LITERATURE SURVEY - TEAM 3

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SL.NO	Title-Name of the author-Initialization year	Concept	Disadvantages	Future Works
1	IOT Based Wireless Sensor Network for Prevention of Crops from Wild Animals by S.R Chourey , P.A Amale , N.B Bhawarkar in 2017	The conservation of crop field from the wild animal has been a main aim of this paper. The proposed paper is completely technical solution for each farmer using **wireless sensor network** (WSN) and Internet of Things (IOT). The position of the animal once detected is tracked by ultrasonic sensor, then raspberry pi take an image of animal using camera, this image is send to the user using GSM.	The wild animals will be captured by the web camera and it will be identified by the raspberry pi and to corresponding response will have some delay. Before the response of the system , the wild animals may damage the farm.	The raspberry pi's performance can be increased by installing ZRAN , Reducing GPU RAM , Giving the correct input power so that the overall performance of the system can be increased to improve the job.
2	The new era of Technological	This paper is going to propose Internet of Things based various	Maintenance is an issue . Most farmers are not aware of this	The improvement can be made by increasing number of sensors so that

	Farming: An Emerging Agronomics by Neha N Rathi , Pranav M. Patil , Aniket S. Marwade , Mohit K. Popat	agriculture techniques. This includes automatic compost spreader which will spread the compost in between the plants. For the protection of farms from wild animal, low-cost crop protection system. This paper addresses the agronomics solution with enhanced use of data-driven techniques that is the Internet of Things with incredibly reduced manual work with high efficiency with reduced cost and losses.	technology. Faulty sensors may generate faulty data .	we can get more accurate results.
3	IoT based Raspberry Pi Crop Vandalism Prevention system P.A.HarshaVardhini, N.Koteswaramma, K.Murali Chandra Babu	The proposed design is a security alarm system that is capable of monitoring isolated fields or home gardening. The camera and the other components are connected to the microcomputer which is turned on 24×7 for the whole day. The camera monitors the fields continually. The Raspberry Pi continually checks for motion in the field .This provides real-time field photos over the internet if any animal is detected, which can be accessed using a web browser on devices such as computers and mobile phones, and also alerts the nearby people via buzzer vibrations.	Continuous internet connection will be required **.** More power is being consumed as the system is on for the whole day. As the project is more technology oriented the farmers have to be educated about this.	Ardiuno can be used in place of raspberry pi. The system can off at regular intervals to reduce power consumption.
4	Protection of crops from wild animals	The attack of animals in the agriculture is one of the biggest	Here as the ultra sonic sensors are used in detection , the complexity	So in order to decrease the complexity the number of ultrasonic sensors must

	by N. Ananya , D. Chandrika , A. Bhavani, Dr. T. Vasudeva Reddy	issues nowadays. The animals enter into the agricultural land because of the lack of water resources in the forest areas and deforestation. After facing this type of problems, we had an idea is to develop a protection of crops from wild animals. Then the yielder can easily verify the animal in agriculture. They use MSP430, Energia IDE, GSM Sim900A, Audio module for detection of animals in farmland.	increases as the no of ultrasonic sensors increases.	be limited.
5	Animal Detection System in Farm Areas by Vikhram. Revathi, Shanmugapriya.R , Sowmiya.S , Pragadeeswaran.G by 2017.	Agriculture is the backbone of the economy but because of animal interference in agricultural lands, there will be huge loss of crops. PIC 16F877A, PIR sensor, ultrasonic sensor, APR board are used in this system. The PIR and ultrasonic sensor detect the presence of the animal and send an input signal to the controller. , the APR board will be on, and the sound is played to divert the animal. The message will be send to the forest department and a call to the farmer.	The efficiency of the system can be affected due to various environmental and other factors.	This project can be made based on wireless networks. Wireless sensor network and sensors of different types are used to collect the information of crop conditions and environmental changes and these information is transmitted through network to the farmer
6	A Smart crop protection against animals attack. Mr.P.Venkateswara Rao,	The major threat to the farmers is crop vandalization by animals. In this paper we use microcontroller and camera to detect the movement of animals	The alert may not reach the farmer in time if there is proper network connectivity. In the mean time there is a chance for animals to damage the device.	The farmer's device must have strong network connectivity .

	Mr.ch Siva Rama Krishna, Mr.M.Samba siva Reddy	send signal to the controller. It diverts the animals by producing sound and signal further ,transmitted to GSM and which give the alert to the owner of the crop		
7	Smart irrigation and crop protection from wild animals. N.Penchalaiah, D.Pavithra, P.Bhargavi, D.P.Madhuri K.Eliyaa Shaik SMd.sohaib	This project focus on detecting wild animal along the farm's border and also save water by switching on and off. Here we are use IR sensor to detect animals, Soil moisture sensor to detect soil moisture content , some speakers to deliver some scared sound so animals get scared to get into the field. The microcontroller analyse the data based on the signal ,based on this send signal to the speaker, the speaker give sound.	This system may be bit expensive, based on the size of the property.	Reduce the cost of the product.
8	IOT based crop protection system against Birds and wild animal attacks. P.Navaneetha R.Ramiya Devi S.Vennila P.Manikandan Dr.S.Saravanan	This project is to protect the crops from damage caused by animals as well as divert the animal without any harm. Animals atrocities leads the farmers into great loss. In this project we use PIR and ultrasonic sensors to detect the movement of animals and send signal to controller. It diverts the animal by producing sound and the signal is transmitted to GSM, Which give alert to the	The system offer little control when group of animals approach . PIR sensor is more suitable for human motion detection .	Correct detection process can be implemented using ultra sonic sensors.

		farmers		
9	Smart crop protection system from animals and fire using Arduino. N.Srikanth Aishwarya Kavita H M Rashmi Reddy K Soumya D B	Here we propose automatic crop protection system from animal and fire .This is an arduino uno based system using microcontroller .This system use a motion sensor to detect wild animal approaching near the field and smoke sensor to detect fire. In such a case the sensor detect and microcontroller take the action. Microcontroller woo the sound to make wild animal divert and send SMS to the farmer and make call so that they can alert.	Here only the PIR sensors are used for detection. It will detect motion even if it is not animal. So the system will not be accurate.	To improve the project cameras can be used to record the images of the animals so that the efficiency of the system can be enhanced.
10	Smart crop protection system from animals. M. Jaya Prabha, v. Vasu Brindha, C. Asha Beaula.	IR sensor and ultrasonic sensor are used in this project to detect animal movement and to give a signal to then controller. Animals get diverted by generating sound and signal. The signal is transmitted by GSM and instantly give warning to the farmers.	The efficiency of the system can be affected due to various environmental and other factors.	This project is further enhanced by wireless sensor network. These sensors gather informations which is useful to the farmers and able to conscious of the farm land from anyplace in the world.

PROBLEM STATEMENT :

Agriculture is a huge contributor for our economy . Nowadays the biggest challenge faced by farmers in agriculture is the " Crop Depredation " due to wildlife interference and various other environmental factors like climate change . These factors leads to huge yield loss for farmers. With the changing of climate, agriculture faces increasing problems with extreme weather events leading to considerable yield losses of crops .Due to climate changes the farming pattern will also change.. The crops are also affected in a large scale due to animals and bird attacks. So in order to increase the yield and protect the crops , there is a urgent need to address the above mentioned issues.