

GISB eAgronomy Solutions

Grameen-Intel Social Business

AN INTRODUCTION

September, 2015

- **Agriculture in the developing world**

- 70 % of population employed in farming (smallholder, rural)
- ~60% of total employment is in agriculture (developed & developing)
(Female: 76%, Male: 55%)
- 62% GDP impact of agriculture in developing countries
- Improvement of productiveness due to technology

- **Improvement of livelihood**





- Improvement in agriculture productivity directly impacts the livelihood (poverty, nutrition) at the base of the pyramid
- ICT in agriculture with strong momentum

GISB Product Portfolio – *ICT solutions that address specific social problems such as low agriculture output, lack of pre-natal care and education*

Solution

Direct Customer

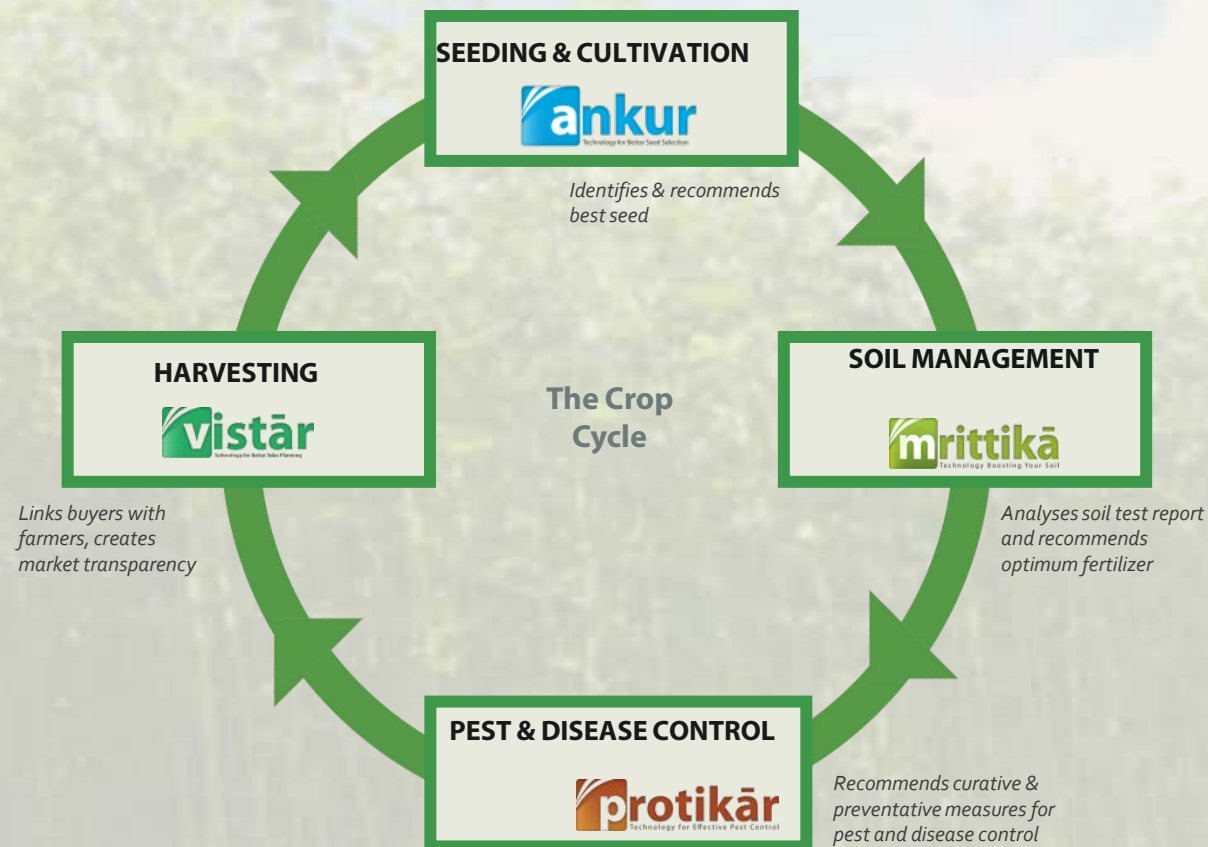
Cost

	Agriculture	Early Learning	Health	
	Mobile Compute – Tablet/PC	Phone-call-in	Web registration	
	<p>eAgro apps for nutrient analysis and recommendations for seeds, fertilizers, and market linkage</p> 	<p>Mobile based solution (voice, txt) using the key eAgro algorithms</p> 	<p>Pre-K learning tools customizable In any language</p> 	<p>Maternal and child health tracking And monitoring software</p> 
	For development agencies, government programs, social franchises and entrepreneurs.	2015: revenue sharing with telecom company with nationwide coverage.	In R&D stage	
	Micro-Entrepreneurs and Agric. extension programs	Farmers directly call Krishi call center	Expectant mothers, newborns and toddlers in rural areas	
	~\$10/license	\$0.10/query	\$10/license + \$12 annual Web-hosting cost	
			Freely available for download on the Google Play Store	

Source: Grameen-Intel Social Business

GISB eAgriculture product family

GISB E-AGRI DEEP DIVE

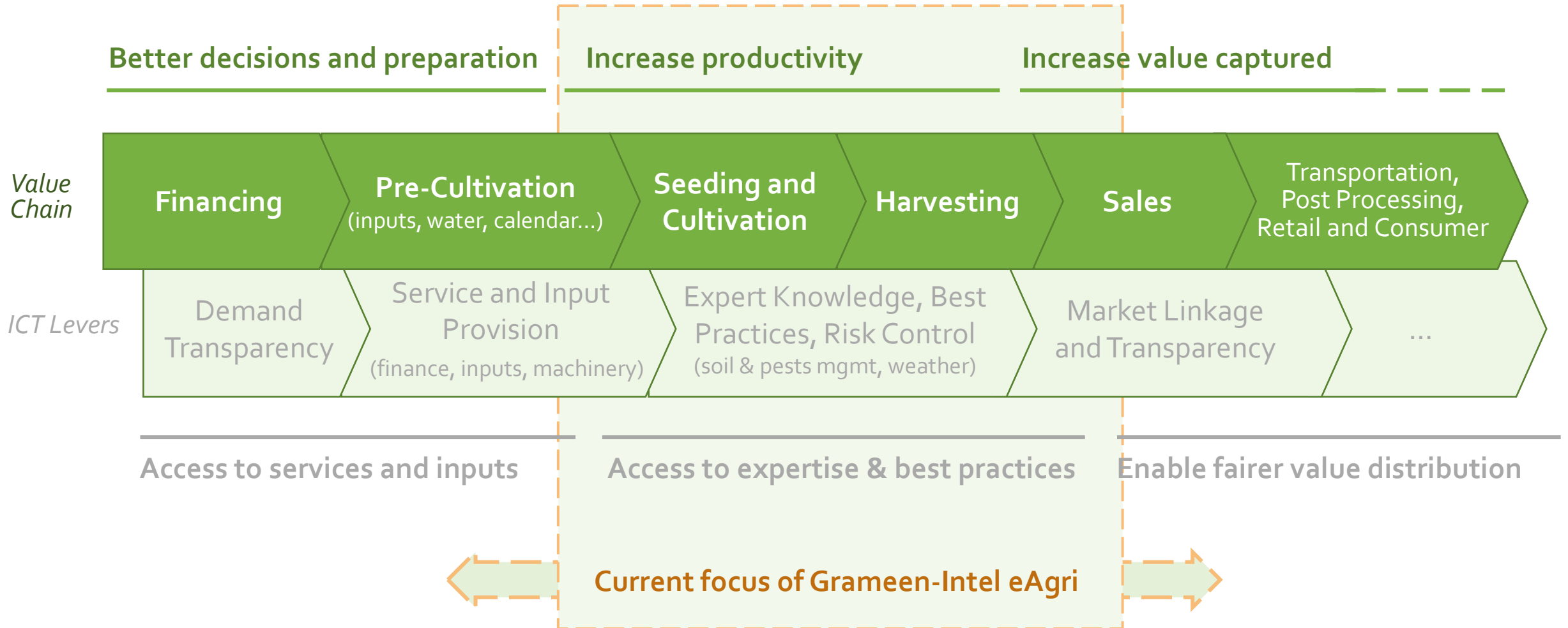


eAgriculture solutions

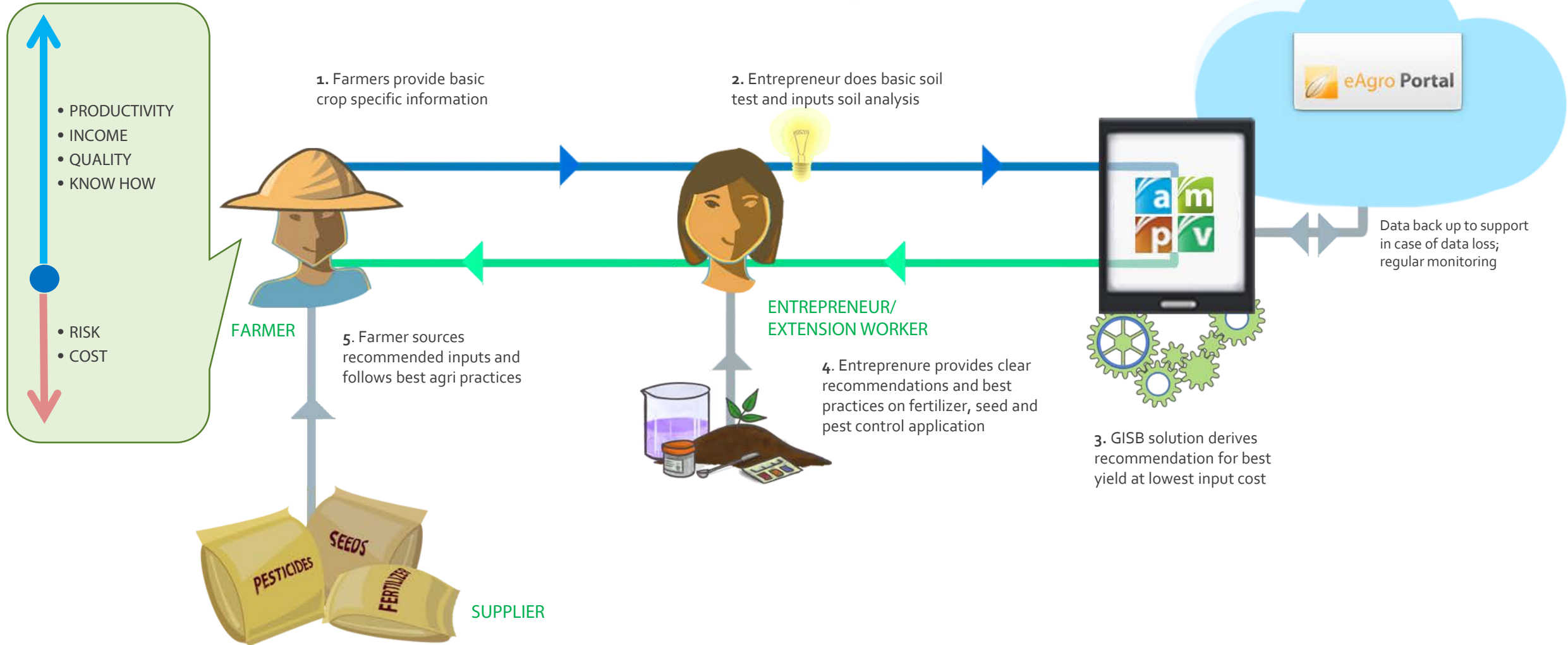
- offer on-the-ground access to expert agriculture advice on fertilizer, seed, pest control and market linkage
- address key issues for smallholder farmers
- facilitate income generation for local entrepreneurs
- are a methodical approach to support farmers progress through crop life cycle

Mobile ICT solutions addressing key issues faced by the farmer along the crop-cycle

ICT driving agriculture impact across the value chain



eAgriculture Working Model





ankur

a seed recommendation solution to identify best seed options, improve input costs and increase yield

Farmer Details

- Name, Picture
- GPS location tag

Land Details

- Characteristics of plot
- Size of plot

Harvest Details

- Type of Crop
- Irrigation source

Soil and Seasonality

- Crop season and cycle
- Soil test to identify characteristics of soil (mainly PH)

Recommendation

- Selection of best local seed options
- Calculate quantity
- Propose suppliers

Recommendation Input

Land

Location

Type

Size Unit

Description

Soil and Season

Soil Test

Add Seed

Basic

Crop

Season

Sowing Month To Sowing Month

Preferred Duration Days

Temperature Resistance

Productivity

Recommendation

Dear Karim Ali,
ankur recommends the following Brinjal seeds:

B-variety seed

Quantity :3096.0 gm

Price :Tk. 371.52

You can buy it from:

Abdul Alim

Phone :008801755524207

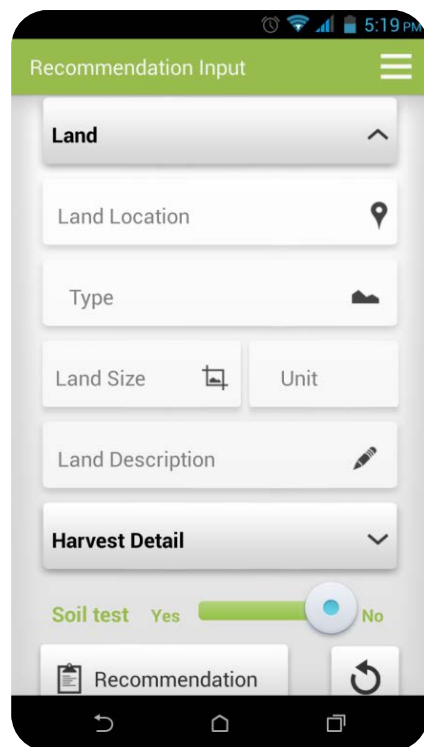
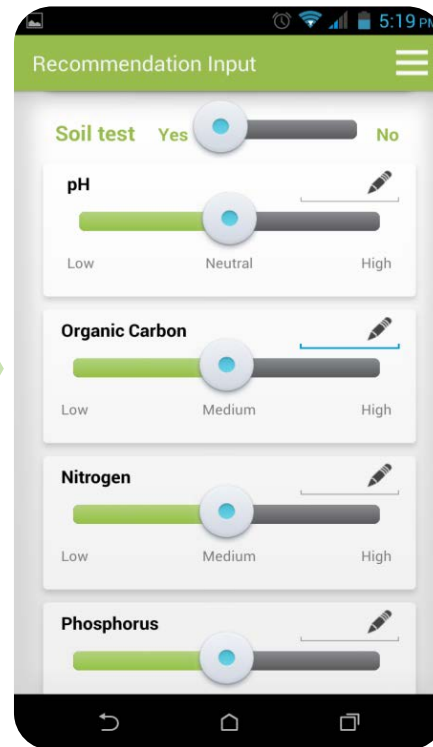
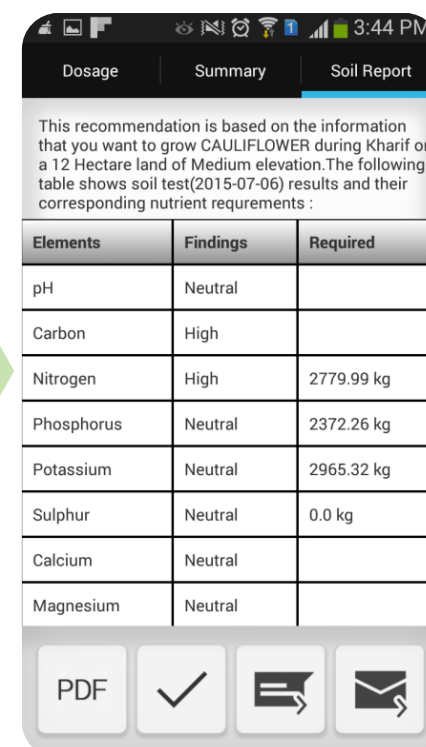
Location :Khulna



mritikka

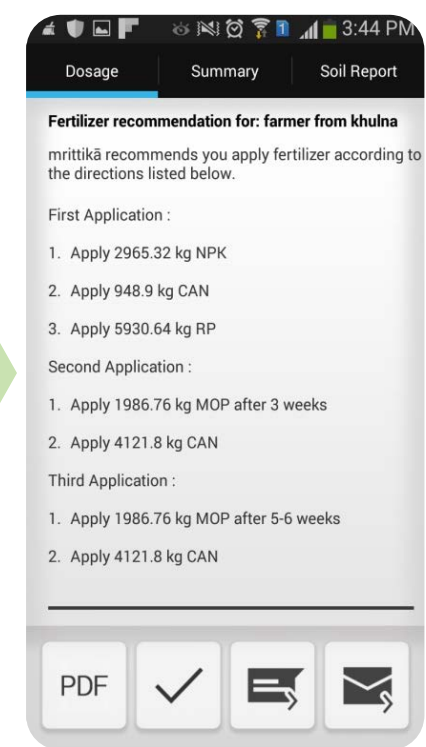
a soil analysis solution to identify optimum fertilizer application, improve input costs and increase yield

- Land Details**
 - Characteristics of plot
 - Size of plot
- Harvest Details**
 - Type of Crop
 - Irrigation source
- Soil and Seasonality**
 - Crop season and cycle
 - Soil test to identify characteristics of soil (PH, N, P, K, OC)
- Recommendation**
 - Best combination of right fertilizers; Optimal quantity and cost
 - Guidance on how and when to apply

This recommendation is based on the information that you want to grow CAULIFLOWER during Kharif on a 12 Hectare land of Medium elevation. The following table shows soil test(2015-07-06) results and their corresponding nutrient requirements :

Elements	Findings	Required
pH	Neutral	
Carbon	High	
Nitrogen	High	2779.99 kg
Phosphorus	Neutral	2372.26 kg
Potassium	Neutral	2965.32 kg
Sulphur	Neutral	0.0 kg
Calcium	Neutral	
Magnesium	Neutral	



Fertilizer recommendation for: farmer from khulna
mritikka recommends you apply fertilizer according to the directions listed below.

First Application :

1. Apply 2965.32 kg NPK
2. Apply 948.9 kg CAN
3. Apply 5930.64 kg RP

Second Application :

1. Apply 1986.76 kg MOP after 3 weeks
2. Apply 4121.8 kg CAN

Third Application :

1. Apply 1986.76 kg MOP after 5-6 weeks
2. Apply 4121.8 kg CAN

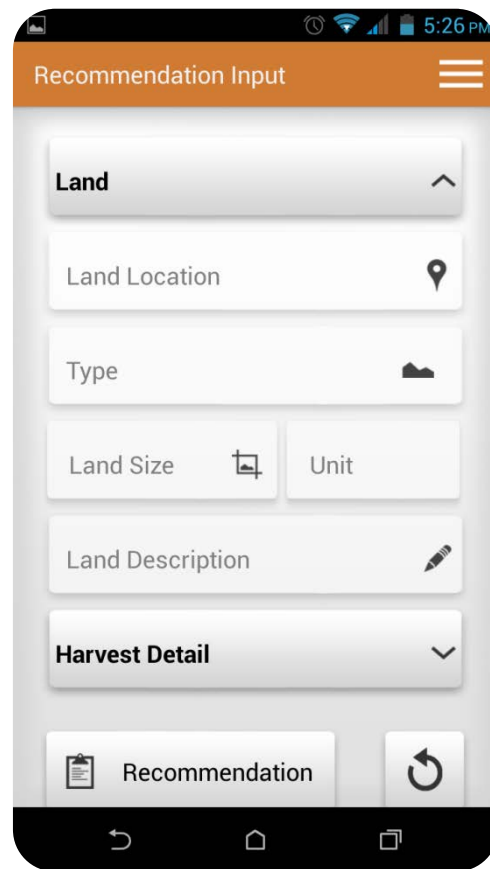
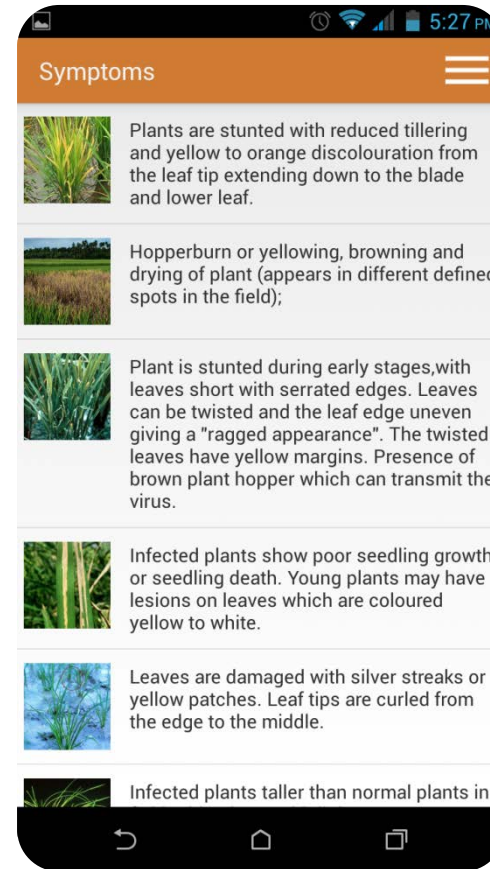
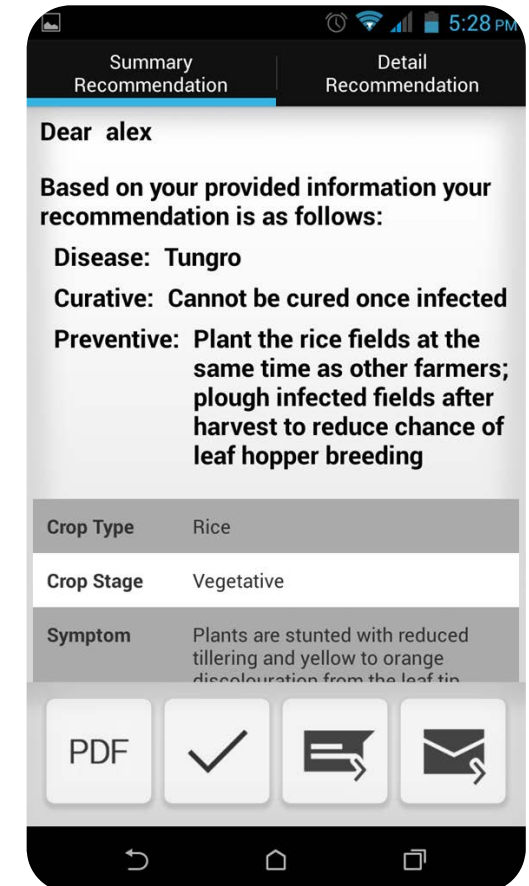


protikar

a solution to help farmers preventing, controlling and fighting plant diseases, weeds and pests based on best practices

- Details on Pest**
- Identify crop symptom by guided diagnosis
 - Localized database describing most pests

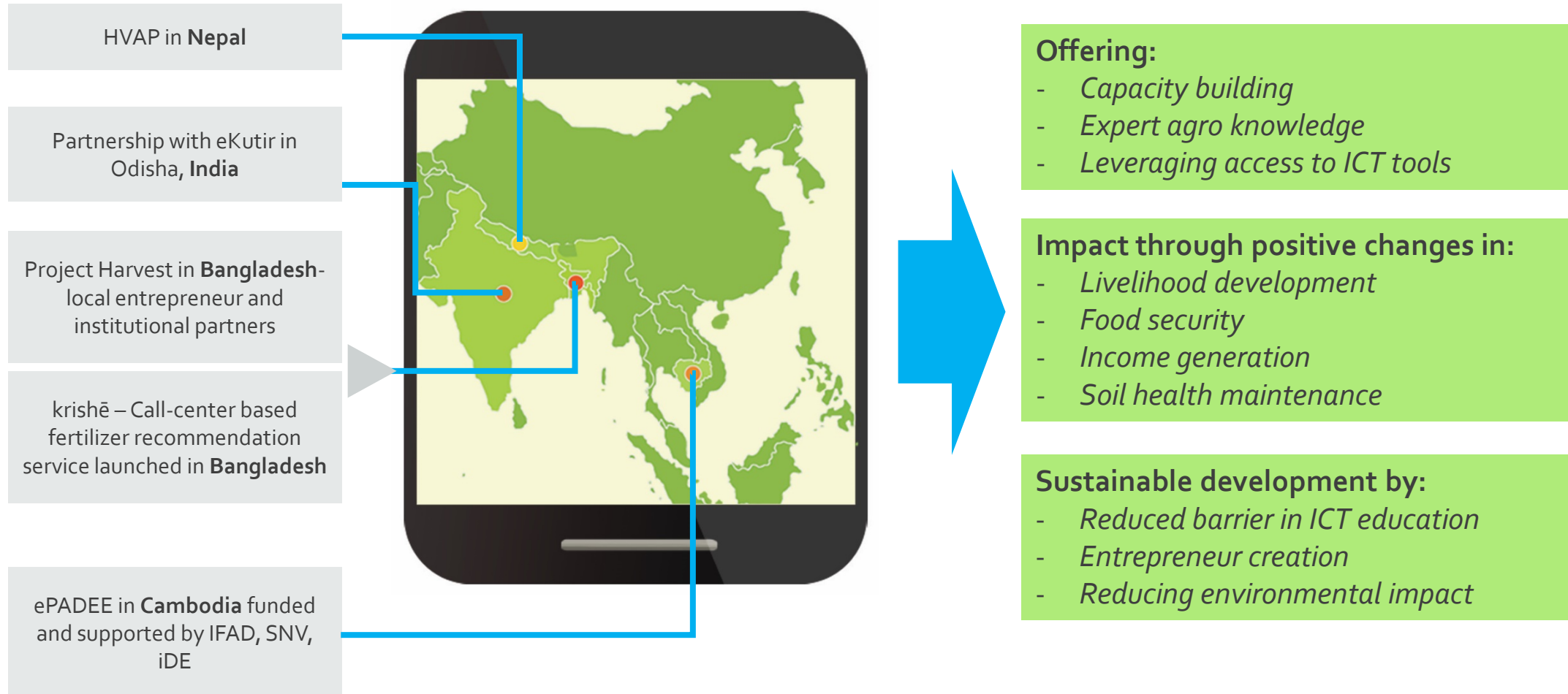
- Recommendation**
- Best practices to prevent and fight pests and diseases
 - Optimal application of curative measures (organic or chemical)

Crop Type	Rice
Crop Stage	Vegetative
Symptom	Plants are stunted with reduced tillering and yellow to orange discoloration from the leaf tip

PDF ✓ ⇨ ✉

ICT intervention for sustainable development



GISB at a Glance

We provide **sustainable technology solutions and business models** to improve the livelihood at the base of the pyramid.

795 million without enough food
67.4 million children out of school
2.9 million newborns died in 2012

Our goals as a **social business** are:

- Sustainably improve livelihood through entrepreneurship
- Support capacity building
- Improve food security
- Better infant and maternal health
- Increase child literacy

 ~250 Entrepreneurs
serving 22964 Farmers



We work with
Governments,
Development Funds,
and International
Organizations



OUR SOLUTIONS

Easily Scalable, Globally Replicable.



Seed recommendation app to identify best seed options, improve input cost and increase yield.



Harvest management application to link buyers with farmers and create market transparency.



Educational app for pre-school children to learn the basic foundations of language. (Currently available in English, Arabic, and Bangla)



Soil analysis solution to identify optimum fertilizer, improve input cost and increase yield.



Telecommunication based solution to leverage the high coverage of mobile network to benefit farmers.



Drawing app to encourage creativity and cognitive development among young children



Solution to prevent, control, and fight plant diseases, weeds and pests based on best practices.



Vaccine scheduling and tracking software for newborns and toddlers.



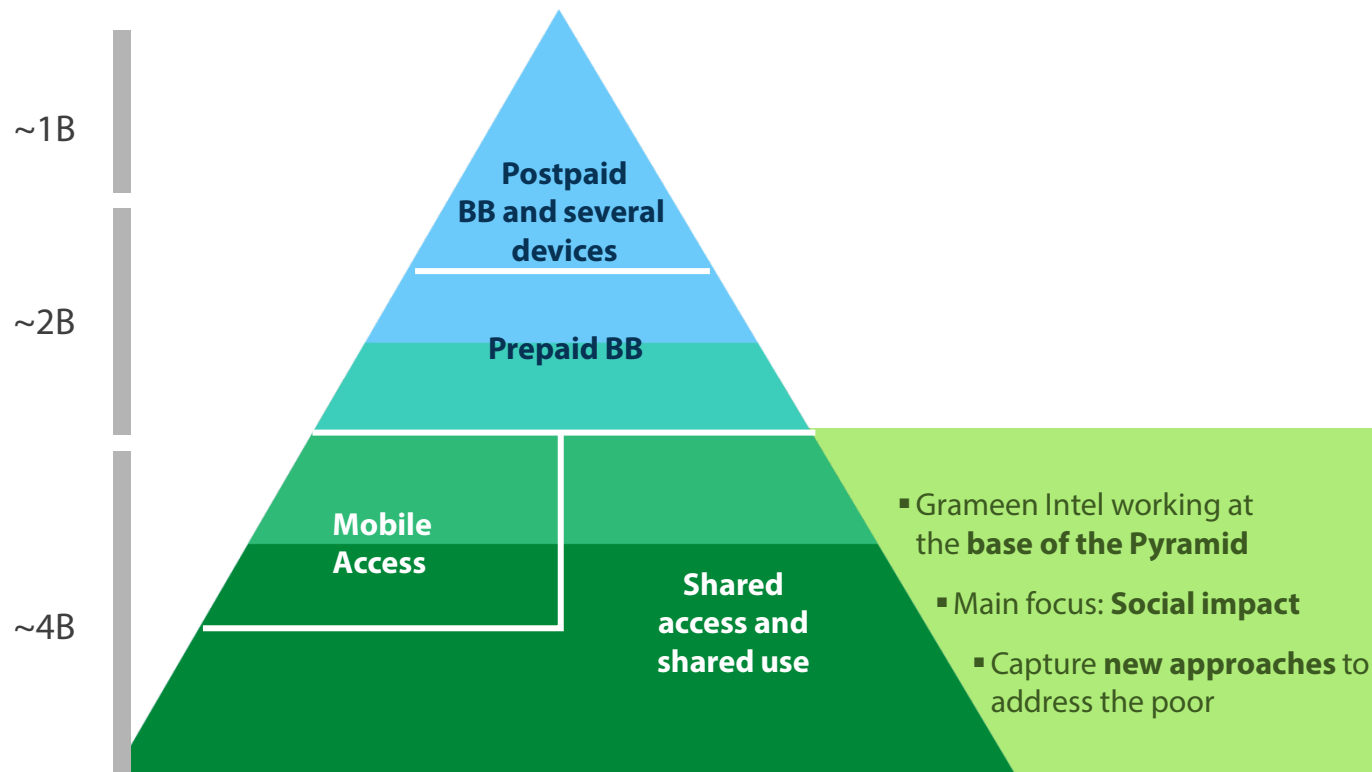
Antenatal care monitoring software for pregnant women to help identify high risk pregnancies early on for appropriate follow up.

Video and Solutions

- <https://www.youtube.com/watch?v=DBOCGSzEidk&feature=youtu.be>
- <https://play.google.com/store/search?q=grameen%20intel%20social%20business>

Out of Flow

The Macro View



Improving the livelihood of the ones in need

- **ICT to enable farmers by**
 - Enhanced information accessibility
 - Improved awareness
 - Offering expert knowledge
- **Overcoming local barriers**
 - Affordability
 - Illiteracy
 - Trust
 - Access
- **Sustainable business models:**
Micro-entrepreneurs and extension programs

Benefits of eAgro



Benefits to the farmer

- Increase in crop yield and income
- Reduction in fertilizer expenses
- Purchase good quality seeds
- Lower crop damage from pests
- Access to market, aggregation methods, better returns
- Access to associated Good Agriculture Practices

Benefits to the entrepreneur

- Source of generating income
- Opportunity to extend potential current agriculture input business with ICT based services for farmers
- Trust built with community
 - => other unmet needs
 - => new sources of revenue