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PROPOSED SOLUTION

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PROPOSED SOLUTION

FERTILIZER RECOMMENDATION SYSTEM FOR PLANT DISEASE PREDICTION

TABLE OF CONTENT

PROBLEM STATEMENT:

- The main way of life of our country is agriculture. More than 70% of the livelihood of the population depends on agriculture.

- It is also a great source of the country's economy. In order to make this field more profitable for farmers, it is necessary to grow suitable crops and make the crop free from pest and pathogen on their fields.

- The predominant problem among farmers is the choice of selecting correct fertilizer for affected plant and make it cure in getting a good and profitable yield.

- They need to pay more attention to is controlling pests or diseases that can limit plant growth.

- Improper management results in agricultural product loss.

CLEAR VIEW OF PROBLEM STATEMENT USING QUESTION AND ANSWER METHOD:

- Who does the problem affect?

  Persons who do Agriculture.

- What are the boundaries of the Problem?

  People who Grow Crops and facing Issues of Plant Disease.

- What is the issue?

  In agricultural aspects, if the plant is affected by leaf disease, then it reduces the growth and productiveness. Generally, the plant diseases are caused by the abnormal physiological functionalities of plants.

- When does the issue occur?

  During the development of the crops as they will be affected by various diseases.

- Where does the issue occur?

  The issue occurs in agriculture practicing areas, particularly in rural regions.

- Why is it important that we fix the problem?

  It is required for the growth of better quality food products . It is important to maximize the crop yield.

SOLUTION DESCRIPTION:

- Agriculture is the most important sector in today's life. Most plants are affected by a wide variety of bacterial and fungal diseases.

- Diseases on plants placed a major constraint on the production and a major threat to food security.

- Hence, early and accurate identification of plant diseases is essential to ensure high quantity and best quality.

- In recent years, the number of diseases on plants and the degree of harm caused has increased due to the variation in pathogen varieties, changes in cultivation methods, and inadequate plant protection techniques.

- An automated system is introduced to identify different diseases on plants by checking the symptoms shown on the leaves of the plant.

- Deep learning techniques are used to identify the diseases and suggest the precautions that can be taken for those diseases.

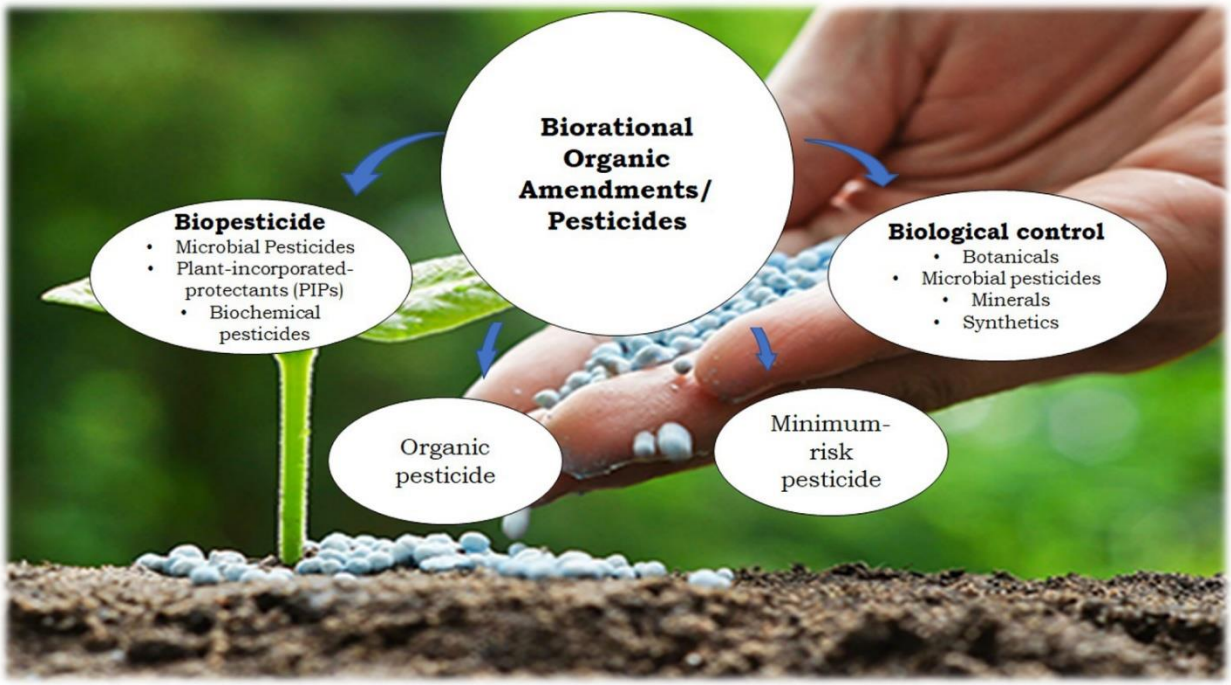
- These different leaf symptoms and diseases are predicted in image processing ,this can be down by CNN layer the image is analyzed and processed, and the fertilizer needed for plant growth is predicted.

NOVELTY:

- The global fertilizer market was valued at $184.60 billion in 2021,and is projected to reach $251.57 billion by 2030, growing at a CAGR of 3.55% from 2022 to 2030.

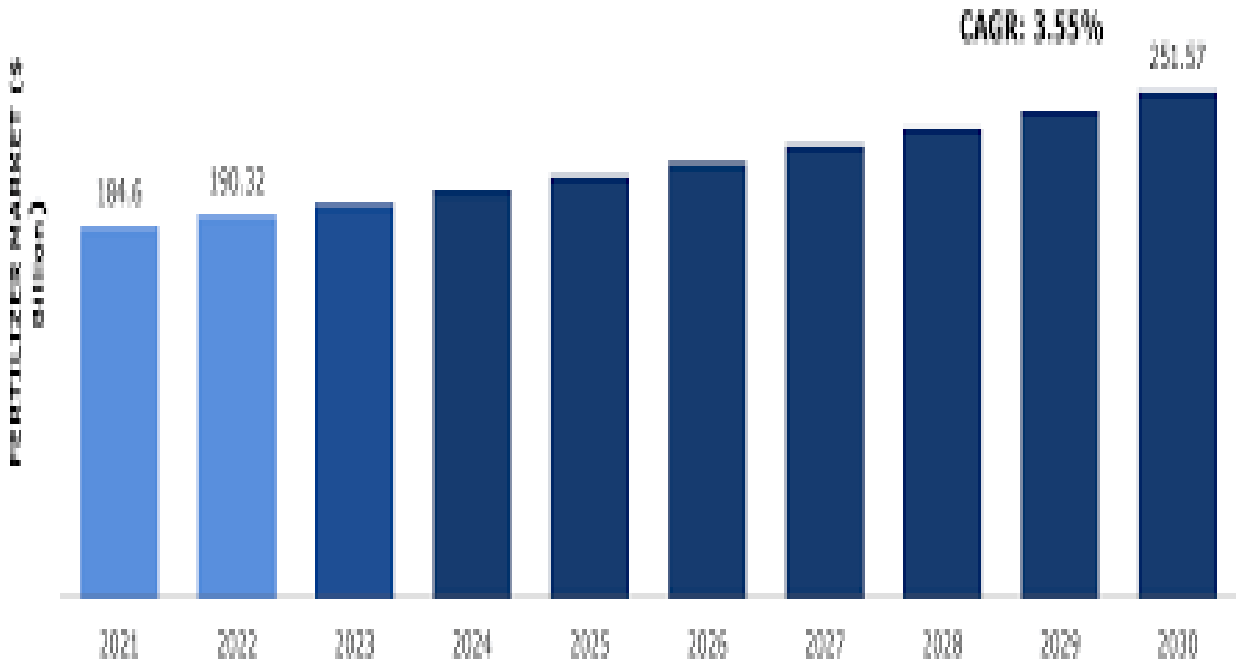
- For fertilizer, market is segmented into application ,type and form.

- Now a days, Without the addition of fertilizer crop yield and agriculture productivity would be significantly reduced.



Global Fertilizer Market Analysis

The global fertilizer market is predicted to garner a revenue of $251.57 billion in the 2022–2030 timeframe, growing from $184.6 billion in 2021, at a healthy CAGR of 3.55%.



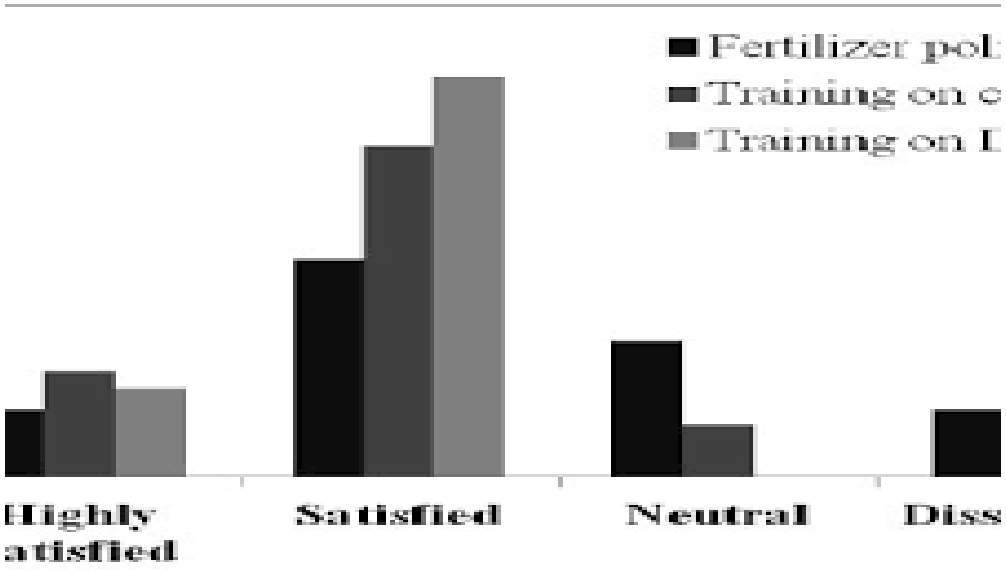
- Without agriculture no one can able to live their life happy, for that plant growth is main important for growth and agriculture productivity. plant diseases can be controlled only by fertilizer usage on affected plant.

- Agriculture particularly on fertilizer has a big market on future.

COSTUMER SATISTIFICATION:

- Here costumer refers to farmer who buying fertilizer for their plant growth specially for affected plants has introduced some fertilizer policy to know merits and demerits of fertilizer .

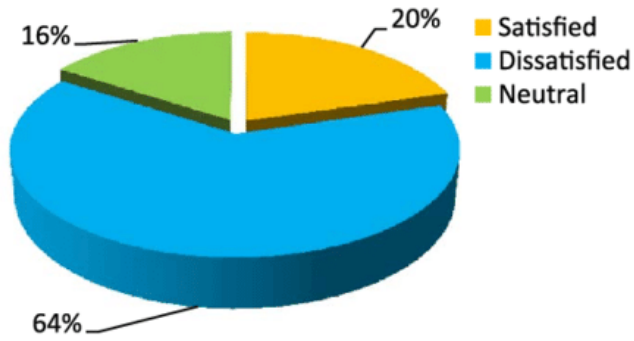
- How to use fertilizer for affected plants ratio level of fertilizer.



- This show how farmer satistified using fertilizer policy.

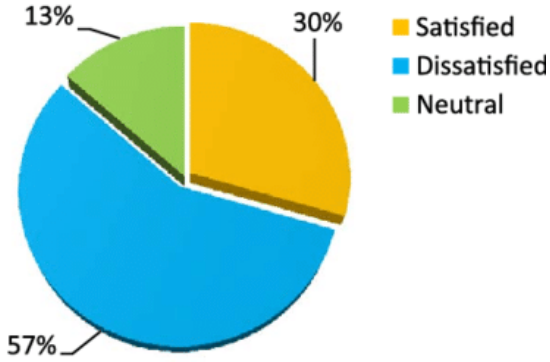
- Using this fertilizer policy costumer satistify a lot and gain a profit in their production.

a



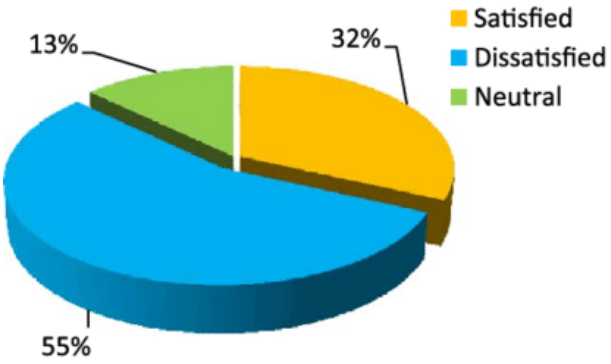
Marginal farmer's satisfaction

b



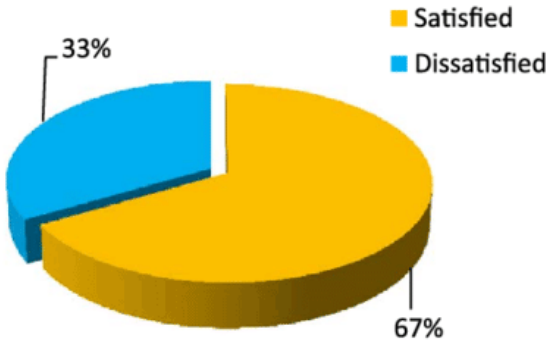
Small farmer's satisfaction

c



Medium farmer's satisfaction

d



Large farmer's satisfaction

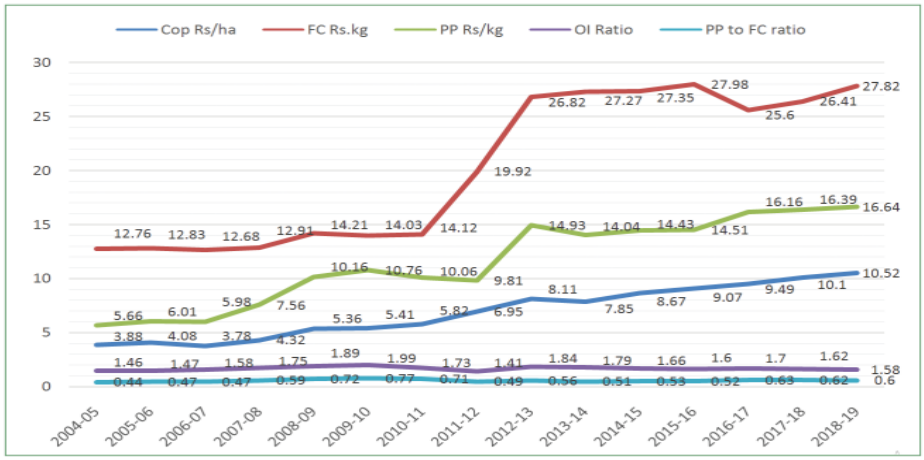
- Many fertilizer include organic and inorganic fertilizer has came to market to cure disease plant while developing .

- By filling the demands of farmer can led to become India as developed country.

BUSINESS MODEL:

- ❖ Now a days government take several measure to increase the productivity of crop.
- ❖ For that farmer needs to put crop insurances near areas.
- ❖ If Farmer's know the correct fertilizer for diseases plant, they get it from shop and put it to the plant and they get good productivity .
- ❖ If the productivity was good and quality they get good price for their crop in market and they let a happy life.

Figure 2: Trends in Cost of Production of Paddy, Prices of Product and Fertilizer Nutrients – Tamil Nadu



SCALABILITY OF SOLUTION:

- Using deep learning technique we can predict the fertilizer for disease plant.
- At first we want to Preprocess the image then Applying the CNN algorithm to the dataset and find How deep neural networks detect the disease.
- Using web portal the farmer can able to upload the image of disease plant and touch predict button they got recommended fertilizer.

Thank

You!!!!!!