

What need are you addressing? How big is the need? *

Soil testing is important for several reasons especially to optimize crop production, to protect the environment from contamination by runoff and leaching of excess fertilizers, to improve the nutritional balance of the growing media, etc. But most of the farmers don't test their soil due to poorly accessible laboratory facilities or the high cost of the testing or lack of knowledge. Nowadays people are very much health conscious, due to that they are adopting organic foods but the majority of the farmers don't have the proper knowledge of organic farming. This results in shortages of organic products in the market and the cost is also very much high. According to the agriculture census 2010-11 there are 3.73 million cultivators are in Assam and most of them are only familiar with paddy cultivation even though in Assam rice productivity is medium-low to very low; therefore, the average yield of rice is very poor as well as they don't know of which crop can generate more profits from their field other than rice. After harvesting for one session farmers in Assam don't use their field due to some issues such as capital, water, etc for approx six months and on average 2-3 lakh hector fields are not used during that period; as a result, we had to import necessary foods from outside.

Capital is necessary for farming and when a farmer can't afford this capital then there is a system in which they can borrow money from a person but they had to give a fixed amount of the produce every year until they pay back the same amount to that person. This causes loss of farmers if they can't manage to pay back the money within 1 or 2 years.

Describe your Solution (with Key functionality) and how it addresses the need *

Remote sensing is the technology that can detect and monitor the physical characteristics of an area by measuring it's reflected and emitted radiation at a distance(from satellite). We are using this technology along with Machine Learning to test the soil and eventually it will predict the quality of soil, what are the necessary actions need to take to optimize the crop production, and what are the crop options that the farmer can cultivate to maximize the profit.

In the case of organic farming, we'll organize Organic Training Programs in every corner of Assam for the farmers and trainees(interested in organic farming but don't have their soil). Now when any farmer is not using their field for 4 to 6 months then they can list their field in our application and we'll offer an amount to that farmer to borrow the field. We have two approaches to do organic farming in that field, firstly we'll ask the farmers that went through the training program, to do the farming on their own and we'll buy all the produce from them or secondly we'll provide all the necessary things to do the farming to any trained farmer or trainee, will provide an amount as a salary and all the produce will be ours. We'll provide all kind of technical support in both cases.

For those farmers who need capital, we'll provide that, and in return, the farmer will have to give a fixed amount of products every year until we receive the invested capital plus 30% of the profit from the products.

Besides, we'll also provide an e-commerce platform in which any farmer can sell their products directly to the customer, and in this platform, we will provide the best quality of seed and all the necessary items that need for farming.

Who are your target customers/users and why they should use your product? *

Our main target customers/users are farmers and organic food consumers. We will provide free soil testing and all the information about their field which will eventually optimize crop production for all the farmers. Farmers will use this technology because they are receiving it for free.

About organic farming, we will use the land that is currently not being used by the farmers, therefore they will earn some amount of money, from where they are not going to earn anything in that period. That's why they will list their land in our application.

The Indian market has a tremendous amount of potential in organic foods and it is growing exponentially and it will reach a value of about USD 2601 million by 2026. But there is very less amount of Organic Food Brand which are making products easily available as well as maintain trust among the customers. That's where we will fill the market gaps by providing organic foods online and offline methods and by maintaining quality.

Explain how the business will generate revenue and how much revenue are you expecting to earn annually?

There are three major segments in our business model that can generate revenue. Firstly by farming organically in that field that the farmers are going to list in our application as they are not using their cropland. There are approximately 2-3 lakh hectares of cropland that remain unused in Assam during the Autumn and Winter season and from that, we are planning to get 1000 hectares of land for organic farming for the 1st year. All the products will be well packaged and branded with the KESAHPAT name and will be sold online (in our e-commerce platform), offline, and exported outside. The average yield per hectare of organic products was 3-20 tons depending upon the crops and on average 1 to 2 lakh Rs can be earned in 1 hectare. With 1000 hectares of cropland we can generate revenue of 15 crores in one year. Secondly, we've considered a minimum of 1000 farmers (which is 0.027% of Assam's total farmers) which will need capital for farming, and from that, we can generate 30% of the profit. On average if we take the capital is 30,000 then the profit will be 9,000 from each farmer. The total profit will be 90,00,000 from 1,000 farmers. Thirdly, we'll provide the best quality of seeds and all the necessary items for farming on our e-commerce platform. We have considered a minimum of 10,000 farmers who would buy the items from the platform. On average 50 Rs profit will be taken from each farmer. So the amount of 5,00,000 will be generated from the e-commerce platform within one year.

A total of 15.95 crores amount of revenue will be generated within one year.

Currently, we are not going to generate revenue from Remote Sensing Technology. We are giving it free to all the farmers.

Explain the innovative /Unique features of your idea/solution. How is your solution different from the existing/competitors product/substitutes?

This is the first time among all startups, Remote sensing technology along with Machine Learning is using for determining the soil properties without using any kind of devices(eg. IoT devices). Which makes us different from the existing competitors.

Besides, we have introduced a new business model for organic farming using the land listing method (farmers can list their land when they are not using it). It is a win-win situation for farmers.

We have introduced another unique business model for farmers that when they need capital for farming they can apply for instant money from our platform at the end they have to return only yield. This will reduce the burden of returning money and help them grow their crops.

These are the unique features that make us unique from existing competitors.

What is the Social Impact that your venture can generate? *

Remote sensing technology will help farmers to get information about their soil, as a result, they will obtain knowledge about scientific farming. We are giving this technology free to all the farmers. It will encourage the farmers to adopt scientific technology, which will help them to know about their field and optimize crop production easily.

With the help of our organic training program, we will generate awareness about organic products among the farmers. It can help us produce more organic products that fulfill the requirements of the market.

In that system where farmers need capital, now they don't have to worry about returning the capital anymore. That will reduce the burden from all the farmers that lead to more crop production as more they produce less time needed to return the profit.

What is the current status of the business? If already launched, describe your achievements so far. *

Currently, the business is in the Ideation stage. We are working on developing the Machine Learning model along with the Remote Sensing technology. We have surveyed to get the knowledge about the problems of farmers and discussed our solution with them. We have received a positive response so far from the farmers. We have researched various ways to do organic farming and gather knowledge from Tenzing Bodosa (as a mentor), who is known as Assam's First Organic Tea Farmer.