**SLIDE 3:**

What’s the one thing we can’t live without, yet we don’t value it enough? It’s the soil — which grows our food, serves as the breadwinner for farmers, and provides life to countless species of flora and fauna

**SLIDE 4:**

Soil contamination in agriculture arises from industrial waste, agricultural chemicals, improper waste disposal, urban runoff, air pollution, and natural sources. This contamination can result in reduced crop yields, lower crop quality, and impaired soil fertility due to disrupted nutrient uptake and water retention. It also poses risks to human health through contaminated crops and groundwater. Preventive measures include regular soil testing, crop rotation, phytoremediation, biochar use, erosion control, reduced chemical use, and government regulations to promote sustainable farming practices and safeguard soil and crop quality.

**SLIDE 5:**

Soil treatment in agriculture plays a vital role in improving crop yields, soil quality, and environmental stewardship. By adopting appropriate treatment methods, farmers can contribute to sustainable and resilient agricultural systems that benefit both themselves and the broader ecosystem.

Soil testing is currently a time – comsuming process in india. So by the time the farmers get the results, they have already added fertilisers to the soil so they can sow seeds on time.

**SLIDE 6:**

GRAPH

**SLIDE 7:**

Now, if we can fabricate a device that is capable of generating a soil test instantly – capable of reading the nutrient value of soil, measure the chemical indices of the land.

We have come up with this idea. This project tackles agricultural information gaps by creating a portable device with integrated pH, moisture, conductivity, and NPK sensors.

**SLIDE 8:**

* This project tackles agricultural information gaps by creating a portable device with integrated pH, moisture, conductivity, and NPK sensors.
* It offers real time soil property insights, replacing time consuming lab methods.

**SLIDE 9** VISUAL REPRESENTATION

**SLIDE 10, 11, 12, 13:**

**SLIDE 10:** FLOW CHART

**SLIDE 11:** SOIL PH

**SLIDE 12:** MOISTURE

**SLIDE 13:** NUTRIENT

**SLIDE 14:** EROSION

**SLIDE 15:** CKT EXP.

**SLIDE 16:** BLOCK DIAG.

**SLIDE 17:** NOVELTY

Disadvantages of existing agrobots include:

1. \*\*High Initial Investment:\*\* Agrobots often require substantial upfront costs for purchase, installation, and maintenance, making them inaccessible for small-scale farmers.

2. \*\*Complexity:\*\* Operating and maintaining agrobots can be intricate, necessitating specialized training and technical expertise that not all farmers possess.

3. \*\*Limited Adaptability:\*\* Many agrobots are designed for specific tasks or crops, making them less versatile and adaptable to changing agricultural needs.

4. \*\*Dependency on Technology:\*\* Technical malfunctions or software glitches can disrupt farming operations, leading to downtime and reduced productivity.

6. \*\*Environmental Impact:\*\* Agrobots powered by non-renewable energy sources may contribute to carbon emissions, counteracting sustainability goals.

8. \*\*Lack of Personalized Care:\*\*

11. \*\*Dependency on Connectivity:\*\* Agrobots often rely on stable internet and communication networks, posing challenges in remote or poorly connected areas.

On the other hand this pocket size gadget is here to check the soil health in just few seconds. Comes with Absolutely no complexities, least cost and demands absolutely no internet.

**SLIDE 18:** TARGET

Our main target is farmers. Farmers of India. Its hard to assume every farmer can afford both a smartphone and internet. So we develop this sms system. It needs no internet. The details will be sent to the given mobile number. Even if there is no network in that area, once the phone enters a network area, sms will be delivered.

Again if we generated certificates, they might get misplaced after a few days, maybe when the farmer needs the certificate to be presented to some agriculturalist. Hence, SMS. He can access the details most easily.

**SLIDE 19:** PROJECT DEMONSTRATION

**SLIDE 20:** FUTURE

We intend to implement something like this. We want to make this storage system. Everytime a reading is taken, it will be stored in some memory chip. There will be websites where this data can be stored in some cloud database for future use. Everytime the farmer approaches such sites, his last readings will be extracted from the device. Other than this, …

**SLIDE 21:** CHALLENGES

**SLIDE 22:** BUDGET

**SLIDE 23:** COMMERCLN.

* Conduct comprehensive market research to identify target customers, their needs, and competitors. Understand the potential demand for the agricultural device and determine the target market segments.
* Position the device as a convenient and reliable solution for soil analysis in agriculture by highlighting its features.
* Develop a marketing plan to create awareness and generate interest in the device.
* Offer comprehensive customer support, including troubleshooting, training materials, and user manuals.

**SLIDE 24:** REVENUE

* Generate revenue through the sale of the agricultural device at a competitive price, considering the production costs, market demand, and profit margins.
* Offer a subscription-based revenue model where users can access additional features, data analytics, and personalized recommendations through a cloud-based platform connected to the device in future.
* Provide optional service and maintenance packages, including calibration services, regular device check-ups, and firmware updates for an additional fee.
* Explore partnerships or collaborations with agricultural experts or data analysis firms to offer advanced data analytics services.
* Consider licensing the technology or forming partnerships with agricultural equipment manufacturers to incorporate the soil analysis device into their existing product lines
* Explore opportunities for expanding the product line by introducing complementary agricultural tools or sensors.

**SLIDE 25:** CONC. – WHY?

This is a quantum leap in technology. Every rural household should have this soil testing device, our AGRIMETRIX so that it boosts their soil health and crop yield.