

International Journal of Current Research and Modern Education

Impact Factor 6.725, Special Issue, March 2020 – Conference Proceedings

International Conference on Rise of Disembedded Unilateral Economy: InnoVision in the Era of

Deglobalization (KRUPACON 2019) On 8th & 9th November 2019 Organized By

Krupanidhi Group of Institutions, Bangalore, Karnataka

SMART TECHNOLOGY IN FARMING

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Cite This Article: Nivedita Jha & N Ravi Shankar, "Smart Technology in Farming", International Journal of Current Research and Modern Education, Special Issue, March, Page Number 20-22, 2020.

Abstract:

World economic uncertainty is growing, and there are ambiguous consequences for global economic growth. These uncertainties, by contrast, balance the boom potential of emerging markets, mainly in India. The production of fundamental food plants has always been linked to agriculture. As long as agriculture isn't commercialised now, agriculture and farming are synonymous. As economic development improved, however, many different occupations associated with agriculture became known as part of agriculture. Agriculture is the number one livelihood supply for about 60% of the population of India (Situation Assessment Survey of Agricultural Households, performed by way of the National Sample Survey Office). The agricultural industry is probably more important than ever before than in the coming decades. According to the United Nations Food and Agriculture Organization, by 2050 the sector is going to be able to provide 70 percent more food than it did in 2006, for the development of the world population (Food and Farming Organization of the United Nations, 2012). Farmers in rural India are not able to gain access to marketing networks and records systems, since it is one of the largest livelihood assets in the region. This paper conceptualises the efficiency of smart agriculture and the primary education provided in this paper is that Internet of Things (IoT), blended with large statistics, offers farmers a wealth of statistics which can be used to maximise productivity in a vulnerable environment and maintain food quality in the supply chain.

Introduction:

By developing multidisciplinary generations in all aspects, Life in 2017 can be converted and the revolution of data and utility preserves itself in a profound way. The world's focus has shifted to feeding the arena sustainable as its population rose to 8 billion centimeters. It is estimated that 2.5 billion people live immediately as full or component farmers or contributors of farming households that support farming activities (International Fund for Agricultural Development, and the United Nations Environment Programme, 2013). Agricultural technology is one of currently highly influential fields which drives the need for food to feed the growing population. It is estimated that the modern global population of 7.3 billion will grow to 8.5 billion by 2030, nine.7 billion by 2050 and 11.2 billion by 2100. (United Nations Department of Economic and Social Affairs, 2015).

It has opened a technology that carries out the pictures previously made by people and animals. Agricole methods took a tremendous leap forward in the approach of the Industrial Revolution and in the development of better machinery. Wheeled machines reduce an intermediate swath instead of traditional harvesting practises such as sickle and blade. Instantly, threshing machines had been used to separate seeds from stalks rather than to thresh the grain with truncheons. These intricate machines required a great deal of strength, originally supplied by bulls or other domesticated animals.

However, tractor discovery has changed how agriculture takes place. The tractors nowadays can cut, thresh and split the grain, even while continuously transferred through the sector, rather than cutting the grain slats and transporting them to a stationary threshing machine. Mechanized agriculture currently also includes aircraft, helicopters, drones, and Internet of Things Aircraft (IoT).

Internet of Things:

A new concept is not technological innovation in agriculture. In the past, hundreds of years have been followed by the Handheld mechanism, which added around the trade in the Industrial Revolution. In the 1800s the chemical fertilizers, grain lifts and tractors were introduced. Farmers started using technology to develop their work in the last decade. The Internet of Things (IoT) will bring the future of agriculture to the next level. The Internet of Things is a concept from a century ago that relates to the connection of regular objects to the Internet but, as technology continues to boost, it becomes more critical within the range of interruptive innovation (BBVA Innovation Center, 2016). IoT is driven together with the manufacture, military, transport and agricultural by sales growth across many sectors. IoT mainly reworks the agricultural sector by allowing farmers to face their daily challenges.

In order to meet the increasing needs of a worldwide population, which is expected to grow by 70% by 2050, the company must overcome the growing water shortages, the reduced accessibility of land, the tough price control (Food and Agriculture Organization of the United Nations, 2009). In assembling this need and moving the future of agriculture to the next level, IoT could play a vital part. Smart agriculture amongst farmers is already becoming the norm and is gaining attraction quickly. Combined with broad information, inputs such as fertilizes and insecticides could improve effectively, disclose the animals, expect disease, test storage capacities, and ensure that plants are properly fed and watered. IoT agricultural and internet agricultural programmes Things (IofT), in the coming years, will help farmers to satisfy the needs for food in the arena.

Internet of Farm Things:

The technological advancement ensures that clever appliances are sophisticated, smaller, extraordinarily comfortable and more economical. The main objective of these gadgets is to ensure that important statistics are gathered for future use. Although knowledge of the gadgets is currently being created, symptoms are gradual. Innovative practises such as clever agriculture could respond to the problems currently faced by the agriculture quarter. Connected agriculture is the fate of agriculture which can be achieved through IoT development across the farming sector. The concept of linked agriculture will interfere with agriculture and make the future of agriculture viable. Smart farming offers automatic agricultural techniques, crop control precision and a series

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of useful information. Farm Things Internet (IoT) is available for the purposes of screening soil and crop situation information and of predicting and preventing crop disorder in real time.

IoT can ensure that no intervention is used to feed and water the crops. Intelligent farming is becoming common among farmers and is growing through advanced farming techniques. A study carried out last year with the support of the American Farm Bureau Association, which uses sensor-pushed technologies in farms, found that 39% of respondents in the major countries growing maize and wheat use sensors (Internet of Farm Things, 2015). The proliferation of wireless networks in rural areas and the popularity of smartphones have made this shift viable, which could provide the farmers working in the sector with information's. For a decade, tractor manufacturers have been solving sensors on the subject device so that information such as the topography and proximity and intensity of every planted seed can be accumulated.

Real Time Information for Higher Productivity:

Farmers are able to work their extensive land with real-time records and reveal their belongings to companies including discipline, machinery and finance, although they are present physically. In addition, IoT provides farmers with a wealth of information, which they can use to optimise performance, maximise productivity and maintain supply chain quality food - from field to fork.

The welfare of farm animals can be improved through growing IoT structures and using records from a variety of sensors. In order to ensure that each operation is carried out in accordance with certain limitations that can alert farmers to any problems, systems should be put in place. For example, IoT farmers can monitor animal health and music, which will help increase yields by developing their grazing patterns.

Enhancing Irrigation and Productivity Using Drones and Sensors:

Enterprises can become aware of the improvement of agriculture. By supplying higher-class statistics with IoT, groups can help farmers by using the settlement-farming version. The answers must basically deal with ordinary critical problems such as irrigation and agricultural productivity.

Given that 1900, more than 11 million people have died as a result of drought and more than 2 billion have been tormented by drought, the United Nations Global Assessment Report points out more than any other body chance. This problem can be resolved with drones or unmanned aerial motors using agricultural generation (UAVs).

Drones are low-cost aerial camera systems with autopilot mode, which use GPS and sensors to obtain relevant information by using an ordinary aerial digicam. A normal digital camera can provide information about plant growth, coverage and various things. However, the software can be fully extended by a multi-spectral sensor. It allows the farmer to look into the visible spectrum of things that cannot be seen along with the moisture content of soil and plants. Drones are predicted to be used in agriculture to make up as many as 80% of the UAV destiny business (Association for International Unmanned Systems of Vehicles (AUVSI), 2013).

In statistics series and analysis for precise agriculture, drones and non-manned aerial vehicles are used. These engines and structures provide farmers with statistics. The use of drones can help farmers to tune problems more quickly and react extra quickly to stop crop losses. It can also help farmers use fertilizers and pesticides to the surest extent, thus reducing our bodies' water prices and pollutants. The statistics generated by drones can help to acquire more accurate facts on how vegetation reacts to these strategies, which can help to use extra resources.

Earth, climate and moisture statistics may help farmers make more knowledgeable seeding and crop harvesting decisions about the soil, the climate and the moisture. Thus, the overall vegetation output can boom this data. Using the IoT of their fields, farmers can quickly collect the relevant information from the source, then use the information to gain insights and use this insight to overcome problems.

Conclusion:

Even though India is an agricultural country, it is confronted with various demanding situations, including IoT use in agriculture. To apply the era, a concerted and collaborative effort must be made to improve the whole climate of public rules, desirable infrastructure, public and private investment. One of the major challenges is Internet connectivity. The assumption that Indian farmers are not prepared for the best technology is another assignment. This has a significantly low level of attention among Indian farmers for IoT gadgets and structures. The positive result is the slow growth of clever agriculture and the applicability of IoT in the agricultural circuits. The results of the report are positive. Innovation in agriculture and connected agriculture is perceived as Indian agriculture's destiny. With government projects like making in India and digital India, an intelligent era could be implemented to make our farmers' capabilities exceptional.

Acknowledgement:

The authors express gratitude towards the assistance provided by The Management, Krupanidhi Group of Institutions (KGI) and Krupanidhi Research Incubation Centre, KGI in completing the research. We also thank our Research Mentors who guided us throughout the research and helped us in achieving the desired results.

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