Mission Model Canvas

Project title:

KORA LABS - decreasing N_2O emissions from fertilisation in agriculture

Created by:

Luca Corinzia
Matteo Turchetta

Date:

25/07/2023

Key Partners

Which persons and organizations can support your project and act as intermediaries?

Agroscope can act as a third-party accountant and certifier for N_2O emissions and their reductions. Other institutions of this kind exist and should be identified.

Agroscope and other institute (for example, Swiss Future Farm) will act as institutions for continued validation of our system in controlled field trials for scientific validation of the impact on yield and N_2O emissions.

Fenaco and other farm cooperatives can act as the distributors of our system, distributing it to their constituent farmers.

Barto, a Swiss app for farm management, could host our system as an additional module, reaching a wide range of farmers very quickly.

Key Activities

What are the three main activities needed to create/realize your project?

App development (mainly front-end, and cloud-based back-end). A prototype version of the backend is already developed.
Building partnership with farm cooperatives and Barto's team.
Defining a protocol for **monitoring N_2O** emission from agriculture.

Key Resources

Which three skills and resources are central to the implementation of your idea?

Skill: software development. Sales and business development skills to open partnership with farm cooperatives. French, Italian, and German/Swiss-German language skills to establish partnerships with farmers and cooperatives around Switzerland.

Resources: computational and cloud infrastructure resources. Field trial plots with N_2O emission monitoring capabilities for scientific validation.

Value Propositions

How do you explain your project to a stranger in 1 minute?

Nitrogen fertilization is fundamental for agriculture. However, its inefficiency is destroying the environment, especially in the Swiss agriculture landscape.

We are developing a nitrogen management system that is personalized, low-cost and scalable. It allows any farmer in Switzerland to get the most out of any gram of fertilizer used, decreasing losses to the environment and increasing farm profits.

Customer Relationships

How do you actively involve your community in your project (beyond just looking/listening)?

We will seek the input of the farm community to improve our app using long-term agronomic knowledge they built over the years.

Moreover, we will tailor the system to the specific constraints and idiosyncrasies of the community such that our app can be used with no changes in farm operations.

Channels

What channels will you use to reach your community? How will the target group find out about your project?

Online communities of Swiss farmers (Facebook groups, forums), and target those communities with ads.

Find physical venues (fairs and workshops) where farmers meet and discuss and have a presence there.

Contact the heads of farm cooperatives with online methods (LinkedIn, etc.) and target them with a specific mail campaign

Use word-of-mouth inside and in between cooperatives.

Customer Segments

Who do you want to address with your idea or project? Who will jump at it? Name your main target groups.

The main target group is constituted by farmer with small farms (smaller than 30ha, 50% of Swiss farms) and that are younger than 40 (31% European farmers). This segment is known to be environmentally conscious (90% of European young farmer is according to studies) and tech-friendly, so will use app for sustainable farming with higher probability.

Cost Structure

What costs do you expect to incur to realize your idea?

What are the costs?

The major costs are for nationwide field trials that can monitor N_2O emissions from fertilizer application. Other costs include ads campaigns, computational resources, cloud infrastructure, business development employee or an additional co-founder (German speaker). Breakdown: Field trial: 50K, Support for business development: 30K, Ads: 10K, computational resources: 5K, cloud infrastructure: 5K, Total: 100K.

Revenue Streams

1. **Impact:** What does your idea do for the climate? How do you measure/verify the impact?
2. **Scaling/Expansion/Unfolding:** How to increase the impact of your project?

Our app optimizes nitrogen fertiliser use, reducing N_2O emissions and contributing to climate change mitigation and environmental preservation. We will track the N_2O emissions in tCO2e using certifications and protocol from third-party institutions like Agroscope and comparing with historical and geographical baselines.

The impact can be increased in various ways: a) increasing adoption rate inside the cooperatives with workshops and other show&tell, b) reaching more cooperatives with tailored ad compaigns, c) optimizing other farm decisions that interact with fertliser use, for example, tillage, cover cropping, etc., d) identifying a holistic approach to Swiss agriculture compatible with climate mitigation, for example proposing new crops that necessitate less fertilization (for example, soybeans and legume-cereal intercropping).