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A Survey on Agriculture Monitoring and Disease Identification System

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Abstract--- In our paper Agriculture Monitoring and Disease Identification System the main objectives is to improving the performance of agriculture and easy to understand to the farmers and they use efficiently. This system is very useful to farmers, to how to grow number of plants in their home as well as in farm by using all available information and here disease identification module use to identify the plant disease by uploading plant picture with provided proper guidance so with respect to disease precautions will be given. Modern agricultural systems have been developed application for fertilizer, soil, climate, crop rotation, and genetic manipulation of crop plants. For practically is used for soil, farming system are depends on the others and need for using the others. The use of fertilizer in agricultural production has been key to the development of these practices.

Keywords: Disease Monitoring, Agriculture Crops, Image processing, Fertilizers, Soil Laboratory.

I. INTRODUCTION

It is mainly used for providing the agriculture related information and solving the problems related to agriculture area. This agricultural system contains the details of fertilizer, soil, crop rotation, genetic manipulation of crop plants, the query communication between the user and admin can be performed in this system. The information is divided into category wise such as crop protection, vegetables, grains and etc. English category information is also included. The agriculture information is exchanged between the browser and the server. The data should be in the form of text. User should need proper guidance information to cultivate their agriculture land.

This system is divided into two panels Admin and User, where as "Admin" maintain the details of fertilizer, soil, climate, crop rotation and genetic manipulation of crop plants. In system news, the admin can add new details to the system this will maintain daily report of agriculture and farmer also touch with recent information of plant. There are five types of modules used to develop the proposed system such as Information Gathering, Information Sharing, and Page Designing. Information Gathering is used to gather the information, reading and sharing of information from one to another. Information Sharing is used to share information one to another. Some of the major operations in farming which are under research and automation are seeding, weeding and spraying processes also add the detail about different dealers of seed and fertilizer with address which

will be use to help the farmer to buy and add detail about risk management of plants and crop management . Another panel for "User" where farmer can see the require detail about the plant, different crops, fertilizer, the details of fertilizer, soil, crop rotation, genetic manipulation of crop plants, the query communication between the user and admin can be performed in this system. Disease identification helps farmer to click the picture of plant disease and upload this picture on application then application identify the disease according to spot on picture and give description of disease respected solution. Using this system user can save money and time in creating application for own news application. It requires a web hosting to store admin panel files and SQL database.

II. LITERATURE SURVEY

Neha S. Naik1 et al.[1] proposed the cost effective and does not require the costly equipments for its navigation; it is designed to be automatic and light weight. These advantages make it real aid to farmers. This system is the open loop control system, i.e. no feedback is given from the output side. Input to this system is crop type and desired output is the execution of showing task. This execution in this paper is achieved through mechanical parts. Two DC motors are required for movement of these arms, one for up and down motion or other for opening and closing.

Beijing Research Center for Information Technology in Agriculture et al.[2] proposed the Agriculture monitoring such as growth, yield, diseases and insect pests can be processed by remote sensing technique which is multi-temporal and large-scale. In China, it is difficult to detect agriculture monitoring by traditional method because of large farming area, complex terrain and diverse planting structure. In this paper the agriculture monitoring using remote sensing technique not only calls for professional images obtaining, high efficiency image preprocessing, storage and management, but also publishing the referred maps quickly. To deal with the complex environment and natural disasters, monitoring and forecasting of small satellite constellation system. More data is provided after this delivery, But mature processing software is still needed to process the any data that is crops detail, soil detail, laboratory numerous data. The massive images which having more data size can't be organized and managed effectively using the traditional document management mode.

Zhuang Jiayu, Xu Shiwei et al.[3] proposed this system for higher grain yield can be best explained by adoption of advanced technologies, followed by material inputs, environment, climate and policy. A crops simulation system helps to study the intricacies of the dependences between these factors and grain yield. In this paper, two typical applications of the intelligence information fusion technology in agriculture monitoring and early-warning research were introduced. These two applications show the multidisciplinary combined with traditional agriculture and modern information technology. Further researches will be focused on how to improve the facility and real-timely of the simulation. The strong alignment of the information technology and agricultural technology represent the development direction of the future agricultural technology.

Tianchen Qiu et al.[4] Proposed the development of facility habitat intelligence monitoring platform will solve a series of technical questions in information collection, efficient and reliable information transmission, intelligent system integration for different needs and environment. This will be a catalyst for the transition from traditional farming to modem farming. This system also provides opportunity for creating new technology and service development in lOT agricultural application. The framework mentioned in this paper applies to intelligent monitoring platform of facility habits in Shanghai. It will lead to the integration of resources to form a system for application and promotion in the base of lOT, ICT and sensing technology. It will have significant implication in the areas of changing the traditional mode of agricultural management, improving prevention and control capabilities of flora and fauna epidemic disease, ensuring the quality and safety of agricultural products, healthy development of modem agriculture, improving production efficiency, shortening production cycle, improving the level of intelligent agricultural production, achieving the maintenance and appreciation of values in the product circulation.

Ji-chun Zhao et al.[5] This paper reveals that inequality across states largely reflects the activity mix –in particular the agriculture share in output The lack of qualifications ,combined with the low number of job openings, has slowed the transition from agriculture to other more productive activities. Large gaps in productivity across states also arise in the organizes manufacturing sector, partly driven by policy, including social and physical infrastructure but also product market regulations (PMR) that differs across states finally, the paper shows that the transition of agriculture, large disparities in living standards between rural and urban areas and demographic factors will result in a massive urbanization process.

Institute of Built Environment and Control et al.[6] proposed a paper that can monitor the greenhouse environments, control greenhouse equipment, and provide various and convenient services to consumers with hand held devices such as a PDA and wireless devices living a farming village. This paper discusses the advantages of using management strategy along wireless sensor-actor network technology for such cost-effective and environmental friendly greenhouse management for farmer.

[7]This paper has main objective is focused on improving the agriculture performance. It is also mainly used for providing the agriculture related information and solving the problem related to agriculture. Here the user can able to grow the number of plants in their home by using this information. The user should need proper guidance information to cultivate their agriculture land. This modern agricultural system contains the details of fertilizer, soil, climate, crop rotation, and genetic manipulation of crop plants and etc. In addition, a digital signature algorithm may be used to detect whether or not the information was modified after it was signed. REST API architecture will be useful to build client/server network applications. It contains all the information to grow plants. The information is divided into category wise such as cattle, crop protection, vegetables, grains and

etc. English category information is also included in this application. The query communication between the user and admin can be performed in this system. User can clarify their quires about the agriculture by using this system. By using this system, the growth of plants will be increased in residential areas. The system can be shared via social network services. User can login to the application with social media Face book, twitter, Google+. It is a web based and mobile application.

Department of Soil Science and Agricultural chemistry et al.[8] proposed that the plant height, number of main branches per plant, number of lateral branches per main branch and number of leaves per lateral branch of any plant were highest in media containing Cocopeat: Vermicompost: Pressmud in 1:1:1 ratio with Nutriseed Pack. The significantly highest fruit yield of tomato (1513 g/pot) was achieved in grow bag media containing equal proportion of Cocopeat: Followed by, the higher yield of tomato (1379 g/pot) was recorded in case of Cocopeat: Vermicompost: Vermiculite (1:1:1) with Nutriseed Pack, which was at par with Cocopeat: Vermicompost: Vermiculite + Neem Seed Crush with Nutriseed Pack (1320 g/pot). The conventional pot mixture of Soil: Sand: Besides, the promising effect of matric suction irrigation has been brought out in the present study as an alternative means for surface irrigation.

Department of Botany et al.[9] proposed that water stress has adverse impacts on crop growth, yield and quality parameters thus, considered among serious constraints to agriculture production. In this paper we have to study, effect of seed size and water stress was analyzed in three wheat varieties (PBW-154, UP-2338, and UP-2425). Three seed size classes (large, medium, small) of each wheat variety were kept under various water stress levels. It was observed that the bottom length and top length were highly sensitive to water stress and showed minimum growth at highest water stress level. The comparison of different varieties, seed size classes and water stress levels showed that in terms of seedling growth variety UP-2338 was more resistant to water stress as compared to any other varieties, whereas in terms of germination variety PBW-154 was more resistant. Variety UP-2425 showed maximum reduction in seed germination with increasing water stress (33.3% at -15 bar stress level). Among seed size, large sized seeds showed highest seed germination (91.9%) followed by medium (89.7%) and small (82.8%) sized seeds.

Research Scholar, Assistant Professor, SVPM's College of Comm., Sci.[10] In this paper shown as in order to enhance investment and achieve a sustained increase in production, coherent and integrated long-term strategies and policies are required to reduce risk aversion and build among Indian rural producers. There is a need to provide reasonable prices for farmers in order to increase the incomes of farmers. In this research paper researcher's objective is to study the major agriculture crops production, export and import of agriculture crop Today, A researcher also does there analytical study of this major agriculture crop Wheat.

India is a one of major supplier of several agricultural commodities like tea, coffee, rice, spices, oil meals, fresh fruits, fresh vegetables, meat and its preparations and marine products to the international Market Agricultural production is prone to several risks which affect both producers and consumers.

III. METHODOLOGY

This proposed system is shown as input crop type and desired output is the execution of showing task. This paper designed detailed solutions including data batch pre-processing, image storage and publishing settling the agriculture monitoring.

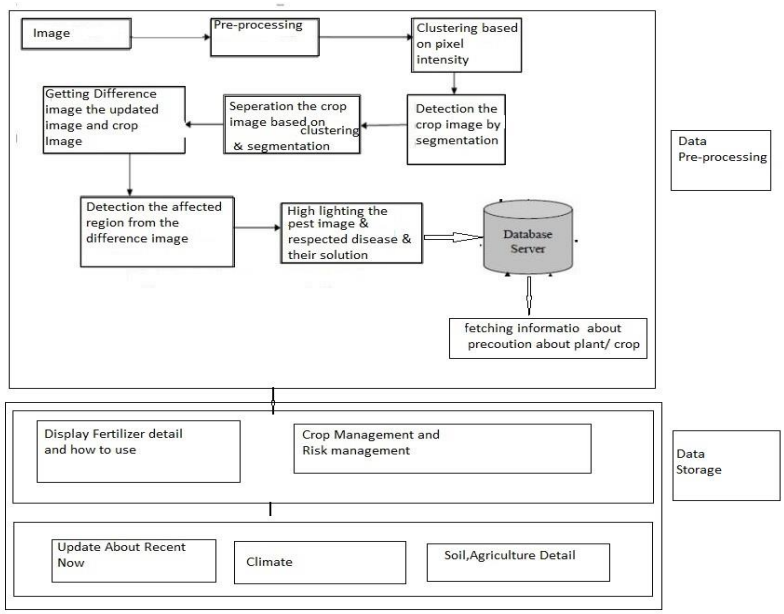
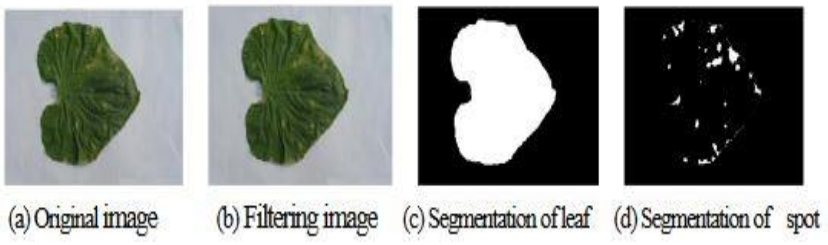


Fig.1: Work Flow of Proposed System

Data Preprocessing: From the location referring different sites, the image is acquired. Regardless of what image device are adopted, the image which have input always not satisfactory. If similarities are present in image the region of in the image is not clear and other objects interference exists as shown in Fig.1. In the image clipping, smoothing, enhancement are the three steps included in preprocessing phase. The process of image collection and lots of information may bring detail which may easily lead from operating and saving to the image would make the quality of image dropped, thereby affects following of diseases aster yellows. Bacterial wilt, blight. Fire blight. Rice bacterial blight, canker, crown gall, rot. Basal rot, scab. Image Segmentation: According to the region of interest, the image will be segmented into different parts. To divide the image into same meaningful region is the image segmentation.

Extraction of features and statistic analysis: The features extraction is the input data transform into set of features. The feature set will extract the relevant information so should carefully chosen. To describe shape by statically sampling co-occurrence methodology is used. All the from these data fetch from database which contain the all classification of leaves diseases that has been display on application disease is identified when plant image going to be processing with pre-define database images.



Applying above classifier, the disease leaf images of cucumber, corn and grape were isolated from background respectively.

Data Storage: This maintains the details of fertilizer, soil, climate, crop rotation and genetic manipulation of crop plants. In system news, the admin can add new details to the system this will maintain daily report of agriculture and farmer also touch with recent information of plant. Some of the major operations in farming which are under research and automation are seeding, weeding and spraying processes also add the detail about different dealers of seed and fertilizer with address which will be use to help the farmer to buy and add detail about risk management of plants and crop management

IV. CONCLUSION

In this study Agricultural Monitoring and Disease Identification System Reviewed. The main purpose of this review is to provide the information related to agriculture like Soils, Climate, Fertilizers and Crop details. It is observed that primary focus of agriculture system is identification of the various plant diseases and provide their respective solutions. In future, User interaction should be provided. Because if the user want to gain some suggestion about the agriculture cultivation, then user can verify as query format through "Email". Later Admin can reply for user's queries.

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