

Agriitecture: The Future of Farming Technology

Rajneesh Kumar^{1*}, Pravin L Chaudhary², Smita Kumari³ and Shambhu Chauhan⁴

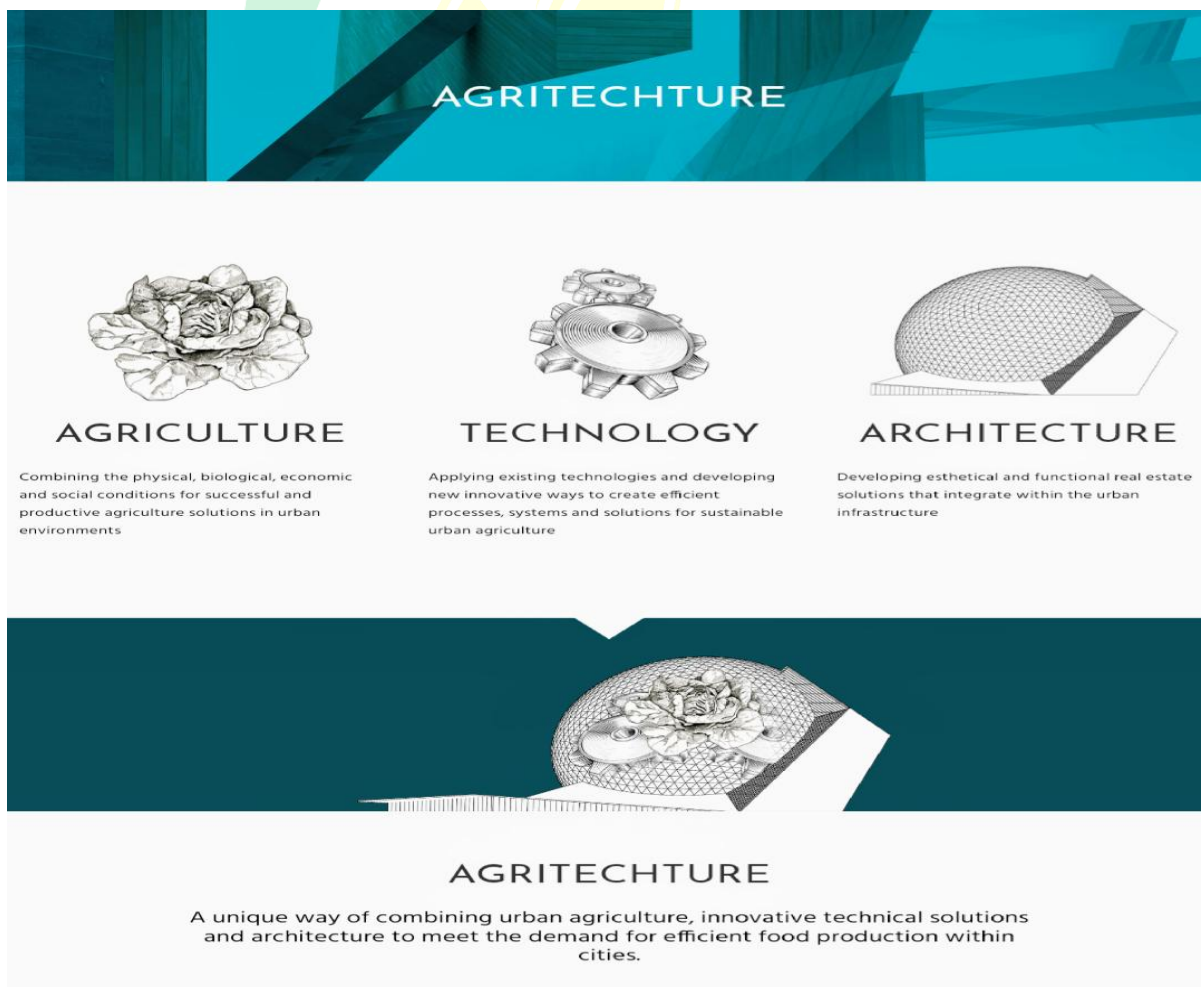
^{1,2}Department of Genetics and Plant Breeding, School of Agriculture Lovely Professional University, Phagwara-144411, Punjab, India.

^{3,4}Department of Agronomy, School of Agriculture Lovely Professional University, Phagwara-144411, Punjab, India.

ARTICLE ID: 59

Introduction

Agriitecture is the world's first platform for planning for the urban farms. Agriitecture is the art, science, and practice for the incorporation agriculture into the human built environment.



The infographic is titled "AGRITECHTURE" and is divided into three main sections. The top section features a blue background with the word "AGRITECHTURE" in white. Below this, there are three columns, each with an icon and a title: 1. A flower icon with the title "AGRICULTURE" and the text: "Combining the physical, biological, economic and social conditions for successful and productive agriculture solutions in urban environments". 2. A gear icon with the title "TECHNOLOGY" and the text: "Applying existing technologies and developing new innovative ways to create efficient processes, systems and solutions for sustainable urban agriculture". 3. A dome-like structure icon with the title "ARCHITECTURE" and the text: "Developing esthetical and functional real estate solutions that integrate within the urban infrastructure". The bottom section features a dark blue background with a large icon of a dome structure containing a flower, with the word "AGRITECHTURE" in white. Below this icon, the text reads: "A unique way of combining urban agriculture, innovative technical solutions and architecture to meet the demand for efficient food production within cities."

This integration can be inside of the building by the (indoor vertical farming) to maximize the yield growing or outside of living walls and roof top farms to take advantage of the microclimates that exist through the design of city. Agritecture then is one way of challenging the current industrial scale agriculture by bringing food production to urban, local architectural environments. Agritecture is everywhere around us, if you visit outside you will find spaces that have been built by nature in a functional and sustainable way. Walking around the city you will find so many different kinds of man-made structures.

Indoor Vertical Farming

Agritecture has many meanings, some define it as an art, and others say it is the planning of useful and enjoyable spaces for human beings. You can give it your own interpretation. Since the spaces we live in influence our behavior and feelings, architecture plays a major role in all of our lives, but have you ever considered how it effects, interacts or could mimic the natural world? Architecture goes beyond a simple profession or career, it is part of human



nature and it has helped define our cultures throughout history. Today it is an area of opportunity. Architecture can help us solve problems in cities and rural areas, improve our quality of life, and take care of our planet by carefully managing natural resources.

Modern Greenhouse

What is Modern Greenhouse?

Greenhouses today are increasingly emerging large-scale, capital-infused, and Urban-centered technology. As the market grown, it has also experience clearly in trends from recent years. Modern greenhouses are becoming increasingly tech-heavy, using LEDs lights,





polyethylene and control systems, which automated to perfectly tailor the growing environment.

Why is it important?

Combined, the entire global greenhouse market currently produces nearly \$350billion in vegetables annually, of which U.S. production comprises less than one percent. Combined, the entire global greenhouse market currently produces nearly \$350billion in vegetables annually, of which U.S. production comprises less than one percent.

Nowadays, in large part due to the tremendous recent improvements in growing technology, the industry is witnessing a blossoming like no time before. Greenhouses today are increasingly emerging that are large-scale, capital-infused, and urban-centered. A major part of this recent transformation in the greenhouse industry has been the rise of a technology-infused Smart Greenhouse Market. Smart Greenhouses feature new levels of technology and control that allow for further optimization of growing conditions. These technologies include LED grow lights that provide energy efficient supplemental lighting during cloudy conditions and at night, as well as an array of smart sensors that can detect issues with plants or the growing environment as they arise and trigger responses from different control systems.

Conclusions

The expected outcome of the article will be an architectural that not only preserves the nature but also help in the production of the food which is upcoming challenges for the country to be cater in future as we are vanishing the agriculture land. The design will also act as lungs for the urban infrastructure through passive means. The different aspects of the helical process will make a severe sense of producing a product of the hypothesis that may be tested in different dimension. Somehow, this natural phenomenon's will heal the sense through Agri-ecture experience. Vertical farms in urban areas are a relatively new phenomenon, interest in this approach is growing, and the number of vertical farms in the United States and globally is expanding every year. There are several variations of vertical farms being tested throughout the world, and new technology will increase the energy efficiency and profit margins of these farms in the future. In the near years, most vertical farms will focus on high-return and short-rotation crops such as salad greens, with restaurants often buying all of the production. Whether vertical farms will become more widespread in



cities is uncertain, but urban planners and the sustainable agriculture community under construction or already in production are closely observing the innovative vertical farms currently. The agricultural sector is of vital importance for the region. It is undergoing a process of transition to a market economy, with substantial changes in the social, legal, structural, and productive and supply, as is the case with all other sectors of the economy.

