FERTILIZER RECOMMENDATION SYSTEM FOR DISEASE PREDICTION

PROBLEM STATEMENTS:

Agriculture is the major factor contributing to the Indian Economy. According to the statistics its GDP sector composition is 17.9%. In order to produce more agricultural products without any wastage, technical advancements are required in this domain. The farmers usually have little control over the usage of fertilizers. There is need for proper guidance for optimal usage of these fertilizers and is required by farmers in order to get more yields and prevent wastage.

PROBLEM - 1:

Indian farmers are already squeezed by a massive shortage of fertilizers and are turning to the black market, paying exorbitant prices for supplies. Additionally, if they use the incorrect fertilizers for their damaged crops, it results in further financial loss and fertilizer waste.

In an interview with Business Standard Farmer Patidar said:
"On the black market, a 45-kilogram bag of di-ammonium phosphate is selling for 1,500 rupees ($20), above the maximum retail price of 1,200 rupees. A bag of urea costs as much as 400 rupees compared with the usual price of 266 rupees."
By applying fertilizers properly, this growing inflation can be substantially slowed down.

PROBLEM - 2:

Mineral deficiencies lead to plant diseases. Application of incorrect chemical fertilizers to plants consumes an indispensable part of the nutrients in soil reducing the amount of minerals and vitamins in the food items. Providing the appropriate fertilizers helps in overcoming nutrition deficiencies in the diseased plants.

PROBLEM CONTEXT:

- **Who is affected by these problems?**

    The prominent actor affected by these issues is Farmer. The subsequently affected people are consumers.

- **Why is it essential to address these issues?**

    The farmers can lead a profitable business. Moreover, increased crop yield is witnessed.

- **What are the challenges faced while resolving the problems?**

    Detailed domain knowledge about the underlying problems is necessary. Suggesting an appropriate fertilizer for undiscovered diseases.