LITERATURE SURVEY

IOT BASED SMART CROP PRODUCTION SYSTEM FOR AGRICULTURE

A various methodologies that are all used as discussed as follows:

1.**MICHAEL ASTERA** :Important minerals and grow the healthiest possible food for people and animals. Completely revised and expanded from the 2010 edition. The secrets of soil mineral balance that create ideal soil, plant, and animal health are revealed here for the first time. The amazing results that can be achieved by balancing the major minerals Calcium, Magnesium, Potassium and Sodium in the soil according to the teachings of Dr William Albrecht and Dr Carey Reams have changed the world of agriculture. This knowledge has taken the focus away from merely trying to achieve high volume yields to achieving the highest yield.

2. **MICHAEL E. ESSINGTON** :In this book, it covers topics including soil chemical environment, soil minerals, soil organic matter, cations exchange, oxidation-reduction, mineral weathering and solubility, surface chemistry and adsorption reactions, acidity and salinity in soil materials, and chemical thermodynamics applied to soil systems .Extensive section that details the sources, speciation, and the general behaviour of elements in soils Expanded section on crystal structure, updated phyllosilicates classifications scheme, Discussion of surface runoff losses of phosphorus from soil and description of the inductively coupled argon plasma-mass spectroscopy (ICP-MS) analytical technique for determining elemental elements concentrations in soil solution.

3. **KEITH REID** :Valuable advice from an expert in soil science. Intended for both small and medium-size gardens, Improving Your Soil reveals the steps to take to achieve the perfect soil base in which to grow plants. With directions on amending poor soil, modifying mediocre earth, aerating compacted topsoil and substrates, and testing pH levels, this book enables gardeners to nurture their plants and promote more abundant growth. The features of good soil include proper structure and nutrients that encourage

healthy plant growth.Soil in "good tilth" is loamy, nutrient-rich and friable because it has an optimal mixture of sand, clay and organic matter that prevents severe compaction. Your Soil shows gardeners how to improve the soil in their garden to encourage good seed bedding and a strong root system for proper nutrient disbursement throughout various soil depths.

4. **BRITTANY M. RAUZAN** ：Sustainable agriculture is an area of global and critical importance for consumers, farmers, and the agrochemical industry in order to address the increasing global demand on the food supply. This volume highlights innovations in discovering and developing crop protection products with a focus on environmental impact and sustainability. Chapters focus on design of small molecules, development of biological , and environmental characterization of agrochemicals. Researchers in agrochemical as well as those in small molecule discovery and delivery will find this work useful.

5. **SARRA ABRAMOVNA BEKUZAROVA, NINA ANATOLIEVNA BOME, ANATOLY IVANOVICH OPALKO, LARISSA I. WEISFELD|MA**: on the ecological aspects of crops growing under stress This new collection covers a wide variety of research conditions due to atmospheric changes and pollution and the impact on both plant and human health. The book provides research that will help to find ways to overcome adverse abiotic environmental factors and unfavorable anthropogenic pressures on crop plants, which also eventually impact human health. Divided into six parts, leading authors from many institutes provide and share new knowledge gained from studies on ecological and genetic controls of plant resistance to various adverse environmental factors. Geneticists and breeders are creating new cultivars and hybrids of crops, which greatly expand the range of source material. The book includes a range of material on the biology, genetics, and breeding of crops, taking into account ecological and climatic conditions, with emphasis on the impact on humans. The main agricultural crops are studied: cereals, fodder crops, and horticultural plants**.**

6. **DAMINI KALRA; PRAVEEN KUMAR; K SINGH; APURVA SONI**:

Agriculture assumes a significant job for advancement in nourishment creation and crop protection in India. Here, agriculture relies upon disproportionate rain which thereby affects India's agriculture. There arises a need for effective

irrigation for agricultural production. The control over how much water is to be supplied and when it is to be applied determines the uniformity which is key to maximizing their irrigation efforts. The proper irrigation management takes careful consideration and vigilant observations. It has many benefits. Keen water irrigation and protection system framework is in this way accepted to be a significant arrangement. The paper along these lines presents an effective water system framework that advances the accessible water in the water supply and in this manner giving an effective and powerful mechanism for the irrigation purpose. The deliberate sensor estimates are sent to the Arduino Uno microcontroller for arranging the controlled calculation.

7. **ALABASTER** :This book provides a detailed study on some of the most significant aspects of agronomy, such as crop science, sustainable agriculture, etc. Approaches to improving plants and crop production, innovative methods for crop breeding and crop management are also covered. The book provides a deep insight about this field and helps agronomists, agriculturists and interested readers to better understand its applications. It elucidates the factors that play a crucial role in agronomy.Researches case studies which bring forth new concepts and techniques in plant genetics, science, crop rotation, etc. have also been included.

REFERENCES

1. **MICHEAL ASTERA**,'' The Ideal Soil v2.0: A Handbook for the New Agriculture "Hardcover-spiral – Unabridged, January 1, 2015 soilminerals.com; 1st edition (January 1, 2015)Language .

2. **MICHAEL E. ESSINGTON ,** "Soil and Water Chemistry:" An Integrative Approach, Second Edition 2nd Edition.) Michael E. Essington is professor of soil and water chemistry in the Institute of Agriculture at the University of Tennessee in Knoxville. Publisher : CRC Press; 2nd edition (April 24, 2015 Language) : English Hardcover : 656 pagesISBN-10 : 9781466573154 ISBN-13 : 978-1466573154

3.**DEBMALYA BARH (MSc, MTech, MPhil, PhD, PGDM)** is the founder and president of the Institute of Integrative Omics and Applied Biotechnology (IIOAB), India. He is a well-known editor for several research reference books in the foremost domains of "OMICS Application in crop science". OMICS: Applications in Biomedical, Agricultural, and Environmental Sciences is one of these books related to plant omics, published by Taylor & Francis in 2013.

4. **BRITTANY M. RAUZAN, (Ph.D., University of Illinois at Urbana-Champaign)** is a Research Investigator at Cortiva Agriscience . She is actively involved with the Indiana American Chemical Society (ACS) Local Section and serves as a coordinator for Chemists Celebrate EarthWeek (CCEW).In 2019, she was elected as Alternate Councilor for the ACS AGRO Division.

5. **BETH A. LORSBACH (Ph.D., University of California, Davis)** is the Global Leader Small Molecule Discovery and Development (SMDD) at Cortiva Agriscience and Publisher :American Chemical Society (September 13, 2022) Language : English Hardcover : 220 pages ISBN-10 : 0841298211 ISBN-13 : 978-084129821

6. **SARRA ABRAMOVNA BEKUZAROVA, NINA ANATOLIEVNA BOME, ANATOLY IVANOVICH OPALKO, LARISSA I. WEISFELD,"** Temperate Crop Science and Breeding Ecological and Genetic " mar 28, 2016|610 Pages|

6. **KHUSHI JOSHI , MAITRAYEE JOSHI , SHASHIKANT PATIL**,"IoT Based Smart Solar Crop Monitoring System"Paperback – May 12, 2021by Khushi Joshi (Author), Maitrayee Joshi (Author), Shashikant Patil (Author)development of agriculture using technology will be very much useful in cultivation.

7. **ALABASTER JENKINS'' Agronomy''** Food, Crops and Environment Publisher : Syrawood Publishing House (May 24, 2016) Language : English Hardcover : 268 pages ISBN-10 : 1682862623