CH

1. CUSTOMER SEGMENT(S)

CS

6. CUSTOMER CONSTRAINTS

CC

AVAILABLE SOLUTION

AS

#crop damage caused by animal and bird attack is one of the major threats in reducing crop yield

#soil moisture conditions affect plant root water absorption and leaf transpiration and ultimately affect crop yield

√ Proper irrigation facilities

- √ Sensors are used
- √ Given data within a fraction of seconds

*A soil moisture sensor is a device that measures current soil moisture.gives better crops.uses fewer inputs and understand what is happening in the root zone of a crop

*Chemical crop protection products,or"pesticides",help control insects, diseases fundi and other undesirable pests

2. JOBS-TO-BE-DONE / PROBLEMS

J&P

TR

EM

9. PROBLEM ROOT CAUSE

reduce the cost budget

RC

- To monitoring soil moisture, temperature and humidity
- Monitoring the animals entry
- Need to reduce crop losses

. The solution is proposed to rectify the problem of labor shortage and to

Δ Even in case of absence of physical workers, the system automatically monitors the humidity level in plants and waters on time

7. BEHAVIOUR

BE

#Tensiometers indirectly measure soil moisture tension #Flectric fences are constructed to inflict an electric shock to animals that come in contact with the fence, therefore preventing animals from crossing the <u>fence</u>

3. TRIGGERS

EM

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Identify strong

- -Soil moisture sensor delivers the results immediately
- ~Increasing crop yield and saving on fertilizer

4. EMOTIONS: BEFORE / AFTER

BEFORE

Anxiety,loss of human power, depression,more

AFTER

Less time consumption, increasing profitability

10. YOUR SOLUTION

- ^ Adopt and learn new technologies
- *lot based crop protection system against birds and wild animals attacks
- *The system finds a way for supervising and monitoring the crops so that quality can be maintained
- ^Apply sprinkler irrigation methods

8.1 ONLINE

SL

Data analytics used to give data to farmers regularly. Storage of data also safe using jot

8.2 OFFLINE

The proposed system includes a number of sensors to test and guarantee the crop quality based on factors including temperature, soil moisture and humidity