**IBM PROJECT – PNT2022TMID26839**

**Team Leader**

MOHAN  **(310519106038)**

**Team Members**

VARUN **(310519106086)**

TAMILESWARAN **(310519106084)**

KAVINRAJ **(310519106027)**

Bachelor of Engineering

In

Electronics and Communication Engineering

DHANALKSHMI SRINIVASAN COLLEGE OF ENGINEERING AND TECHNOLOGY MAMALLAPURAM, CHENNAI

**IOT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE**

**ABSTRACT**

Agriculture is the foundation of the economy, yet animal intrusion in agricultural lands will result in significant crop loss. This article offers a thorough analysis of the numerous techniques used by farmers to safeguard their crops. The employment of contemporary technology in agriculture is also included in the article. This essay concludes with reviewing a smart crop protection system that uses sensors, a microcontroller, and a gsm module.

**Keywords** - microcontroller, sensors, GSM module, solar panel

**INTRODUCTION:-**

Farm crops are frequently destroyed by neighbourhood animals including buffalo, cows, goats, birds, etc. The farmer suffers significant losses as a result. Deforestation caused by overpopulation leads to a lack of food, water, and shelter in forested areas. Therefore, there is an increase in human-animal conflict as a result of animal interference in residential areas, which also threatens human life and property. However, according to nature's laws, every living thing on earth plays a crucial function in the eco-system. Elephants and other animals that come into touch with people have a negative impact in a variety of ways, including crop destruction, damage to grain bins, water supplies, buildings, and other property, as well as injury and death of people. The autonomous crop protection solution that we suggest here comes from animals. This system is microcontroller-based and uses microcontrollers from the PIC family. When a wild animal approaches a field, these devices use a motion sensor to alert the user. The sensor will instruct the microcontroller to operate in this situation. The following list of traditional farming techniques is provided.

**LITERATURE REVIEW:-**

One of the major financial issues looked by the nation is agribusiness as this is the area which is wellspring of occupation for around 54% of Indians till date. Still today this area isn't advanced and deals with loads of issues coming about into low efficiency of harvests. As 43% of land in India, is utilized for cultivating yet contributes just 18% of the country's Gross domestic product. The unfortunate state of horticulture in the nation is the place of worry for Indians. The country ranchers in India experience the ill effects of destitution and a large portion of them are unskilled so there is absence of good expansion administrations. The issue of natural life assault on crops i.e., crop Vandalization is turning out to be extremely normal in the territories of Tamil Nadu, Himachal Pradesh, Punjab, Haryana, Kerala and numerous different states. Wild creatures like monkeys, elephants, wild pigs, deer, wild canines, buffalo, nilgais, estray creatures like cows and bison and even birds like parakeets make a ton of harm crops by running over them. The low productivity in India is a result of the following factor:

• As indicated by World Bank's "India: Needs for Farming and Country Advancement", India's huge

• Agrarian sponsorships are hampering efficiency upgrading venture. Over guideline of horticulture

• has inflated costs, value dangers and vulnerability. Government mediates in labor, land, and credit

• Markets. India has deficient foundation and administrations. World Bank additionally says that the allotment of water is wasteful, impractical and unjust. The water system framework is decaying.

• Ignorance, general financial backwardness, slow advancement in executing land changes and

• Lacking or wasteful money and advertising administrations for ranch produce.

• Tiny (under 20,000 m²) size of land possessions because of fracture, land roof acts and family debates

• Such little possessions are frequently over-monitored, bringing about camouflaged joblessness and low efficiency of work.

• Lack of education of ranchers and their obliviousness in the field of present day agrarian practices and innovation, hampered by significant expenses and difficulty on account of little land property.

• Lacking Water system offices and reliance of ranchers on storm season, where great rainstorm brings about a lively development while an unfortunate storm prompts a drowsy development for the economy overall.

• Service of Horticulture is likewise working in course to work on the states of ranchers by utilizing unique programs like Protection plan and ITC Restricted plan.

Under Protection plan Horticulture Insurance Agency of India protects ranchers developing wheat, organic product, rice and elastic in case of cataclysmic events or horrendous crop disappointment, under the management of the Service of Horticulture.

ITC Restricted plan expects to associate 20,000 towns to the Web by 2013 giving give ranchers up-to date crop costs interestingly, which ought to limit misfortunes caused from adjoining makers selling early and thus work with interest in provincial regions.

**CONCLUSION:-**

The issue of harvest vandalization by wild creatures and fire has turned into a significant social issue in current time. It requires critical consideration as no successful arrangement exists till date for this issue. Hence, this undertaking conveys an incredible social importance as it intends to resolve this issue. This venture will assist ranchers in safeguarding their plantations and fields and save them from huge monetary misfortunes and will with saving them from the useless endeavors that they persevere for the assurance their fields. This will likewise help them in accomplishing better harvest yields hence prompting their monetary prosperity.

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