Journal of Agricultural Science and Food Research

OPEN ACCESS Freely available online

Mini Review

Food Preservation Methods and Advanced Techniques

James Smith*

Department of Food Science and Technology, The Ohio State University, Columbus, USA

INTRODUCTION

In modern years, the implementation of advanced innovations in accuracy agribusiness has been changing the manners in which those farmers treat crops and oversee fields. One doesn't need to be a specialist to perceive how the innovation has changed the idea of cultivating making it more productive, effective, more secure, and straightforward. Among different advancements, farmers have picked five they consider to be the splendid:

- GIS programming and GPS farming
- Satellite symbolism
- Drone and other ethereal symbolism
- Farming programming and online information
- Merging datasets

Accordingly, current ranches get huge advantages from the consistently developing advanced farming [1]. These advantages incorporate discounted utilization of water, supplements, and manure, scaled down adverse consequence on the encompassing environment, discounted compound spill over into neighbourhood groundwater and streams, better proficiency, discounted costs, and some more. Accordingly, business becomes financially savvy, brilliant, and supportable.

GIS based agriculture

Since fields are area based, GIS programming turns into an unbelievably helpful device as far as exactness cultivating. While utilizing GIS programming, farmers can plan current and future changes in precipitation, temperature, crop yields, plant wellbeing, etc. It additionally empowers the utilization of GPS-based applications in-accordance with keen hardware to improve manure and pesticide application; given that farmers don't need to treat the whole field.

Another incredible advantage of GIS-based horticulture is the use of satellites and robots to gather important information on vegetation, soil conditions, climate, and landscape from a higher perspective.

Satellite derived data

Foreseeing yields, just as directing practically on-going field observing, so as to distinguish an assortment of dangers with satellite information in help has never been so natural. The sensors can give symbolism in different spectra, taking into consideration the use of various otherworldly records, like the Normalized Difference Vegetation Index (NDVI) [2]. NDVI takes into account the recognition of vegetation content, the measure of shrinking plants, and generally speaking plant wellbeing.

Information from the sky-drones

With the help of robots farmers have a chance to characterize plant tallness, crop biomass, and water immersion on certain field regions with high accuracy and the presence of weeds. They convey better and more precise information with higher goal in contrast with satellites [3]. Robots are additionally viewed as unparalleled associates in the fight against bugs; the attack is forestalled by applying the insect poison on the peril regions utilizing drones, all while decreasing the probability of direct openness prompting synthetic harming.

Precision farming using online data

To improve on field perception, EOS has planned Crop Monitoring – an advanced Platform that utilizes satellite observing to accelerate a rancher's dynamic so he doesn't miss a vital mark of field treatment. Here are a portion of the elements accessible in the stage:

Crop Monitoring permits the utilization of the Normalized Difference Vegetation Index (NDVI) for following harvest wellbeing. This record screens the measure of chlorophyll in plants which makes it conceivable to get data about their condition. At the point when you have higher NDVI esteems, you have better vegetation, since the more chlorophyll accessible to the plant, the better it is.

Another significant component of Crop Monitoring is a Scouting application. It is both a portable and work area application that utilizes advanced field maps. Add a field, drop a pin, and set an undertaking. When the errand is allotted, a scout moves straightforwardly to the chose area and checks trouble spots at the site, assesses bug action, performs weed the board exercises and so on, quickly making records in the application [4]. This permits review of the pain points just when required, accordingly saving adequate opportunity to make vital precaution moves.

***Correspondence to:** James Smith, *Department of Food Science and Technology, The Ohio State University, Columbus, USA*, E-mail: smithj@osu.edu

Received: September 03, 2021, **Accepted:** September 17, 2021, **Published:** September 29, 2021

Citation: Smith J (2021) Food Preservation Methods and Advanced Techniques. J Agri Sci Food Res. 2021;12:292. doi: 10.35248/2593-9173.21.12.292

Climate investigation

By investigating climate information in-accordance with the information on plant condition got from satellite imaging, farmers can exactly apply water system and forestall ice or warmth harm.

The upside of Crop Monitoring is the way that it relies upon satellite imagery. It assists with examining field conditions or the condition of explicit regions and concentrate significant data on-the-fly, subsequently accelerating ideal response time just as settling on solid choices – what yields to plant, when to gather, how to viably anticipate the following season, what measure of supplements and manures apply, and some more [5].

Promising farming advances are moving into the future huge amounts at a time. They offer significant assistance for farmers in their undertaking for enhancing inputs, working on ranch the board, and expanding usefulness. Expanded yields, just as decreased upkeep costs, assist with boosting overall revenues. With regards to savvy arrangements, exactness horticulture offers a Swiss armed force blade of cultivating methods for the present, and the upcoming formers.

REFERENCES

1. Pandiselvam R, Subhashini S, Priya EPB, Kothakota A, Ramesh SV, et al. Ozone based food preservation: a promising green technology for enhanced food safety. Ozone Sci Eng. 2019;41:17-34.
2. Rech S, Finco E, Lazzaretto A. A multicriteria approach to choose the best renewable refrigeration system for food preservation. Renew Energy. 2020;154:368-384.
3. Butnaru E, Stoleru E, Brebu MA, Darie-Nita RN, Bargan A, et al. Chitosan-based bionanocomposite films prepared by emulsion technique for food preservation. Materials. 2019;12:1-17.
4. Brody AL, Strupinsky ER, Kline LR. Active packaging for food application. New York: CRC Press. 2001.
5. Takenaga F, Itoh S, Tsuyuki H. Prevention of lipid oxidation in roasted and ground soybean with oxygen absorber during storage. J Jpn Soc Food Sci Tech. 1987;34:705-713.