

《智慧农业发展战略研究》专题快报

2022年第7期（总第46期）

中国工程科技知识中心农业分中心

中国农业科学院农业信息研究所

2022年4月4日

【动态资讯】

1. 重庆梁平：一个农业大区的稳产增效“三步法”

【中国农网】光辉生万物，好雨润禾肥。素有“巴渝第一大平坝”之称的梁平区，刚下了一场春雨，万亩稻田春水盈盈，山水田园徐徐铺开。“梁山熟，川东足”，传统产粮大区梁平近年推出的稳产增效“三步法”，为秋季丰收注入了更多希望。流转的土地通过高标准农田改造，不但使耕种面积增加了约5%，还为机械化耕作提供了便利。农民以土地入股实现分红，并组建农业社会化服务队，为种粮大户提供耕、播、收、储等服务，传统农民变成了新型“农业工人”。据统计，去年全区农村居民人均可支配收入2万多元，增速连续多年居全市前列。

链接:

<http://agri.ckcest.cn/file1/M00/03/2B/Csgk0YahWQGAANegAAjfo1yuJc271.pdf>

2. “在心里种稻，科研人生才能有收成”

【农民日报】在天津有这样一位以“一稻济世，万家粮足”为己任的水稻耕耘者。他就是天津市优农中心副主任、天津市水稻产业技术体系岗位专家于福安研究员。日前，于福安团队主持的《半弯曲重穗大粒理想株型创制及小站稻新品种选育应用》获天津市科学技术进步特等奖，这已经是该研究团队第八次获得天津市科学技术进步奖。“该成果已育成水稻新品种16个，相关衍生品种累计推广4000多万亩，创造社会效益30多亿元。”于福安说。

链接:

http://agri.ckcest.cn/file1/M00/03/2B/Csgk0Yaf_x6APG1UACGYDr1074Y558.pdf

3. 抢抓“双碳”机遇推动茶产业绿色转型

【农民日报】近日，中国茶产业联盟举行第五次理事会，研判“碳达峰、碳中和”背景下推动中国茶产业高质量发展的实现路径。会议指出，过去一年，在农业农村部指导下，中国茶产业联盟着力推动产业科技创新、绿色生产、产品升级和品牌提升等，有力推动了我国茶产业高质量发展和综合竞争力提升。会议重点介绍了创设生态低碳茶认证情况，强调要抢抓碳中和、碳达峰战略机遇，对标对表先进、低碳标准，积极推动茶产业链全链条绿色化转型，弘扬茶文化、做优茶产业、提升茶科技，进一步提高中国茶产业现代化水平。“生态低碳茶”也是有机茶、绿色食品茶之外茶叶认证体系中的又一重要内容，除对产地、管理等有较高要求外，还提出了“固碳”“减排”等一系列目标，这也是我国第一个切实践行“双碳”战略的农产品大类。中国茶产业联盟理事长，四川省茶业集团股份有限公司党委书记、董事长颜泽文表示，联盟将继续秉持“信息互通、科技创新、健康市场、共同发展”宗旨，下一步重点围绕提升茶叶质量、提高产业科技水平、推动数字经济赋能、发挥茶文化载体功能、规范茶叶市场秩序、强化联盟自身建设六方面开展工作。据了解，中国茶产业联盟由农业农村部牵头，中茶、川茶、中科院茶叶所等国内大型茶企、涉茶科研单位及社会团体自愿联合组成的非营利性社会组织，旨在共推标准实施、品牌创建、市场拓展，开展交流合作，加快技术进步，弘扬茶文化，带动茶农增收。

链接:

http://agri.ckcest.cn/file1/M00/0F/FD/Csgk0GJJS0eAGAGyAESqOf_PBD8882.pdf

4. 大豆玉米带状复合种植全程机械化技术四级联训举行

【农民日报】为推动各地及广大实施主体扎实掌握大豆玉米带状复合种植配套农机装备应用要领，3月30日，在农业农村部农业机械化管理司指导下，农业农村部农业机械化总站、农业农村部南京农业机械化研究所等单位联合主办的大豆玉米带状复合种植全程机械化技术培训班以部省市县“四级联训”线上直播形式举行。河北、内蒙古、四川等16个省区731个县的农机技术推广人员、农机手、种植大户共2.3万名学员参加了为期1天的培训。培训班安排来自农业机械化主管部门、推广机构、科研院所、现代农业产业技术体系等方面的8位专家，就复合种植农机农艺融合实践、机具保障要求、专用播种机新产品补贴政策、耕种管收全程机械化作业衔接、配套机具选用与改造等主题作了详细报告讲解。

链接:

<http://agri.ckcest.cn/file1/M00/0F/FD/Csgk0GJKjPiASquoAF-au6cUm74718.pdf>

5. 寸寸耕地成沃土——三个关键词解析浙江“土壤健康行动”

【中国农网】耕地红线不仅是数量上的，而且是质量上的，中央也多次强调耕地问题。浙江早在2003年就提出高效生态农业，更是全国首个现代生态循环农业发展试点省，以及农业绿色发展试点先行区。浙江此次专为土壤发起“健康行动”，与以往有何区别？重点在哪？

链接:

<http://agri.ckcest.cn/file1/M00/0F/FD/Csgk0GJKrMKAcDeOABDcyD-Np-w807.pdf>

【文献速递】

1. Crops Yield Prediction Based on Machine Learning Models: Case of West African Countries

文献源: ScienceDirect,2022-04-04

摘要: Global agricultural production, in particular, is of increasing concern to the major international organizations in charge of nutrition. The rising demand for food globally due to unprecedented population growth has led to food insecurity in some populated regions such as Africa. Another contributing factor to global food insecurity is climate change and its variability. World and African agricultural production in particular are of increasing concern to the major international organizations in charge of nutrition. The World Food Program has reported that high population growth worldwide, especially in Africa in recent years, is leading to increased food security. Moreover, farmers and agricultural decision-makers need advanced tools to help them make quick decisions that will impact the quality of agricultural yields. Climate change has been a major phenomenon in recent decades all over the world. An impact of climate change has been observed on the quality of agricultural production. The arrival of big data technology has led to new powerful analytical tools like machine learning, which have proven themselves in many areas such as medicine, finance, and biology. In this work, we propose a prediction system based on machine learning to predict the yield of six crops, namely: rice, maize, cassava, seed cotton, yams, and bananas, at the country-level in the area of West African countries throughout the year. We combined climatic data, weather data, agricultural yields, and chemical data to help decision-makers and farmers predict the annual crop yields in their country. We used a decision tree, multivariate logistic regression, and k-nearest neighbor models to build our system. We had promising results with both models when using three machine learning models. We applied a hyper-parameter tuning technique throughout cross-validation to get a better model that does not face overfitting. We found that the decision tree model performs well with a coefficient of determination(R^2) of 95.3% while the K-Nearest

Neighbor model and logistic regression perform respectively with $R^2 = 93.15\%$ and $R_1 = 89.78\%$. We also study the correlation between the predicted results and the expected results. We found that the prediction results of the decision tree model and the K-Nearest Neighbor model are correlated to the expected data, which proves the efficacy of the model.

链接:

<http://agri.ckcest.cn/file1/M00/0F/FD/Csgk0GJKzHSAMiMLADaGRSLI2Gw430.pdf>

2. Design and implementation of a smart beehive and its monitoring system using microservices in the context of IoT and open data

文献源: ScienceDirect,2022-04-04

摘要: It is essential to keep honey bees healthy for providing a sustainable ecological balance. One way of keeping honey bees healthy is to be able to monitor and control the general conditions in a beehive and also outside of a beehive. Monitoring systems offer an effective way of accessing, visualizing, sharing, and managing data that is gathered from performed agricultural and livestock activities for domain stakeholders. Such systems have recently been implemented based on wireless sensor networks (WSN) and IoT to monitor the activities of honey bees in beehives as well. Scholars have shown considerable interests in proposing IoT- and WSN-based beehive monitoring systems, but much of the research up to now lacks in proposing appropriate architecture for open data driven beehive monitoring systems. Developing a robust monitoring system based on a contemporary software architecture such as microservices can be of great help to be able to control the activities of honey bees and more importantly to be able to keep them healthy in beehives. This research sets out to design and implementation of a sustainable WSN-based beehive monitoring platform using a microservice architecture. We pointed out that by adopting microservices one can deal with long-standing problems with heterogeneity, interoperability, scalability, agility, reliability, maintainability issues, and in turn achieve sustainable WSN-based beehive monitoring systems.

链接:

<http://agri.ckcest.cn/file1/M00/03/2B/Csgk0Yaha2GAaN0gAI5AqUnYOQE515.pdf>

3. A global meta-analysis of crop yield and agricultural greenhouse gas emissions under nitrogen fertilizer application

文献源: ScienceDirect,2022-04-04

摘要: Nitrogen fertilization (NF) is one of the common practices to increase crop production worldwide over the past several decades. Nevertheless, unreasonable NF results in massive greenhouse gas (GHG) emissions, leading to climate change and global warming. Many studies have already reported the impact of NF on crop yield, global warming potential (GWP) and greenhouse gas intensity (GHGI), but the studies were limited to only some parameters. In this study, a total of 174 studies from 16 countries were collected and then a regression analysis was conducted to obtain the appropriate N fertilization rates that enhance crop yield while reducing GWP and GHGI. After that, a meta-analysis was performed to evaluate the effects of NF on crop yield, GHGI, GWP and GHG emissions and identify NF management strategies that benefit crop yield and maintain GWP. The results showed that the suitable N fertilization rate was 180, 150, 130 and 200 kg ha⁻¹ for wheat, maize, rice and vegetables or industrial crops, respectively. Overall, NF resulted in positive effect size in crop yield (0.56) and negative effect size in GHGI (-0.14) compared to NNF. GWP showed positive effect size (0.37) due to an increase in N₂O emissions (0.91) relative to NNF, which is higher than the increase of CH₄ emissions (0.01) and CO₂ emissions (0.22). It was recommended that split and banded application of urea or urea plus manure is employed for cereals (especially wheat) in the arid and semi-arid regions with medium-textured and neutral or alkaline soil.

链接:

<http://agri.ckcest.cn/file1/M00/0F/FD/Csgk0GJKuWyACKoqABOK3V3GPWg041.pdf>

4. Blockchain: An emerging novel technology to upgrade the current fresh fruit supply chain

文献源: ScienceDirect,2022-04-01

摘要: Background. With the globalization of trade, the current fresh fruit supply chain now incorporates multiple entities, wide distribution, and intricate transactions. This brings about the issues of information tamper resistance, supply-demand relationship, and traceable supervision. Blockchain is a distributed ledger technology with advantages of tamper resistance of information. It is expected to solve the problem of transaction resource allocation among several untrusted participants in the fresh fruit supply chain. Scope and approach. This article recommends the use of blockchain to upgrade the current fresh fruit supply chain, and highlights the advantages of blockchain in supply chain

management. The obstacles faced by the implementation of this technology in relation to participants' attitude, fruit preservation, and blockchain technical loopholes have been analyzed as well. Key findings and conclusions. Blockchain can upgrade fresh fruit supply chain. It collects and uploads reliable data from fruit picking to final consumption through IoT-related technologies. After hash encryption and consensus verification, it is transmitted to P2P network for sharing. It balances the tension between supply and demand, brings funds for enterprises, simplifies supervision and traceability. Smart contracts reduce the cost of communication and trust. However, blockchain has some limitations such as difficulties in incorporating architecture, reliance on the IoT, immature fruit preservation technology, unclear legal supervision, lack of reference cases, and technical loopholes.

链接:

<http://agri.ckcest.cn/file1/M00/0F/FD/Csgk0GJKzk6Act6HAEqccuL19UY802.pdf>

5. Estimate soil moisture of maize by combining support vector machine and chaotic whale optimization algorithm

文献源: ScienceDirect,2022-04-01

摘要: Soil moisture of maize has an extremely important impact on the growth and development of maize. Failure to accurately estimate soil moisture will lead to severe reductions in maize yields and thus intensify the global food crisis, so it is extremely important to accurately estimate soil moisture of maize. This study proposes a new hybrid machine learning model (SVM-SWOA) that incorporates the Whale Optimization Algorithm (WOA) into sinusoidal chaotic graphs and couples it with a support vector machine (SVM). The model is with both high convergence speed and high accuracy. After using the data from two maize agricultural districts in Iowa, USA for model creation, Taylor plots and significance tests were used to enable the model for identifying input variables. To verify the performance of the model, SVM-SWOA was comprehensively evaluated with both SVM and SVMWOA models. Results showed that SVM-SWOA was improved 14%, 13%, 41.5%, and 14% over SVM-WOA at 60 cm depth for MAE, RMSE, MAPE, and MBE, respectively, and 20%, 29.5%, 44.5%, and 38% over SVM, respectively. It implies that the SVM-SWOA meta-heuristic algorithm can provide better guidance for smart agriculture and precision irrigation.

链接:

<http://agri.ckcest.cn/file1/M00/03/2B/Csgk0YahfiKAKI9WAFpAMIRSr zg189.pdf>

6. 考虑无线传输损耗的农业物联网节点分布规划算法

文献源：农业机械学报,2022-03-30

摘要：针对传统的农业物联网路由以及网关选址缺乏考虑实际地形对传输损耗的影响，导致节点电能的浪费以及维护费用的增加问题。本文首先对农场地形以及已布置终端的位置进行建模，使用K-means算法确定路由初始位置以及该路由负责对接的终端。在考虑电磁波自由空间损耗以及绕射损耗的前提下设计合理的适应度函数，基于一种可变惯性系数的粒子群优化算法对路由和网关的位置进行优化。最终模型给出最大的电磁波损耗数据，用于在确定节点的最大发射功率时提供参考。算例仿真发现，路由位置通过PSO算法寻优，可降低最多27.82%的最大传输损耗。实地检验发现，本算法所选取的最优点通信质量显著高于其附近的点，对于RSSI的提升高达12%~20%。模型最终给出的路由和网关最大传输损耗与最优布局位置对于实际节点铺设具有指导性意义。

链接:

<http://agri.ckcest.cn/file1/M00/0F/FD/Csgk0GJMSp6AQ0XAAB1CW6w6XT4694.pdf>

7. 基于TRIZ理论的大型粮仓中储粮害虫防治方法创新策略的研究

文献源：中国粮油学报,2022-03-24

摘要：民以食为天，粮食事关国运民生，粮食安全是国家安全的重要基础。研究高效、灵敏、准确、便捷、绿色的储粮虫害检测技术和方法是目前储粮害虫综合治理的热点。现代信息技术已广泛应用于储粮害虫检测领域中：如，电导率法、电容法、声学法、电子鼻法、近红外光谱法、机器视觉法、灯光诱食法、纳米材料法、生化荧光法、光纤测温法、物联网技术、深度学习算法、云计算，等。TRIZ理论有70多年的发展历史，是公认的、优质的发明问题的解决理论，已被广泛应用于世界500强企业和各领域。本文基于经典的TRIZ理论，将大型粮仓视为技术系统，运用九屏幕法、IFR法、因果链分析法、技术系统的进化法则、技术矛盾矩阵表法、物理矛盾法和物-场分析模型研究了大型粮仓中储粮害虫防治方法，有助于启发广大学者拓展技术创新的思维视角、发现新的研究方向、提出创造性的解决方案。

链接:

<http://agri.ckcest.cn/file1/M00/03/2B/Csgk0YahZ1iAL0YuAA2YVTolQD0531.pdf>

8. 区块链农业应用现状与技术热点

文献源：中国农业科技导报,2021-12-25

摘要：以德温特系列数据库为主要数据来源,利用文献计量学方法和CiteSpace可视化工

具从技术发展历程、技术研发力量分布、技术热点与前沿等方面对近十年区块链农业应用研究的发明专利进行全面分析。结果表明:区块链农业应用研究已经引起世界各国,特别是区块链技术强国的高度重视,但目前尚处于起步阶段;中国在区块链农业应用研发强度上较为领先,但创新性不足,研发主体以企业为主;商业应用模式、数据处理与数据传输、安全管理等相关研究是区块链农业应用研究热点,数据库应用和软件技术相关研究是区块链农业应用研究前沿。在这种形式下,我国应重视技术成果质量、把握技术前沿、追求技术创新与农业领域应用深度融合,提高我国区块链农业应用的全球影响力。

链接:

<http://agri.ckcest.cn/file1/M00/03/2B/Csgk0YahaQKAf2gTABhJhnddyM903.pdf>

9. 供应链视角小麦与初加工产品生产水足迹分析

文献源: 农业机械学报,2021-12-25

摘要: 针对农产品水足迹量化仅关注农田直接耗水,而忽略间接水足迹的问题,基于国际水足迹标准量化框架,结合生命周期法,构建考虑生产资料及其上游产品完整供应链、国际和国内贸易的农产品生产水足迹量化框架,计算2016年中国大陆省级行政区尺度小麦原粮及其初加工产品(面粉和麦麸)的生产水足迹,分析其耗水特征。结果表明:供应链视角下,全国平均小麦生产水足迹为4 869 m³/t,生产资料的间接水足迹占比为6%;面粉和麦麸生产水足迹分别为3 781 m³/t和11 037 m³/t;省级小麦及其初级加工产品生产水足迹的大小与构成存在显著空间异质性,福建省小麦生产间接水足迹占比高达25%。研究结果可为全面解析区域间农业和工业用水投入内在联系,制定合理的配水方案、落实"以水定产"战略提供一定科学依据。

链接:

<http://agri.ckcest.cn/file1/M00/0F/FD/Csgk0GJKt1-ACrvNACvGkzv2ylA527.pdf>

【会议论文】

1. Wireless Communication Technologies with IoT-Based Cloud-Enabled Service for Smart Agriculture Monitoring System

发布源: IEEE

发布时间: 2022-04-01

摘要: Wireless communication technologies are now being applied in new sectors because of technological advancements in the Internet of Things (IoT). Agricultural monitoring is an example of how the Internet of Things helps in improving productivity, efficiency, and yield. However, because all these devices are frequently used in locations where energy is not

easily available, the powering device is a problem. For agricultural monitoring, this study examines IoT devices with energy harvesting capabilities employing three wireless technologies like Wi-Fi, HC-12, and the Long-Range Wireless Communication Network (LoRa). The objective of this investigation was to see how each technology performed in different types of environments. According to the observations, LoRa is the best wireless communication technology the use of an agricultural monitoring system where network lifetime and power consumption are essential.

链接:

<http://agri.ckcest.cn/file1/M00/03/2B/Csgk0YahXwOAbNvmABNIrgltzbo632.pdf>

2. Application of Big Data Processing Technologies in Agriculture

发布源: IEEE

发布时间: 2022-03-31

摘要: Big data in farming depend on the usage of information provided, knowledge and analytical skills in order to generate suitable data which in turn beneficial to agriculturalists. This paper addresses the problem with the objective of Big data processing technologies in agricultural field. Advanced technologies have been developed for decision making about several essentials required components in cultivation. Internet of Things is applied for collecting information through various sensors that could able to convert into digital data. More number of sensors are used to develop the monitoring network in the cultivation field through the technological advancements. It could support the agriculturalists to identify the problems and its specific targeted locations. Big data processing technologies supports farmers based on rough and random data collection on patterns, water management and requirements of pesticides. It helps farmers to find a way forward to take suitable decisions for plant health protection. It also able to obtain the cultivation yield. Appropriate levels of spraying pesticides may result in increasing the productivity. Big data allows farmers to manage and helps in decision making. Big data lets agronomists to improvise their effectiveness by providing vital cues. It helps to persistently adapt to the requirements and provides insights in each stage of the way.

链接:

<http://agri.ckcest.cn/file1/M00/03/2B/Csgk0YahZWSAXFRGAAT9DZDzWJM978.pdf>

3. Plant Monitoring System Cum Smart Irrigation using Bolt IOT

发布源: IEEE

发布时间: 2022-03-31

摘要: Plant monitoring system is one of the most important tasks in any farming or agriculture-based environment which helps the farmers for irrigation. An automated IOT based water system for monitoring and maintaining the farms in approximate moisture content in soil based on temperature, moisture, humidity and light intensity. They can record the temperature values daily. Farmers can know which farm will suit that particular land based on their sensor values analysis. The main goal of this automation is to aid the farmer yielding more crops, optimal use of water supply (some areas have drought lands, they can use this future very efficiently), decision of crop. Our automated IOT based water supply provides efficient resource utilization and yields high accuracy in temperature with existing Arduino UNO. Overall it reduces economic cost and human intervention.

链接:

<http://agri.ckcest.cn/file1/M00/0F/FD/Csgk0GJKrxaAUyZbAAQpVxiVcwk918.pdf>

4. IoT based Crop Protection System during Rainy Season

发布源: IEEE

发布时间: 2022-03-30

摘要: Water is progressively turning into the foremost limited resource required to satisfy the developing populace. Its important part in the life of human beings is emphasized in arid lands, wherever is recognized by low annual downfall. Moreover the irregular temporal and spatial dissemination ensues dry and damp periods. This type of environmental circumstance impacts water expediency and crop yielding permanency. Thus, farming is challenging and this is credited to unsuccessful access of water. The chief and much needed agricultural element in arid lands is potency of agriculture water use. Beneath reduced and changing downfall circumstances, reasonable irrigation administration may be a great way for up water-use potency. The Internet of Things (IoT) is associate degree future technology that connects numerous devices through the web. Within the field of agriculture, the IoT technology provides varied advantages to the farms by addressing numerous problems faced by them. Such techniques facilitate to boost the standard, amount and property of agricultural merchandise. During this paper we've projected associate degree innovative approach for irrigating and persecutor watching and dominant for the crops. Towards this objective, associate degree IoT based mostly sensible irrigation system is projected, which

calculates the exact water supply of the crop that aids in its life cycle and climate. When this calculated crop water demand is mistreated, there is a pump motor that operates instinctively each time the dampness of the soil goes low beyond the enduring wetting purpose. The motor is closedown once the desired water is wired resolute crops. This ensures acceptable level of water is used for watering the crops that might aid in higher quality crop production. During this work, numerous parameters like wetness, wetness and temperature area unit being monitored endlessly mistreatment acceptable sensors. The information nonheritable by these sensors area unit collected mistreatment Arduino microcontroller. The pump motors and therefore the RF / GSM transceivers area unit operated mistreatment AT Mega controllers.

链接:

<http://agri.ckcest.cn/file1/M00/0F/FD/Csgk0GJKsxGACViWAAWqFw9LznU428.pdf>

5. Agriculture Crop Selection and Yield Prediction using Machine Learning Algorithms

发布源: IEEE

发布时间: 2022-03-30

摘要: Agriculture is the most fundamental and essential occupation for every human being. Without agriculture there is no living being, all are chained through web of life. In India agriculture is the main occupation, around 67% of people involving in agriculture. Inventors release many smart technologies in all the field like health sector, automobiles, education, etc. to improve our life styles and make our work easy. In the same way farmers also started to use smart technologies in the field of agriculture to improve the cultivation productivity. Recently the cities are transformed to smart cities through advanced technologies, similarly agriculture also turns slowly into technology enabled farming. Many farmers practicing green farming technologies to improve the production rate. In this regards, this paper proposes a model to select the appropriate crop for cultivation and predict the production rate using the weather parameters which are very much influencing the agriculture. Random Forest algorithm is the widely used machine learning algorithm for classification and prediction. The outcome of Random Forest is compared with Support Vector Machine algorithm. The authors concluded that the proposed model works on average accuracy of 90%.

链接:

<http://agri.ckcest.cn/file1/M00/03/2B/Csgk0YahYd-ARpmsAA0ibj9zbCY699.pdf>

6. Intelligent Itinerant Robot [IIR] for Agricultural Farm Monitoring using IoT

发布源: IEEE

发布时间: 2022-03-30

摘要: Agriculture plays a vital role in India's economy. Nearly 60% of our country's population hinge on agriculture and its by-products for its source of revenue. Hence proper maintenance of agricultural farm plays a pivotal role. Many on field sensor monitorization techniques has been implemented previously and it has produced incredible results in crop cultivation and farm maintenance. The performance or lifetime of the on-field sensors may get abridged due to various environmental factors and human intervention. Hence, we propose an Intelligent Itinerant robot is introduced here to monitor the various agricultural field parameters remotely on demand basis which completely removes the concept of on-field sensor fixation strategy. Moreover, the farmers can water the agricultural field remotely using a mobile application after the monitoring the humidity, temperature, soil moisture and soil pH values. This reduces the human workload to a huge extent and it also helps in improving the lifetime and performance of the sensors.

链接:

<http://agri.ckcest.cn/file1/M00/0F/FD/Csgk0GJKsHqATmXBAAynuKYhy8I482.pdf>

7. Various Crop Yield Prediction Techniques Using Machine Learning Algorithms

发布源: IEEE

发布时间: 2022-03-30

摘要: Agriculture is the third most contributing sector in the Indian Gross Domestic Product (GDP). Selecting right crop for the right soil at the right season plays a major role in getting good crop yield. A vast majority of the farmers believe on their intuition to grow crops in a particular season based on which they might incur losses. Based on the segregation of huge amount of data using Machine Learning (ML) algorithms, the important decisions like prediction of crop yield, for the type of soil or season can be taken. In this study, comparative literature review is carried out, giving ideas about various algorithms, their features which are popularly used in crop prediction. According to research, temperature and soil type are the most important parameters. Deep Neural Networks (DNN) is one of the most commonly used algorithms.

链接:

http://agri.ckcest.cn/file1/M00/03/2B/Csgk0YahYGqAKHqfAAh_213bOX0805.pdf

主编：赵瑞雪
地址：北京市海淀区中关村南大街12号
电话：010-82106649

本期编辑：陈亚东
邮编：100081
邮件地址：agri@ckcest.cn