P. A. COLLEGE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution)

Accredited with 'A' Grade by NAAC.

POLLACHI - 642 002.

Department of Electronics and Communication Engineering.

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TEAM LEADER

V Swathi - 721719106066

TEAM MEMBERS

N Sowntharya - 721719106063

R Vaishnavi. - 721719106067

S Varshini. - 721719106068

IOT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE

INTRODUCTION:

Major challenge in Agriculture is to cultivate produce in the farm and deliver it to the end consumers with the best possible price and best possible quality. Currently all over the world, it is found that around 50% for the farm produce never reach the end consumer due to wastage and suboptimal prices. IIoT (Industrial Internet of Things) tendencies are often utilized in smart farming to boost the standard of agriculture.Wild animals regularly ruin eminence of crops.The low productiveness is mainly due to the reasons, the crop ruined by means of untamed animals and yield ruined by way of nature object. Cultivators are experiencing numerous challenges for attaining more production due to unexpected encounters of animals, slight sorts of species, beetles, some hazardous snakes and weather circumstances. Within the existing system, electrical protection is used to give up untamed animal assaults on vegetation which leads to the death of animals.Electrical fences are very meaningful to be certain that they're allowed to be used in the precise area, and for defense towards endangered animal species.

Hence Smart farming can be implemented in these situations. Smart farming is a strategic approach that focuses on providing the farming industry with the infrastructure to use sophisticated technologies for tracking, monitoring, automating, and analyzing activities, such as big data, the cloud, and the internet of things (IoT). Smart farming, often known as precision agriculture, is software-managed and sensor-monitored.

OBJECTIVE:

India is a nation dependent upon agriculture. Improving the efficiency and quality of agro-based goods therefore is very critical. This project focuses on detecting wild animals along the farm's border and also to protect farm from fire.Here we use IR sensors to detect wild animals,some speakers to deliver some scary sounds so animals can be afraid to get into the field and smoke Sensor to detect fire, and microcontrollers to collect sensor data. The microcontroller analyses the data and, based on that data, sends the signals to the speakers that it generates the sound to stop the animals from reaching the field and also sends the safety instructions to the cell phones of the nearest residents and farmers.

LITERATURE SURVEY:

Farmers describe the protection of crop fields as a major content and a complex problem.But there will be major crop loss due to animal intrusion in the agricultural lands. Wild animals are vulnerable to crops. And tracking the local presence of animals is very important. Then the intervention of various devices to repel the dangerous animals will follow.Over the years, the animals from the protected area [PAs] constantly invade the crop field and the protection of this crop field has become a major concern.The method of protecting farms from wild animals by ubiquitous wired network devices that are applied to farming along with conventional methods to increase the efficiency of protection. The methods that are currently being used are unsuccessful, so they present a realistic method to scare them off, by developing a device that studies the animal's behaviour, senses the animal and produces the

specific sound that irritates the animal and also warns the designated individual by sending a message.Thus IoT will be more helpful in protecting farm in an effective way.

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