values in order to reduce the amount of error that exists between the outputs that are predicted and those that are sampled. This is done in order to maintain the highest possible level of accuracy. Computing the adjustments is the responsibility of the back propagation algorithm, which is responsible for the computation.

MLPFFBP technique, which is given in this work, was developed with the intention of conducting an analysis of the bandwidth of microstrip antennas. Additionally, the CST software is utilised by the artificial neural network (ANN) in order to generate both training and test data. This computational electromagnetic (EM) simulator is built on the Method of Moment as its base. It has been discovered through analysis that a feed position is very important parameters and by varying the feed position, the several data of bandwidth of proposed flexible antenna is calculated which is utilised in training of ANN network. Once the return loss has been determined, the feed point that is selected as the ideal one is the one in which the return loss is the greatest negative, which is defined as being less than -10 dB. This provides the optimal feed point for the system [11-19]. This is accomplished by the adjustment of the probe feed coordinates.

A jeans substrate is used to design the proposed antenna in order to achieve the goal of providing a wide bandwidth of 85.25%. Since this antenna is capable of covering the frequency range from 4.83 GHz to 12.0 GHz, it is an excellent choice for usage in applications involving WLAN, WiMax and broad band application.

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"A REVIEW ON CODE COMPLICATION AND VIRUS DETECTION"

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ABSTRACT

Traditional viruses were computer programs with static structure exhibiting very limited functionality. Once identified for the first time, their structure is utilized by antivirus (AV) software as a tool for detecting the similar viruses with similar patterns. However, modern viruses are smart enough to self-configure and even change the pattern of their functionality making it hard for AV software detecting them. This paper shows that to develop new reliable antivirus software some problems must be solved such as: a new method to detect all metamorphic virus copies, new reliable monitoring techniques to discover the new viruses or attaching a digital signature and a certificate to each new software.

Key Words: *Antivirus, Digital Signature, Dynamic Detection, Metamorphic Virus and Static Detection.*

I. INTRODUCTION

In today's world, where a majority of the transactions involving sensitive information access over the internet, it is absolutely imperative to treat information security as a concern of importance. Computer viruses and other malware have been in existence from the very early days of the pc and continue to pose a threat to home and enterprise users. When Anti-Virus techniques came to remove or detect these viruses, the virus developer also changed their strategies to develop more complex and nearly impossible to detect viruses.

Both viruses and virus detectors have gone through several phases of change since the first appearance of viruses and this thesis is concerned with a recent stage in virus evolution—metamorphic viruses. These are viruses which employ code Complication techniques to hide and mutate their appearance in host programs as a means to avoid detection.Signature based static detection is the most famous virus detection technique employed today is, which involves looking for a fingerprint-like sequence of bits (extracted from a known sample of the virus) in the suspect file. Metamorphic viruses are quite potent against this technique since they can create variants of themselves by code-morphing and the morphed variants do not necessarily have a common signature. In fact, the paper [1] provides a rigorous proof that metamorphic viruses can bypass any signature-based detection, provided the code Complication has been done based on a set of specified rules.

II. STRATEGIES OF COMPUTER

A computer virus is a computer program that can copy itself and infect a computer without permission or knowledge of the user. In order to avoid detection by users, some viruses employ different kinds of deception such as the following Strategies.