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Editorial

ADVANCED TECHNOLOGY IN ORGANIC FARMING

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EDITORIAL

Advancements within the field of science and technology along the worldwide urbanization are the foremost factors driving the course and evolution of agricultural research. Rise in per capita financial gain in developing nations, activity changes and global linkages have modified the food preferences. These trends along with the rise in population create a challenge to agriculture for manufacturing a lot of higher food. Increase in the productivity of agriculture by using techniques of typical agriculture is a limitation. The threat to environment, because of dependence on chemical fertilizers and pesticides for increasing productivity and pest management severally is major constraint touching the worldwide food production. Vertical farming is a step beforehand era from greenhouses because it involves harnessing of sources in vertical arrays and might feed the needs of food deliver with the sources of mega cities. Food quality and protection are the two essential elements which have won ever-growing interest in trendy consumers. Conventionally grown ingredients have huge adverse health consequences because of the presence of higher pesticide residue, greater nitrate, heavy metals, hormones, antibiotic residue, and additionally genetically modified organisms. Moreover, conventionally grown ingredients are much less nutritious and comprise lesser quantities of defensive antioxidants. In the search for more secure food, the demand for organically grown foods has multiplied over the past many years because of their possibly health advantages and food protection concerns.

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Organic farming systems use carbon-based additives, various crop rotations and cover crops to increase soil fertility. These practices increase the bioavailable soil organic matter and beneficial activities of soil microbes and invertebrates, improve the physical properties of the soil, reduce the potential for disease, and increase plant health. The nanotube is a new form of carbon that corresponds to a two-dimensional graphene sheet rolled into a tube. Two main types of nanotubes are Single Wall Nano Tubes (SWNT) and Multi Wall Nano Tubes (MWNT). Its tensile strength ~200 GPa makes it ideal for composites and nano electromechanical systems. In addition, it is metallic or semiconductor shaped and offers amazing possibilities to create electronic circuits or even complete nano devices. Structurally, nanotube systems consist of graphite layers that are seamlessly wrapped in cylinders. Recently, fluorescent Nano Particles (NP) or Quantum Dots (QD) has been developed to identify vegetable proteins. Nano encapsulation, similar to microencapsulation, is used to develop the quality of the products of the desired chemicals that are delivery to the target biological process. Recently, few chemical companies have openly promoted the sale of nanoscale pesticides as microencapsulated pesticides. If the nanomaterials those agricultural plants contain, toxic nano composites, then lack the unique possibility of increased production of agricultural crops. Hence the introduction of modified NPs in agriculture should always be a routine check in order to maintain environmentally friendly agriculture in the agricultural sector. The biosensor integrates a biological component with an electronic component to produce a measurable component signal, and the biological detection is done by the transducer process and the signal processing is done by electronic power. Recently, some nutrients,

mainly vitamins, have been encapsulated and released into the bloodstream via the digestive system with very high efficiency. Some foods and drinks have been fortified with these NPs without affecting the taste or appearance. NP emulsions are used in ice creams and spreads of this nano emulsion. It can improve the texture and evenness of the ice.

CONCLUSION

Nanotechnology has shown great potential in precision agriculture. Nanoparticles with unique properties can be easily synthesized from different biological sources and can be applied in agriculture. Biological Sources, Plant extracts (leaves, flowers, stems, roots) of different series of plant species were used successfully in nanoparticles synthesized. Biomolecules that reduce in plant extracts metal ions on nanoparticles in a green synthesis process of single. Therefore it is necessary to have a modern knowledge in agriculture. Despite relative advantages in the agricultural process, developing countries still suffer from the lack of importance of food.