

IDEATION PHASE

PROBLEM STATEMENTS

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| Date | 18 September 2022 |
| Team ID | PNT2022TMID19796 |
| Project Name | IoT Based Smart Crop Protection System For Agriculture |
| Maximum Marks | 2 Marks |

Problem Statement Template:



| Problem Statement (PS) | I am (Customer) | I am trying to | But | Because | Which makes me feel |
|------------------------|-----------------|----------------------------------|--|--------------------------------------|-----------------------------------|
| PS-1 | Farmer | Monitoring the growing condition | It involves risk on related equipment and understand the use of technology | Requires more knowledge and skills | Irritated |
| PS-2 | Farmer | Smart and precision irrigation | Climates changes to increased maintenance of channels | Purchasing and installing costs high | Suitable for mass crop protection |

Agriculture farming is the main source of livelihood for many people in different parts of the world. But still, farmers depend on traditional methods for past years. Also, among the reasons behind the low yield of crops includes Animal intrusion, causing serious damage to the crops.

The Necessity of IoT-Based Smart Crop Protection System for Agriculture:

Crops growing on farms are many times devastated by local animals like buffaloes, cows, goats, birds, etc. This makes the farmers face a huge loss. And it's impossible to keep an eye on the field or stay on the field for the whole day and protect it.

Low production of crops is one of the major issues faced by the farmers in our country. This includes two main reasons. One of them is the crops destroyed by wild and domestic animals.

Impact of this issue :

- Low productivity
The damage to the crops leads to low productivity
- Threat to animal
The electrical fences constructed are a threat to animals which gives an electric shock when animals come in contact.

When does this issue occur :

Due to deforestation, animals become homeless. The removal of trees reduces available food, shelter, and breeding habitat. Wildlife becomes fragmented, where native species must live on remaining habitat places that are surrounded by disturbed land that is being used for agriculture and other uses.

Why it is important to fix the problem :

IoT-based Smart Farming improves the entire agriculture system by monitoring the field in real-time. With the help of sensors and interconnectivity, the Internet of Things in agriculture has not only saved the time of the farmers but has also reduced the extravagant use of resources such as water and electricity and thus protecting the crops from getting destroyed.