

Standard Operating Procedure

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A. Outline of FarmEd's Goals and the Application

What is Project Everest Ventures (PEV)?

Project Everest Ventures is an Australian based company that aims to use business solutions to create social change. As a company we strive to achieve the United Nations Sustainable Development goals. Currently PEV operates in Fiji, Malawi and Timor Leste.

What is FarmEd?

FarmEd is a PEV project that seeks to collaborate with local communities, businesses, stakeholders and farmers. The goal of our project is to improve food security and make agricultural expertise more accessible. To achieve this we have developed a smartphone application that can be used on certain android phones that have a regular internet connection. Farmers are also encouraged to buy a soil sensor that allows the application to provide tailored agricultural advice.

What is the application?

Our application is based on the Govi Nena prototype and is an interactive database of agricultural information. Currently the application is a minimum viable product. PEV believes that in this form the application provides enough basic information to make this product useful. PEV's vision involves further developing the app to have many more features useful to Fijian farmers - this will be done with feedback and ideas we receive from current users. The application is currently only available on android smartphones with recent versions of the android software.

Our belief is that the application allows farmers to grow fruits and vegetables of better quality and in greater quantity. Farmers will be able to learn how to grow new types of fruits and vegetables best suited for their soil type. The application also provides information to farmers on a variety of different ways to treat sick plants using both chemical and non-chemical medicines. The calendar feature of the application encourages farmers to start looking for and treating plant sickness early on rather than after the plant is already very sick.

Application Features

Information Input

- This section allows the application to make tailored recommendations to users.

My Crops

- This feature gives the farmers recommendations on the best crops to grow based upon the data they have entered.
- This feature also provides the most important information about the crop including its pest and disease tolerance, average yield, duration of crop, seed rate and optimal growing conditions. This allows farmers to compare crops based on both environmental and economic suitability.
- Currently the application has information on ten crops: cauliflower, cucumber, banana, coconut, taro, avocado, cassava, eggplant, rice and sweet potato.

Calendar

- Advises on all key dates for suggested farming activities.
- This feature assists farmers to be more proactive in looking for pests and diseases and recommends optimal times to fertilise plants to ensure crops remain healthy.

My Crop Growth

- Farmers take and store photos of each plant to track growth, etc.
- This makes it easy for farmers to track any positive or negative changes to plants, e.g. can visually track the spread of disease and the effect of medicine in healing the plant.

Pests and Diseases

- The application also provides information on pests, diseases and weeds specific to each crop.
- It offers both chemical and non-chemical medicines and methods to aid in combating pests, weeds and diseases allowing farmers to choose to grow organic or non-organic produce.

Application Requirements

To use this application the farmer must have:

- An **android** smartphone, this includes phone brands such as samsung, LG, oppo, sony, blackberry, nokia, adcom, HTC, etc.
- A regular connection to the internet

Cost Structure

The FarmEd Govi Nena application is kept on a subscription basis. The cost of this minimum viable product is \$1 per month. Currently farmers will be directed to purchase a subscription that will last them until either July or December as these are the months that PEV will be in country to assist in renewing their subscription.

Purchase until July:

Month of Purchase	Cost
March	\$4
April	\$3
May	\$2
June	\$1

Purchase until December:

Month of Purchase	Cost
March	\$9
April	\$8
May	\$7
June	\$6
July	\$5
August	\$4
September	\$3
October	\$2
November	\$1

pH Sensor

There is optional step to purchase a 3 way soil meter to further personalise the app's recommendations. This \$15 soil sensor measures soil pH, moisture, and light intensity.

B. App Installation Instructions

Checking the Application Works

As a middleman partnered with PEV to distribute the application to a wide range of farmers you should have the apk file downloaded on your phone. It is recommend you keep this file in a folder in your phone that is easy for you to quickly access. If ever you lose this apk file please contact the Farm Ed Fiji Facebook page to receive another copy of the file.

1. Transfer the APK file from your phone to the potential customers phone using bluetooth, SHAREit¹ or a phone cable and computer.
2. Enable phone to install applications from external sources.
 - a. Go to phone settings.
 - b. Search for "Unknown Sources" in the phone settings OR go to "security" or "lock screen and security" page.
 - c. Find the option to install apps from unknown sources. Tick or slide this setting to allow applications to be installed from unknown sources. You may need to click "OK" or "allow" to a warning message to enable this feature.
3. Find the application file in the phone.
 - a. If file transferred via bluetooth it will probably be located in the phones "downloads" folder.
 - b. If it was transferred using a cable and computer the file will be in whichever folder you chose.
 - c. If you are using SHAREit the application will be installed to the receiver's phone automatically.
4. Install the application by clicking on the file.
 - a. The file is an apk (Android Package) so the phone should know that when you select it you are asking for the file to be installed as an application.

¹ Free phone application available on the Google Play store that allows quick and easy transfer of all file types.

5. After installation to maintain security with the phone turn the install file from unknown sources feature off.
6. Check the application is working by attempting to open it. If the application opens to the login page, it will work on this phone.
 - a. If the application works, proceed to “Sales Procedure”
 - b. If the application does not work explain that the application currently only works on some versions of android and that in the future we hope to change this. With the farmers permission, **fill out the first page of the subscription management spreadsheet**. This allows us to track the android version which the application is able to work on and contact the farmer in the future if any updates to the application are made.

Sales Procedure

1. Explain to the farmer the purchase procedure.
2. Direct farmer to send the correct amount of money to Project Everest Venture M-Paisa account.
 - a. Details for the account are _____
3. Fill out Farmer Subscriptions Google Form.
 - a. Confirm phone number and spelling of name are correct
4. Explain that Project Everest Ventures will create a login for the farmer within three Australian business days. This login will then be messaged to you, the middleman, who will provide it to the farmer using whatever medium you feel is most appropriate, e.g. text message, face to face, etc.

Providing Tutorials

PEV has aimed to create an application that is simple to use, however we do understand that the nature of the application is fairly different from a typical smartphone application. This may present a challenge in adapting to its use. For this reason we have created tutorial videos for each application feature which can be found on our Facebook page “**Farm Ed Fiji**” under the ‘videos’ section. New users should be directed to this page to watch these videos and get a feel for the application. If farmers have any further questions that you are unable or too busy to answer they are encouraged to send a message through this Facebook page to our Australian FarmEd team who will respond as quickly and efficiently as possible.

C. Subscription Management

Subscription Management Google Form

To access the Google form, you will be required to have a google account (gmail). This form should be used to send all the necessary information required by PEV to create a user an application account. PEV will share this form with your email account, so you have your own personal record on your customer interactions. The form will ask short answer or multiple choice questions. An outline of the questions provided in each form include:

Farmer's First Name - Make sure this is spelt correctly

Farmer's Last Name - Make sure this is spelt correctly

Farmer's Phone Number - Best contact number

Farmer's Email - Not required; only for contact purposes

Farmer's Phone Model - Currently needs to be an android smartphone

Android Version - This can be found by going to settings and searching 'android version', or alternatively by going to in 'settings', under the tab 'about phone' or 'android version', and from here find 'software info'. The android version should look like X.XX.XX OR X.X

Does the application work on their phone? - If the application is able to open to the login page, the app will work on the phone. If the app cannot open, it is not compatible with this phone and android version.

Payment made? - Have they sent the payment through M-Paisa to PEV's account

Length of subscription purchased? - The number of months they subscribed to the service.

Preferred language? - Their preferred language out of English, Fijian, and Indo-Fijian. The app is currently only offered in english but there is high potential the app will be translated in the future.

Farmer's Village - The village that they live in and that their farm is located at.

Sensor purchased? - Has the customer purchased a pH sensor.

If the application did not download, should we contact them in the future if the application begins to work on their phone? - If the application is updated to work on their phone and version of android should PEV contact them again in order to sell the application.

Any feedback? - Has the customer given any valuable feedback on the service/process/app?

D. Customer Satisfaction

A top priority for PEV is to track customer satisfaction to ensure that our service providing agricultural advice is efficient, educational, and satisfactory. This will involve the middleman to interact with customers after the date of purchase. The collection of feedback can look like: filling out a survey, an interview, or a conversation. The aim of these interactions is to assess whether the app is customer friendly (easy to use), is promoting better farming practises, and is guiding them to increase crop yields. This feedback can be sent to the PEV Farm Ed Fiji Facebook page, or via email to fiji.workhub@projecteverest.ventures.