

Concept Note

“Farmer” in Data-Driven Agriculture Digitization

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Background and context

General introduction / Context

Today, Information and Communication Technologies (ICTs) have become an integral part of modern organization and are omnipresent, constantly transforming farmers to practice their farming activities with an advanced approach to make sure that they benefit on their different agricultural intervention through agricultural programs.

“Farmer” Data Driven Agriculture Digitization focus on making sure that smallholder farmer tend to have a great land’s profit potential through their method of targeting such as farmers’ associations or other groups (CLGs). Whereby the process of digitizing farming data, the farmer is no longer the centralized anchor for data, it is the farm. Through which details like weather and satellite data to the farm, linking profit potential to the farm that means, How much land is there to plant?, where is it located?, what are the soil conditions? And How can we sustainably intensify agriculture on that farm?.

Problem statement

Most of farmers tend to practice their farming activities in a standard where they lack an enough information from soil experts to their farms, also they farm without a consideration of food security and nutrition, market linkage to their farm products, investment decisions as well as food saving for next year. Therefore, satellite capabilities will enable in monitoring productivity and provide remote – sensing data from the farms.

Also, digitization tend to simplify the challenge faced by farmers on spreading their voices by simplifying so that an approach of getting distinct measures and capture the actual roles of people on the farm by basing on gender equality. But also, overcoming the challenge of something very risky about trying to oversimplifying the definitions of a smallholder farmers

Justification

In a context of everywhere smallholder farmers are available, then there is high need of a lot of agricultural extension support on the farmers because ultimately this can likely be making important decisions about how that land / farm can be well used by the farmers. Therefore, the digitization can improve on how smallholder farmerreceiving the one-to-one agricultural extension support and likely tb be more useful inmaking more productivity on their farms.

Objectives

“Farmer” Data Driven digitization can find a way of collecting farm data from multiple voices, improving basis of gender equality whereby in most farming societies women seems to own the land and may be considered the “primary farmer” but men meet the crops market buyers on the market where they are going to be purchased and receive income.

Also, “Farmer” Data Driven digitization helps in improving the food security and nutrition by making sure that farmers tend to benefit from what they produce which improve their standard of life in their families. Then through an approach farmer tend to benefit on education on how they can improve their standard of productivity as a result of getting high support from extension agricultural experts such as education onhow the soil condition for their farming activities can be well considered on their farming activities.

Lastly, an approach tend to help on the issue of market linkage of the crops products by the smallholder farmers whereby an issue of Radio Market Place (RMP) can be well introduced here.

Expected results

The expected results including the following ;

- Food security and nutrition : The issue of saving and planning for next year on their produced crops.
- Market linkage : Since the smallholder farmers will consider on the advice on what to plant finally this will result to high productivity on their farms.
- Great support of extension experts : Especially on the issue of educating smallholder farmers on the soil conditions for them to make a best practices in their agricultural activities.
- Gender equality : Since it gives a voice to women how the different agricultural activities.
- Great decision making : As a result of food security, on where or how to use their produced crops for future.

Implementation strategy / methodology

The following are the main methodologies that will be undertaken;

- **IVR (Interactive Voice Response)** : For Making sure that the issues of gender equality, decision making, market linkage and food and security are going to be well implemented towards small scale farmers.
- **Soil Map Information System (Farm Software)** – Mainly, it emphasizes on the issue of field-keeping records as a result of area's location thus tend to ensure small scale farmers are getting the reasonable information of their fields for their agricultural activities.



- **Soil Sensor** - For collecting soil information from the field. Thus, improving the functionality of farm software.
- **Satellite Maps** : This contains providing of full details on the soil conditions of the remote areas where small scale farmers are doing their agricultural activities with corresponding to the weather and climate elements. Through this approach farmers will benefit on their farming activities.

Sustainability

- An approach can be well implemented and having a great contribution towards the small scale farmers especially on the issues of gender equality, food security and a great support from the extension experts to the future agricultural activities by small scale farmers in their remote areas.
- Therefore, IVR, Soil Management Information System and Satellite Maps methodologies should be well practiced and maintained for making sure that the intended tasks are going to be well undertaken continuously.