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【动态资讯】

1．全国首批“绿水青山就是金山银山”理论实践创新基地贵州贵阳乌当区——生态“原色”勾勒 产业“绿色”出彩

【农民日报】贵阳乌当区上坝村，3000多亩李花盛开，形成一片“雪海”，扮靓了村村寨寨，吸引着八方来客。近日，贵州省贵阳市乌当区遍地花开，美景如画，一个个美丽乡村遍布黔中大地。行走画中，悠悠乡愁弥漫山水间，吸引着八方来客，也让无数游子回归故里。生态，一直是乌当的亮丽名片。这里全年平均气温14.6摄氏度，森林覆盖率达57.95%，空气质量优良率达95%以上，2017年9月被命名为全国首批“绿水青山就是金山银山”理论实践创新基地。近年来，乌当区依托良好生态优势，坚持“产业生态化、生态产业化”，不断拓宽“两山”转换通道，巩固提升全国“两山”理论实践创新基地品质内涵，推动高品质生态环境和高质量经济社会协调发展，着力打造留得住乡愁、聚得起人气、看得到未来的美丽乡村。

链接:

http://agri.ckcest.cn/file1/M00/03/33/Csgk0YbwW_CAHxMXAE_u1GtSUWQ172.pdf

2．国家审定一批绿色、专用和耐盐碱小麦新品种

【农民日报】日前，根据种子法及《主要农作物品种审定办法》有关规定，第四届国家农作物品种审定委员会审定通过176个小麦新品种，其中耐盐碱小麦品种首次通过审定。据介绍，此次审定通过的新品种有三个特点：一是高产优质绿色品种数量不断增加。18个品种对赤霉病的抗性达到中抗以上水平，其中宛1204对赤霉病、白粉病、条锈病3种病害均达到中抗水平，华麦11号对赤霉病达到中抗水平、对白粉病达到高抗水平，白湖麦4号、镇麦16对赤霉病、白粉病均达到中抗水平。这些品种在生产中逐步推广有利于我国小麦主产区提高减损增产能力。二是优质专用型品种数明显增加。11个品种达到优

质强筋标准，27个品种达到优质中强筋标准，3个品种达到优质弱筋标准。强筋品种适于生产面包、饺子、拉面粉，弱筋品种适用于饼干、糕点等产品加工，这些品种投入生产将更好满足人民群众美好生活需求。三是耐盐碱小麦品种首次通过国家审定。京麦188、京麦189、京麦12、小偃60等4个耐盐碱小麦品种通过审定，有利于由治理盐碱地适应作物向选育耐盐碱植物适应盐碱地转变。同时，这次审定的品种有90个为种业企业独立选育或者作为第一育种单位，所占比重首次超过50%，同比提高了4个百分点，这表明企业育种能力稳步提升。此次还撤销了沈免96等95个失去生产利用价值的国家级审定小麦品种，这是继去年撤销296个向日葵登记品种和233个水稻、玉米、大豆、棉花审定品种后又一重要行动，是探索建立健全农作物品种全生命周期管理有效实施的一次重要实践。

链接:

http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKZqiCALoLVADbQFyM3row725.pdf

3．油菜新品种“大地199”联合机收喜获丰收

【农民日报】中国农科院油料所培育的油菜新品种“大地199”喜获丰收。在该县城西湖乡许集村“大地199”千亩示范片，采用稻油轮作、免耕飞播模式种植模式和一次性联合收获，经安徽省农科院、安徽省农业技术推广总站等单位相关专家现场测产，实收菜籽亩产达224.6公斤，现场压榨出油率达44.7%。种植大户林德国介绍，“大地199”产量高、病害少、抗倒性强、成熟一致性好，后期不裂荚，非常适宜机械收获，且菜籽出油率高，去年油厂每斤加价0.2元收购，供不应求。自2020年以来他已连续3年种植“大地199”，2021年秋播种植300多亩，在冬季连续受低温干旱影响的不利条件下，今年平均亩产仍达160公斤以上，平均亩产值超过千元，每亩效益比小麦高出200多元。油菜的落叶落花秸秆等还田后还可以培肥地力，有利于提高水稻产量。据安徽国豪农业科技有限公司营销总监章俊东介绍，公司与中国农科院油料所合作推广“大地199”以来，该品种表现出高产、高油、多抗、适宜机收等优良特点，被种子经销商、种植户和压榨企业广泛认可。他说，在优质稻区规模化种植该品种，可以实现稻油双增双优，显著提升种植效益，并对今年进一步扩大推广规模、助力粮油兼丰充满信心。

链接:

http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKZrHKAd2iXABcYB9AW79M693.pdf

4．提高粮食收储数字化水平有助于粮食减损降耗

【中国农网】5月，全国各地逐渐进入夏粮收获季节。为扎实做好2022年小麦、早籼稻、油菜籽等夏季粮油收购工作，国家粮食和物资储备局等六部门联合发布关于切实做好

2022年夏季粮油收购工作的通知，提出要认真落实节粮减损各项政策措施，推广应用新技术和新装备，促进粮食减损降耗、提质增效。作为粮食全产业链的关键环节，粮食收储一直是粮食数字化转型的排头兵，不断提高粮食收储的数字化水平，是助力夏粮收购、实现节粮减损的必经之路。

链接:

http://agri.ckcest.cn/file1/M00/03/33/Csgk0YbwXjmAGnB8AAndthDUxak230.pdf

5．山东省济南市章丘区三涧溪村唱响数字乡村“四重奏”

【中国农网】近日，一部展现乡村振兴成就的当代题材剧《三泉溪暖》在央视一套火热首播。剧里三泉村的原型，便是位于山东省济南市章丘区双山街道的三涧溪村。近年来，三涧溪村作为乡村振兴齐鲁样板，联合浪潮以云服务、大数据、工业互联网为基础打造了数字乡村典型样板，依托党建引领智慧乡村建设，以“数据”创新赋能基层治理，以工业互联网推动产业发展，正在成为全国乡村振兴的桥头堡。

链接:

http://agri.ckcest.cn/file1/M00/03/33/Csgk0YbwYOWASBlNAAujItw8L0w860.pdf

6．数字赋能加快乡村产业升级

【中国农网】三涧溪，山东章丘的一个古老村落，数字乡村正在用数字化赋能，为我国农业农村发展开启一个可以借鉴复制的乡村振兴新模式。在章丘区社会治理综合服务中心的牵头和指导下，浪潮乡村振兴云依托乡村振兴基层治理数据库、一体化政务智能数据平台、边缘云一体机等优势产品，联合浪潮卓数、浪潮工业互联网共同助力三涧溪以党建引领率先实现数字党建，以数据创新应用赋能基层治理，“互联网+网格治理”打造智慧村居，视频感知、物联网、区块链、大数据等新一代信息技术加快乡村产业升级，打造乡村振兴的齐鲁样板。

链接:

http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKZrtSAfiopAAnnYAwGnac159.pdf

【文献速递】

1．A comprehensive assessment of SM2RAIN-NWF using ASCAT and a combination of ASCAT and SMAP soil moisture products for rainfall estimation

文献源：ScienceDirect,2022-06-03

摘 要： Rainfall estimation using remote sensing products is an alternative to in situ measurement rainfall due to their high temporal and spatial resolution. Using satellite soil

moisture (SM) observations in the SM to Rain (SM2RAIN) algorithm have a great potential to estimate rainfall. SMA2RAIN-NWF algorithm is a reinforced version of a SMA2RAIN algorithm which was developed to estimate rainfall through the integration of the SM2RAIN algorithm and the net water flux (NWF) model. A new release of SMA2RAIN-NWF algorithm uses the Advanced Microwave Scanning Radiometer 2 (AMSR2) SM dataset as input datasets. The aim here is to assess the SMA2RAIN-NWF by using multiple SM products including ASCAT, and their integration in four aggregations (AGGR) periods (1, 7, 14, and 30 days) by comparing with rainfall observation of 15 stations over the Lake Urmia basin, Iran for the period January 2015 to December 2019. The Discrete Cosine Transform (DCT) method is applied to fill the gap in the satellite SM time series. Moreover, the effect of land cover classes (grasslands, croplands, and urban) on rainfall estimation is investigated. Considering the Kling-Gupta efficiency (KGE) and correlation coefficient (R) values in comparisons of calibration and validation revealed that urban areas experienced a minimum decrement rate (25 %). A comparison of three SM products (ASCAT, ASCAT+SMAP, and ASCAT+DCT) show that all products had a high performance on a daily time scale in term of the KGE and R. The results showed that algorithm performance gradually rose via an increase in AGGR levels, reaching KGE and R values of 0.8 and above. Furthermore, the comparison of SM2RAIN-NWF and SM2RAIN show an improvement of SM2RAIN-NWF performance across various AGGRs.

链接:

http://agri.ckcest.cn/file1/M00/03/33/Csgk0YbxrGiATCZ0ADZ-liTlPNc668.pdf

2．土壤氧化铁的特征波长选择和高光谱反演

文献源：中国生态农业学报(中英文),2022-06-02

摘要：传统的氧化铁特征波长选取方法单一， 且往往仅利用相关系数法（correlation coefficient method， CC）选取特征波长， 导致建模输入变量较多进而导致预测精度不高。为提高模型预测精度， 在云南禄丰恐龙谷南缘地表研究区采集135个土壤样品， 并在室内测定样品的光谱反射率和氧化铁含量。对土壤光谱曲线进行Savizky-Golay平滑后作为原始光谱曲线（origin spectral reflectance， OR）， 并对原始光谱曲线进行一阶微分（first-order differential reflectance， FD）和倒数的对数（reciprocal logarithm reflectance， RL）变换。通过与氧化铁含量做相关性分析， 并在此基础上进一步利用迭代保留信息变量（iteratively retaining informative variables， IRIV）、竞争性自适应重加权算法（competitive adaptive reweighted sampling， CARS）和连续投影法（successive

projections algorithm， SPA）算法以提取特征波长， 把提取的特征波长作为自变量， 氧化铁含量作为因变量， 分别用随机森林回归（random forest regression， RF）和偏最小二乘回归（partial least squares regression， PLSR）进行反演模型的构建。发现在相关性分析进一步利用IRIV、CARS和SPA算法提取特征波长的方法可以有效降低建模波长数。通过结合不同的光谱变换方法和建模方法， 发现RL-CC-CARS-PLSR模型的效果最好， 其建模集R^2为0.833， RMSE为4.361 g·kg^{-1}， 验证集R^2为0.826， RMSE为5.600 g·kg^{-1}， RPIQ达3.618， 模型具有很好的稳定性和预测能力。该研究为利用高光谱反演土壤氧化铁含量提供了参考。

链接:

http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKZ7KCAHa8GABejWcp43TA460.pdf

3．An innovative digitization evaluation scheme for Spatio-temporal coordination relationship between multiple knowledge driven rural economic development and agricultural ecological environment—Coupling coordination model analysis based on Guangxi

文献源：ScienceDirect,2022-06-01

摘 要： The agricultural ecological environment is the premise and foundation of rural economic development and the rural economy is an important manifestation of the vitality of the agricultural ecological environment. Taking 14 prefecture-level cities in Guangxi as the research object, this paper collects and sorts out the relevant data indicators of rural economy and agricultural ecological environment of them from 2007 to 2019, constructs the evaluation index system, calculates the development index by using the comprehensive index function, and finally uses an innovative digitization evaluation scheme to further evaluate the spatiotemporal coupling and coordination relationship between the rural economy and agricultural ecological environment. The following conclusions are ultimately drawn. First, the comprehensive level index of the rural economy shows linear growth with unbalanced regional development (values from 0.306 to 0.598). Second, the comprehensive index of the agricultural ecological environment shows fluctuating growth with obvious regional differences (values from 0.264 to 0.483). Third, the development of rural economy and agricultural ecological environment is not synchronized, and there is mutual influence. Fourth, the coordination level of the rural economy and agricultural ecological environment is low (coupling values from 0.369 to 0.513). Then, policy inspirations are proposed. First, the investment in agricultural science and technology innovation should be increased and

the modern agricultural technology system. Second, agricultural industrial structure should be optimized and the agricultural industrial chain. Third, the construction of agricultural infrastructure should be improved, and the high-quality development of agriculture should be promoted. Fourth, the education of ecological civilization should be strengthened, and awareness of ecological and environmental protection should be established. Fifth, they should strengthen education and training and cultivate new professional farmers. Sixth, they should improve the utilization rate of land and enhance the arable land production capacity.

链接:

http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKa_YKAXdq1ACuZ7yMuzPY096.pdf

4．基于MPC算法的无人驾驶插秧机控制系统研究

文献源：农机化研究,2022-06-01

摘要：针对水稻插秧机无人驾驶需求，以井关PZ60型插秧机为试验平台，采用RTK-GPS北斗定位技术获取插秧机无人驾驶所需的高精度位置信息，以华测领航员NX300电动方向盘为执行元件实现无人驾驶插秧机转向操作。基于CAN总线设计了插秧机无人驾驶系统，通过CANOPEN协议与电动方向盘、上位机等进行通信，对待作业地块进行路径规划，用直线段与拐弯段填充作业路径，建立插秧机运动学模型。同时，提出了一种基于线性时变模型预测控制的路径跟踪算法，控制插秧机按规划路径进行直线追踪和地头转弯，实现了插秧机无人驾驶。进行插秧机无人驾驶田间试验，结果表明：基于MPC算法的控制器能够使无人驾驶插秧机车速1m/s时，有效跟踪预定义路线，直线段跟踪误差最大2.02cm,满足插秧机无人驾驶精度要求。

链接:

http://agri.ckcest.cn/file1/M00/03/33/Csgk0YbwnlKAF8dLABx4AshKoF8128.pdf

5．规模养猪户智慧农业技术采纳意愿的决定因素：基于互联网普及的视角

文献源：华中农业大学学报(自然科学版),2022-06-01

摘要：为推进智慧农业技术普及，本研究使用湖北省规模养猪户的调研数据，应用倾向得分匹配法（PSM）分析互联网使用对规模养猪户智慧农业技术采纳意愿的影响效应，并在此基础上应用Probit模型进行异质性和影响路径分析。研究发现：（1）互联网使用会显著提高规模养猪户对智慧生产技术、智慧管理技术、智慧服务技术和安全追溯技术的采纳意愿，且效应大小排序依次为智慧生产技术>智慧管理技术>安全追溯技术>智慧服务技术。（2）互联网使用对规模养猪户智慧农业技术采纳意愿的影响具有异质性：

从年龄来看，新一代规模养猪户倾向于采纳智慧生产技术，老一代规模养猪户倾向于采纳余下3种技术；从学历来看，较之于高学历规模养猪户，互联网使用对低学历规模养猪户4种技术采纳意愿的影响均更大；从经营规模来看，小规模养猪户倾向于采纳安全追溯技术，大规模养猪户倾向于采纳余下3种技术。（3）使用互联网能够通过提高规模养猪户对智慧农业技术的技术认知和价值感知间接正向影响其采纳意愿。

链接:

http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKZ6yuAOWWuAA2pSmdvfr4349.pdf

6．基于性诱和物联网的草地贪夜蛾成虫种群动态智能化监测

文献源：植物保护,2022-06-01

摘要：为实现田间草地贪夜蛾成虫种群动态的智能化监测，本研究对本文作者前期研发的基于性诱和物联网的害虫智能监测设备进行了田间应用和评估。研究发现，该智能监测设备的实时采集数据和人工计数数据所反映的草地贪夜蛾高峰期均为9月20日—9月22日、10月14日—10月22日和11月4日—11月6日，自动计数的平均准确率达75.03%；桶形诱捕器仅监测到9月20日—9月22日和10月14日—10月22日这2个高峰期，但整个监测期间桶形诱捕器诱集到的草地贪夜蛾种群数量与智能监测设备监测到的种群数量没有差异（Z = -0.784，P = 0.433）。此外，该智能监测设备的实时监测数据表明：草地贪夜蛾成虫具有明显的昼夜活动节律，而且受环境温度影响较大。当日平均温度>16℃时，大多在18:00后开始活动，晚上12点左右达到活动高峰期；当日平均温度<16℃时，草地贪夜蛾成虫整体活动性不强，但在16:00—16:59和23:00—00:59出现两个活动小高峰期。以上结果表明，基于性诱和物联网的智能化监测可以用于草地贪夜蛾的远程实时测报。

链接:

http://agri.ckcest.cn/file1/M00/03/33/Csgk0YbwnAaAaPooABK6aKJFK8A723.pdf

7．基于分数阶微分的土壤含水量高光谱响应特征与估测模型构建

文献源：测绘地理信息,2022-05-31

摘要：面向滨湖地区土壤含水量信息的高效获取，以洪湖272个土壤样本为例，测定可见-近红外反射光谱，对原始和两种预处理后的光谱进行0～2阶分数阶微分处理（间隔为0.2阶），探究土壤含水量的分数阶微分光谱响应特征；以此为基础构建土壤含水量的估测模型并进行对比验证，探究最佳的预处理与微分阶数组合。结果表明：随着微分阶数的增加，土壤光谱在水分特征波段1 450、1 950和2 200 nm附近谷值逐渐突出，1 950 nm处的VIP峰值逐渐增强；分数阶微分在特定波长和阶数下能提高土壤含水量和光谱之间的相关性，使用Savitzky-Golay（SG）平滑+0.6阶微分的光谱数据建立的模型精度最佳，

预测决定系数为0.86，相对分析误差值为2.62，且在不同用地类型的交叉验证中都取得了良好效果。

链接:

http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKZ7i-ASffxAA6E8hk_FIg871.pdf

8．Exploring the characteristics of smart agricultural development in Japan: Analysis using a smart agricultural kaizen level technology map

文献源：ScienceDirect,2022-05-11

摘 要： This study aims to clarify the Japanese characteristics of the spread of smart agriculture utilizing digital technology, which is expected to spread worldwide, and to provide policy implications for further dissemination of the technology. We conducted a questionnaire survey on actual conditions related to smart agriculture on Japanese farms. We have also proposed creation of a Smart Agricultural Kaizen Level (SAKL) technology map by applying the evaluation method used in management technology theory for the manufacturing industry. Using the results of the questionnaire survey and the proposed SAKL technology map, we analyzed the current pattern of expansion of smart agricultural technologies in Japan. Our results suggest that production efficiency in Japanese agriculture could be improved by raising the data visualization level and introducing smart agricultural technology. We also found that Japanese agriculture efficiency can be improved by introducing smart agricultural technology even if the data visualization level remains low. Smart agricultural technology automatically visualizes information and optimizes conditions without relying on the farmer's information literacy. At Japanese agriculture sites, the current smart agricultural technology introduction rate is less than 50%. To effectively disseminate smart agricultural technologies in the future, a policy should be implemented that promotes the development of a standardized package of smart agricultural technologies that can improve efficiency to some extent through default operation. With such a package, smart agriculture could be expanded without resorting to improving farmers' information literacy. Agricultural sites in Japan are thought to be currently engaged in developing such a standardized package of smart agricultural technologies.

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http://agri.ckcest.cn/file1/M00/03/33/Csgk0Ybzi6yAJVm3ACgE_YVv3z8184.pdf

9．Assessing agro-environmental sustainability of intensive agricultural systems

文献源：ScienceDirect,2022-04-02

摘 要： Sustainable production in water-scarce regions entails not to overshoot the sustainable blue water availability (BWA), which in turn requires addressing environmental flow requirements (EFRs). We explored the long-term effects of agricultural development, before (19841997) and during (19982018) the operation of the modern irrigation and drainage network of Tajan (TIDN), northern Iran, on the sustainability of blue water consumptions. A combination of different methods were applied to estimate hydrological EFRs of rivers, ab-bandans (traditional water reservoirs), and groundwater resources. Three major pollutants in the region's water resources, including nitrogen, phosphorus, and salinity, were used to estimate water quality EFR. Monthly agriculture water footprints (WFs) were calculated using the AquaCrop model, and then were compared with the region's BWA, which was calculated by subtracting monthly EFRs from monthly natural runoff. When WF exceeded BWA, the production system includes unsustainable water consumption. The EFR satisfaction of surface water decreased after TIDN operation by about 19%. Unmanaged nitrogen application and post-TIDN overexploitation of groundwater resulted in substantial increase in groundwater EFR violation. The TIDN led to more water consuming cropping pattern resulting in increased agricultural water consumption by about 73%. Overall, agricultural development in TIDN was beyond the capacity of the area, which resulted in up to about 167 MCM y−1 unsustainable blue water consumption. Based on the results, the new framework presented for assessing agro-environmental sustainability could assist managers and policy makers to modify agricultural systems according to environment resilience.

链接:

http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKbAMOAC5u9AEJ7cx-TpHU866.pdf

【会议论文】

1．Estimation of Soil Salination for Crop - Yielding and How to Prevent

发布源：IEEE

发布时间：2022-06-02

摘要： Now-a -days the farmers are facing various crop yielding problems due to climatic conditions and lack of fertility in soil salinity has negative impacts in growth of plants and causes destruction of land. Because of less salinity, the yield of agricultural products is lower as it is not favorable for farmers. It even destroys the economic growth of the region. Detecting the soil salination at an early stage helps in getting good production. The

complete loss of farmlands is due to heavy contamination, and it has negative effects of soil erosion. Moreover, some crops are not suitable in certain areas due to increase of salt content in water. This method is proposed to identify the salination in the soil and suggest suitable crops based on the salination level. Inorder to increase the farmer's academic growth, this method is proposed. In this project we collected the pH values of different soil and suggest the suitable crops for the soil based on pH value. Agriculture depends on the soil and based upon the soil we can estimate whether the crop is suitable for the cultivation or not based on the soil. The soil comprises of minerals like S, Cl, Ph, NO3.The composition of the correct of these minerals leads to the good yield of the crop. So, it is important to check the soil and estimate the mineral content accordingly so that we can estimate the crop based on the mineral content. Salination is nothing but the collection of exact number of soluble salts in the water. Plant growth gets effected by soil salinity due to the meddle of the salt in water absorption. That is the reason even when sufficient soil moisture was provided also the crops die as they were unable to take enough water. Therefore, because of this soil salination, many lands were being excluded for the agriculture. Hence, using the pH sensor the solution was proposed to this problem.

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http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKZszeAZmBRAANviWKScCc901.pdf

2．A Hybrid Approach for Crop Yield Prediction using Supervised Machine Learning

发布源：IEEE

发布时间：2022-06-01

摘要：Agricultural production has always been a vital factor in economic development, and it has had an enormous impact on our economic prosperity. Also, as science progresses rapidly, the farming industry has become one of the most critical segments to face issues in farming, such as land, groundwater flow, catastrophic events, herbicides, and pesticides. Throughout all stages of yield development, the amount of acceptable precipitation observed is critical to the development of harvests in farming. There will be occasions when the excellent monsoon season is insufficient to aid agricultural production, and understanding it can assist farmers in determining the volume of moisture that can only be made available via irrigated agriculture. Forecasting feasible precipitation and harvest and water requirements is a difficult task requiring a thorough and reliable scrutiny of a long set of variables, such as relative humidity and temperature. In the earlier period, the viable

monsoon was calculated by factoring in 3 significant aspects: moisture, heat, and rain. Analyze several research mechanisms throughout history, and investigate a considerable proportion in heavy rains. We employ a hybrid approach that combines logistic regression and random forest (LRRF) to anticipate crop production concerning annual rainfall as in the research design.

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http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKZtpmAUZxOAAO6cVsnw5A989.pdf

3．Disease Classification and Detection Techniques in Rice Plant using Deep Learning

发布源：IEEE

发布时间：2022-06-01

摘要： In today's world, agriculture is an important source of food, Plant diseases, on the other hand, cause the majority of agricultural crop production losses, with about 35% of crops being lost owing to plant diseases. The considerable impact on plants can be reduced by early identification of plant diseases, which demands the use of computing technology in the agricultural area. Deep Learning (DL), a subset of Artificial Intelligence (AI), provides a solution to these challenges. Popular Deep Learning models are used for disease classification and detection. A comparison is made between the related studies in terms of image preprocessing, segmentation, feature extraction, and classification. This paper compares various deep learning models for detecting and classifying various diseases.

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http://agri.ckcest.cn/file1/M00/03/33/Csgk0YbwZqqAKHPgAARLqdrOoXM192.pdf

4．E-Connect for Agro Products Using Supply Chain with Micro-Finance: A Blockchain Approach

发布源：IEEE

发布时间：2022-06-01

摘 要： The computerized world coordinates with customary cycles and keeps a nature venture track of the client of the rural product from the maker. Agro-Connect proposes collaboration among ranchers and customers participation utilizing blockchain for cultivation. Here, the ranchers can post their current harvests and production of their homestead through conveyed public record. The purchasers can go through subtleties and verify the rancher's believability in view of the past development and supply. This makes a

straightforward and sealed advanced market stage for ranch items. In this way, the agreement can be shaped between the rancher and the purchaser, to such an extent that the buyer shall finance singular harvests or a ground shall get the harvest from the homestead or the benefit level of its reasonable worth. Measurement of yield and assemble the believability of ranchers and a buyer in light of their past encounters in the agro market. One of the momentous advancements, Blockchain, is an incredible approach to dealing with the nature of the production network on the board since it utilizes the disseminated public general record. Blockchain innovation ends up being useful in the store network area in an accompanying way: diminish mistakes, keep away from item delays, dispose of fake exercises, further develop the executives, increment buyer/provider trust, etc. In the event of the absence of straightforwardness, Blockchain gives kept data about an assortment of exchanges in merchandise and additional benefits, which are recorded and followed progressively.

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http://agri.ckcest.cn/file1/M00/10/05/Csgk0GKZtOqAYowcAAgFg5AJ6eE772.pdf

5．Identification of Maize Plant Leaf Disease Detection using ConvNet Model

发布源：IEEE

发布时间：2022-06-01

摘要： Agriculture is one of the most crucial determinants of a country's development. Agriculture employs more than 60% of the population in India. Plant disease is a persistent problem for smallholder farmers, posing a threat to income and food security as the seasons change. These diseases attack the leaves of the plant initially, then infect the entire plant, reducing the quality and quantity of the crop produced. It is impossible for a human to recognize and diagnose each plant's status due to a large number of plants on the farm. Because these ailments are contagious, it's vital to identify each plant. The deep convolutional Neural Network model's accuracy results in disease identification revealed that it is promising and can have a major impact on disease identification efficiency.

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http://agri.ckcest.cn/file1/M00/03/33/Csgk0YbwZIiAGqR7AAVsFz07R5o085.pdf

6．Prediction of Maize Leaf Disease Detection to improve Crop Yield using Machine Learning based Models

发布源：IEEE

发布时间：2022-05-27

摘要：In India, agricultural crops such as rice, wheat, cotton and maize are largely produced, which leads to a rise in the Indian economy, where most Indian people are largely dependent on agriculture. Among the crops, maize is one of the most important crops, because it is the main source for energy in food for humans and yields high productivity all over India. But, the crop yield production of maize is affected due to the diseases in plant leaves. The farmers face the problems in controlling and identifying the plant diseases that affect the quantity and quality of maize crops in high yield production. To avoid this huge loss and increase the maize crop yield productivity, it is essential to identify the diseases at an early stage. Therefore, an automated disease diagnosis system for maize plants is proposed in this research work. There are four stages presented in the work such as pre-processing the input data, segmenting the affected areas of maize leaves, extracting the features and prediction of disease. In this work, supervised Machine Learning (ML) techniques are implemented to predict the diseases of maize plants. YOLO architecture is used for the segmentation process, where Discrete Wavelet Transform (DWT) is used for extracting the features. An input image is taken from Kaggle dataset and experiments are conducted to test the efficiency of ML techniques in terms of accuracy, precision, sensitivity and specificity. The results proved that the Support Vector Machine (SVM) techniques provide better performance than other ML techniques in terms of various parameters for detecting the maize diseases.

链接:

http://agri.ckcest.cn/file1/M00/03/33/Csgk0YbwaqOAeMu0AEA5IJES4mc453.pdf

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