

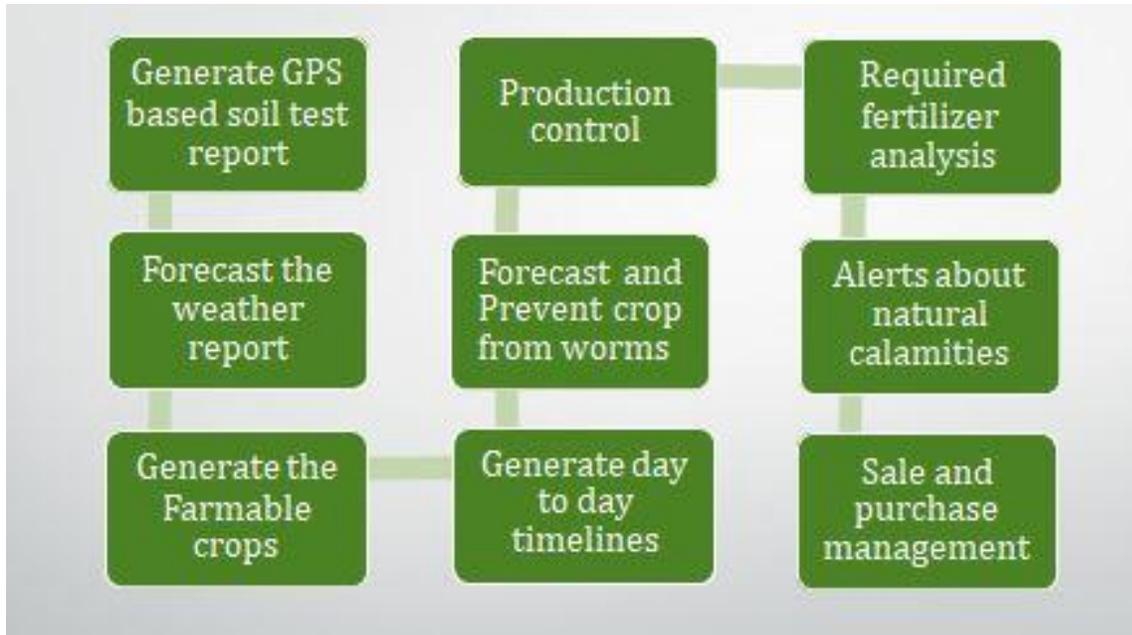
AUTOMATED E-FARMING TECHNOLOGY WITH SATELLITE MONITORING

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ABSTRACT:

We industrialized a system to allocate satellite produces to users in realities. GPS based Soil information is a mechanism for soil properties across the world. Soil dataset is a forecast models are close-fitting soil profile interpretations and a series of eco-friendly covariates. This site will monitor the farmers in all the characteristics, the current market rate of different produces, the total sale and the earned profit for the sold products, access to the new farming techniques through e-erudition and integrated approach to view different administration's agriculture arrangements including the recompense schemes for farming. The Advanced procedures and the Automated machines which are leading the world to new heights, is been covering when it is concerned to Farming, either the lack of awareness of the innovative accommodations or the unapproachability leads to the scarcity in Farming.

ARCHITECTURE:



EXISTING SYSTEM:

Real-time crop monitoring system using satellite data reception and management system is the existing system Using the satellite data reception and management system, real-time checking of rice straw roasting in Punjab was predictable. The system provided information of the area under active fire on real-time basis. It was apparent that about 15 million loads of rice straw were burned in Punjab. The system will be useful to assess the enormosity of paddy straw burning and pollution problem including conservatory gas emission due to straw burning.

DRAWBACKS:

1. This system mainly concentrates on fire incidents.
2. Any precautions about the crops are not allowed to the user.
3. It does not work under soil and meteorological conditions related issues.

PROPOSED SYSTEM:

In this paper, we report the disadvantages of Real-time crop checking structure using satellite data treatment and administration system. In our proposed system we bring together satellite data API's (Application program interface) without any use of mechanisms and algorithms. We hosted soil evidence, weather information along with real time crop specialist care systems. Soil information system is under **Global Soil Reference and Information Centre** which provides world soil statistics at anytime from anywhere.

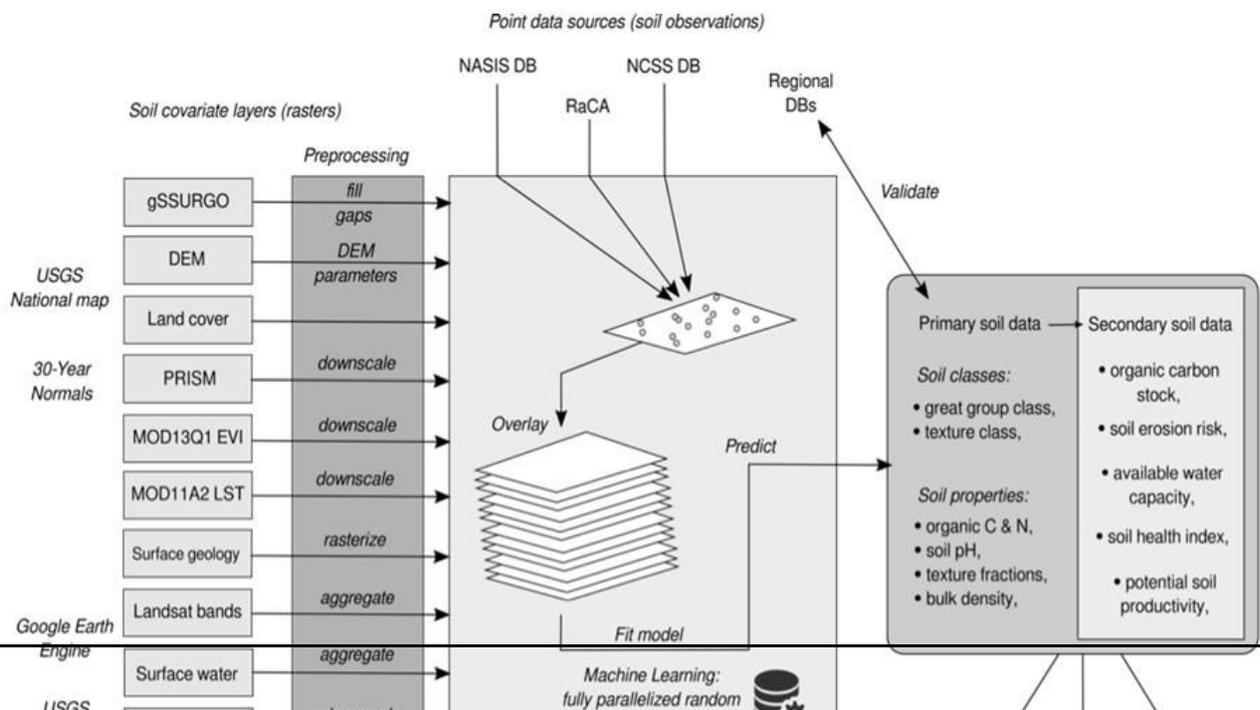
ADVANTAGES:

1. This system explains about everything regarding farming.
2. Several API's are introduced for best outcome results.
3. This system is used to forecast the exact requirement of Fertilizers and Seeds.
4. This provides GPS based soil health reports.
5. Used to make available day to day timelines for the farmers till the end of the crop.

MODULES

1. Soil grids
2. System layers
3. Product functionalities
4. Satellite monitoring

SOLID GRIDS:



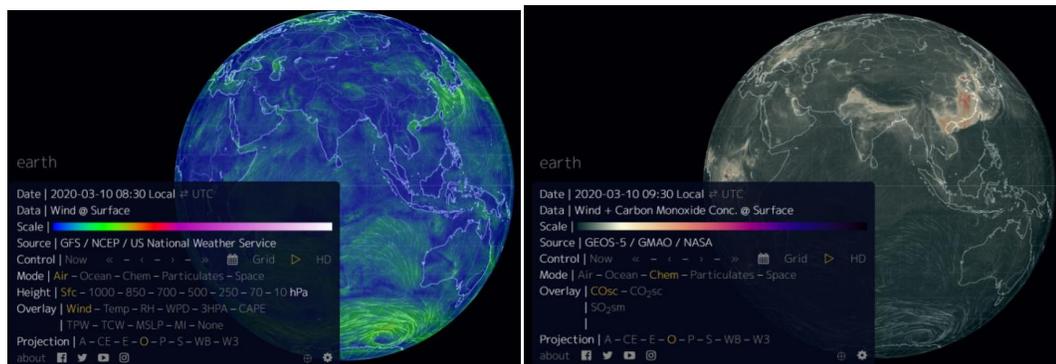
Soil Grids has changed considerably both in the organizations employed as in the computation organisation and the data inputs.

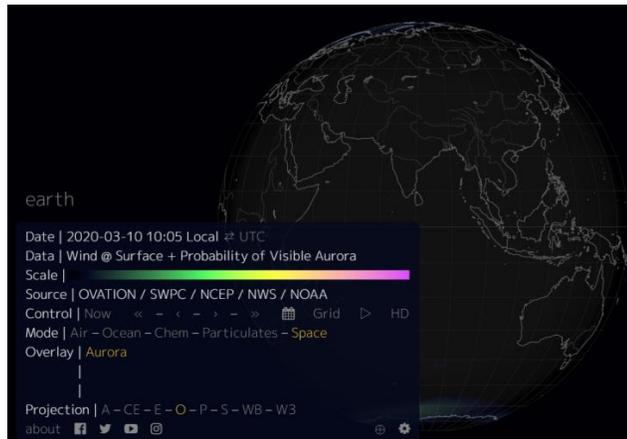
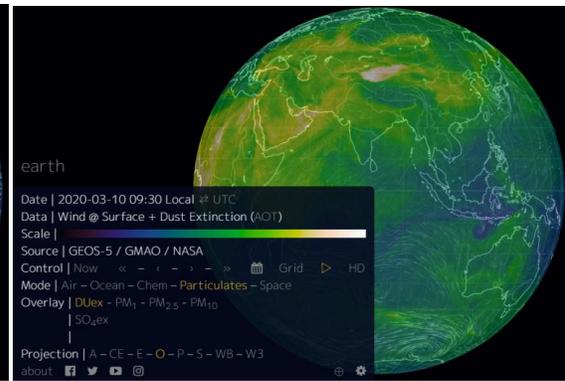
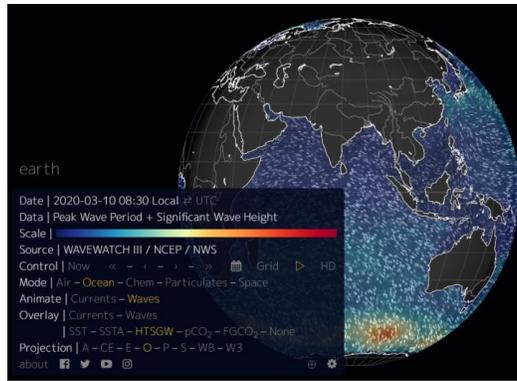
- Broader selection of soil understandings: more profile observations, increased quality estimate and improved and consistent standardization across the different point datasets.
- Texture fractions demonstrated and mapped not self-adequately from each other, but as compositional data with the sum of the fractions unnatural to 100%.

SYSTEM LAYERS:

There are mainly four layers which are mentioned below:

- Weather layer



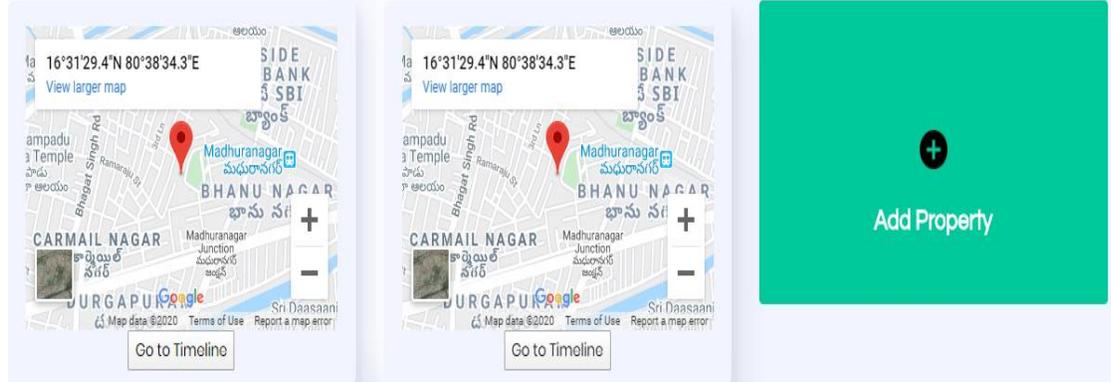


- Satellite monitoring layer
- Soil health reports layer
- Land GPS

PRODUCT FUNCTIONALITIES:

Basically there are mainly 5 ways of generating the farming which are explained below:

- Generate GPS based soil test report, Forecast the weather report



- System will map soil health reports with GPS to arrive at location-wise farmable crops
- Forecast the weather report based on earth air flow and position of the cloud

- Generate the Farmable Crops

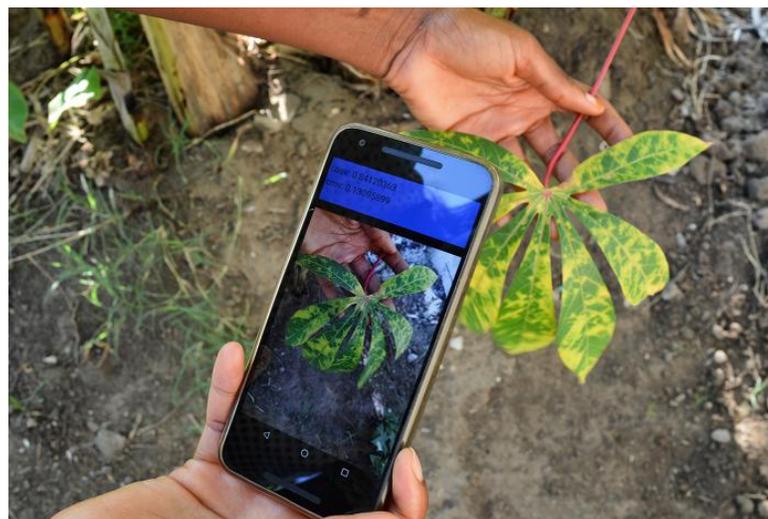
Farmable Crops For Property							
Crops Name	Investment	Profit	Duration	Weather Support	Soil Report	Production	View Farms
Rice	20,000	3.3lakh	3 months	normal	Supported	10 hectares required	Start Farm
Wheat	80,000	29,000	4 months	normal	Supported	20 hectares required	Start Farm
Milllets	2,500	37,50,000	4 months	normal	Supported	15 hectares required	Start Farm
Maize	8,000	50,000	5 months	normal	Supported	16 hectares required	Start Farm

- Based upon the soil parameters and weather forecast, system will generate the farmable crops which are suitable for the soil.
- Day to day timeline

You Started Rice Farming		
Days	Title	Description
day1	Soil Puddling	Soil puddling should be done to allow the water to clear when direct seeding.
day2	apply fertilizers	Apply 1/3 nitrogen, the whole of phosphorus and potassium Apply all P, K, and 10% N evenly and incorporate just before seeding
day3	mixture of soil	Fill a bucket with 6 inches of a mixture of soil and compost.
day4	water covering	Add about 5 inches of water to cover the soil
day5	Pre-germination of seed	Soak the seeds in water for about 36 hours
day6	draining the soods	drain for 24 hours in the shade
day7	warming the soods	Evenly spread the soods in the bucket and place in a warm, sunny area.
day8	sowing soods	Broadcast pre-germinated seed at 100 kg/ha
day9	draining of soil	Allow surface water to drain or percolate naturally into soil
day10	watoinq	Keep soil surface moist by adding water

- Alerts farmers about the worms based on the atmosphere.
- Based on the current production, the system will forecast the requirement of Fertilizers

- Request Based Crop Monitoring



- If the plant is effected farmer is asked to upload a photo of the plant to our system
- Our system analyses why the plant is effected and send the report to the farmer
- And also suggest the required Pesticides to be used, to the farmer.
- Alerts about natural calamities



- Our system alerts about natural disasters like hurricanes, floods, and earthquakes etc., which challenge the agricultural production.

SATELLITE MONITORING:



- Crop Monitoring
 - Our system shows colour variation when our crop is affected with the pests.
- Production Forecasting
 - Production forecast based on last 1961 to 2018 years data
 - Based on previous year's production
- Satellite Based Crop Monitoring
 - API(Application Program Interface) to satellite images for the crops
 - Our system uses NDVI, NRDE, MSAVI, RECI technologies for crop monitoring
- Satellite Scouting
 - Normalized Index is a popular undergrowth index, but FBN is providing Enhanced Undergrowth Index images
 - EVI pay compensation for special alterations and alterations due to the ground cover below the canopy

CONCLUSION:

Government will get benefited with the purchase and sale of the fertilizers and pesticides as our system forecast the needs. Government will know the seeds requirement for the farmers. Hence there will not be any loss to the farmer, as the supply of the crop is in accordance with the demand. As the demand is in accordance with the supply, price stabilization can be achieved. This system makes our agriculture process more stronger and farmers get secured at each and every stage with our forecasting system.

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[9] OpenLayer, <http://openlayers.org>