PROJECT NAME:IOT BASED SMART CROP PROTECTION SYSTEMS FOR AGRICULTURE **TEAM ID:**PNT2022TMID50334 **IDEATION PHASE**:INDEATION

IDEATION

Idea 1:

Crops in farms are many times ravaged by local animals like buffaloes, cows, goats, birds, and fire etc. This leads to huge losses for the farmers. It is not possible for farmers to barricade entire fields or stay on field 24 hours and guard it. So here we propose automatic crop protection system from animals and fire. This is a arduino Uno based system using microcontroller. This system uses a motion sensor to detect wild animals approaching near the field and smoke sensor to detect the fire. In such a case the sensor signals the microcontroller to take action. The microcontroller now sounds an alarm to woo the animals away from the field as well as sends SMS to the farmer and makes call, so that farmer may know about the issue and come to the spot in

case the animals don’t turn away by the alarm. If there is a smoke, it immediately turns ON the motor. This ensures complete safety of crops from is animals and from fire thus protecting the farmer’s loss. This a arduino Uno based system using microcontroller. This system uses a motion sensor to detect wild animals approaching near the field and smoke sensor to detect the fire. In such a case the sensor signals the microcontroller to take action.

Idea 2:

Agricultural sensors – Farmers today are using sensors, smartphones, and drones to have a detailed analysis of both the topography and resources in the desired area. Smart farming sensors located across the field collect data around various environmental parameters and send it to the cloud. This provides fine details of soil quality, temperature, and other variables.Smart Greenhouses – They can automatically adjust various parameters such as temperature, humidity, irrigation, or lighting. This can be done remotely using IoT and connected devices, which aids in a hassle-free, predator-safe, efficient crop conducive environment.
Crop management – Crop rotation, management, and monitoring can be made easier with insights provided by data around crop

growth, anomalies, crop health, precipitation levels, humidity, and climatic conditions. Crop management devices can change the game for farmers and make their decision-making more aligned to profitability.

Idea 3:

Crops are usually destroyed by these wild animals and result in large amount of less to the farmers. A constant manual guarding of the fields is not possible. To tackle this problem, in our proposed work, we shall design a system to prevent the curtly of animals into the farm and alert the farmer at the same time via a phone call. Our main purpose is to develop an inexpensive and prohibitive fencing to the farm to cut losses Electric Fencing Status due to animals. The developed system will not be harmful to animals. Theme of project is to design an intelligent security system for farm protection by using embedded system. Firstly, the fields are protected by a solar fencing system which uses energy from solar panels to drive an electric current through the wires of the fences, that wards off animals by giving them a safe electric shock. If in some cases, small animals like rabbits, manage to enter the farm, then ultrasonic sensors are used to detect their presence. The sensors send the data to the microcontroller which

turn on the alarm system which consists of sounds and damping lights The microcontroller then informs the user by an automated phone call via GSM module and he can decide to turn off the alarm if so desired.