

## Developing Micro Cattle Farms in Bangladesh Using the Inclusive Business model

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**Abstract:** Cattle farming is a popular source of livelihood in Bangladesh due to the abundance of milch cows. Despite this, many farmers in the country still continue to face poverty due to lack of accessibility to the market and other constraining factors. To overcome **this**, an inclusive business model may be developed to integrate such farmers into the product value chain of the cattle farm industry so that they can come out of poverty. This study aims to explore the potential implications of a four-year project to put 30,000 farmers in the Kishoreganj district of Bangladesh into the inclusive business model. Analyses were conducted of a planned schedule as well as costs, human resources and potential risks. In the fourth and final year of the project, changes in income, assets and other criteria like social class will be assessed to conclude whether the project will succeed or not. This project, if successful, may eliminate the need for facilitators, thereby making markets more accessible for the poor farmers who will otherwise find it difficult to escape poverty through cattle farming. Even those who do not own cattle will benefit as they will be able to earn through collecting milk, testing for quality and delivering them.

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### I. Introduction

‘Inclusive business’ is a relatively new idea that lies in-between the concepts of Social Business and Corporate Social Responsibility (CSR). Both social business and CSR are tried and tested methods for poverty alleviation<sup>1</sup>. A social business is a self-sustaining organization, created to address a social problem, where profits are not disbursed but are reinvested in the business while CSR involves increased spending without hope of any immediate benefit to the company and is organization philanthropy beyond what is legally required by the law of the land. Inclusive business, meanwhile, focuses is on the integration of those who are at the bottom of the pyramid into the supply chain network. Inclusive business not only ensures fair earnings for (low income) communities and businesses it is also beneficial from the governments’ and consumers’ points of view. This study aims to discover the use the Inclusive Business Model to develop micro cattle farms in Bangladesh.

### II. Objectives

The objective of this study is to discuss a project to design and create the market mechanism that will allow Bottom of the Pyramid (BOP) farmers to be included into the Dairy Products Value Chain of the country with the aim of lifting them out of extreme poverty.

On a more specific note, the objectives of the project will be as under:

- i) Design and creation of interventions that allow micro cattle farmers’ access to credit, improved breed of cows, cattle feed, veterinary services and training.
- ii) Design and creation of interventions that allow micro cattle farmers access to Business Development Services (BDS) like micro insurance, brand building, accounting, etc.
- iii) Training and development of ‘Collectors’ who will collect the milk from the farms, conduct quality control test and deliver the milk to nearby milk tankers (vehicles), etc.
- iv) Encouraging local entrepreneurs to invest in and operate biogas & fertilizer plants and cattle fattening & butchering plants, etc.
- v) Design and creation of interventions that allow micro cattle farmers access to markets where they will get a fair price for their products.

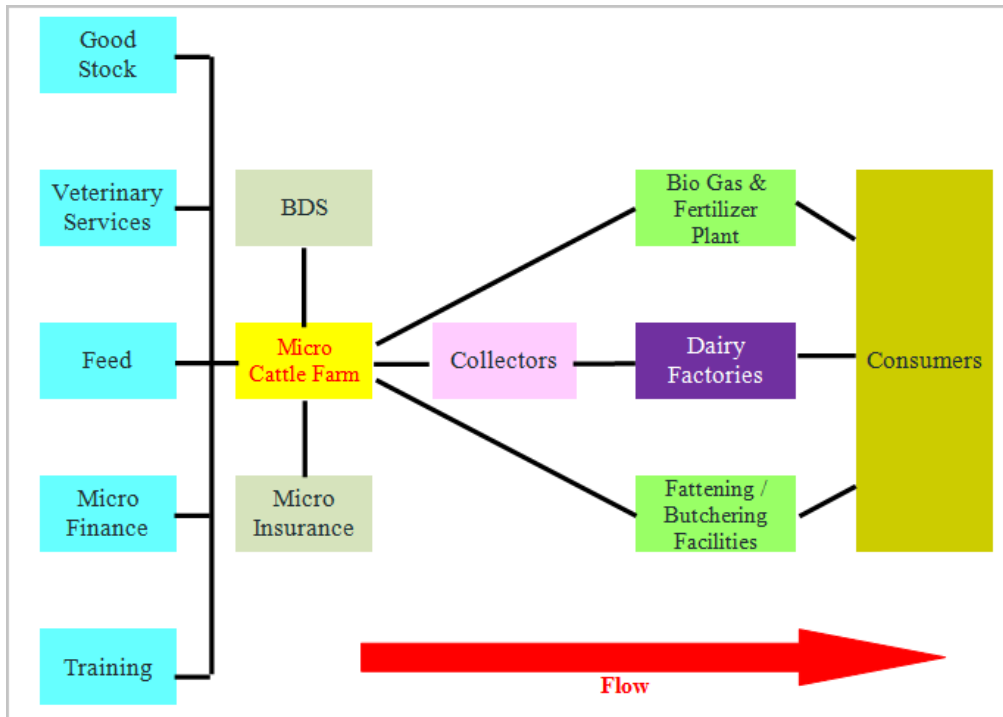


Figure 1: Conceptual Framework

### III. Scope of the Project

The project plans to organize poor farmers into groups of thirty and help them procure and take care of at least one milch cow each. On completion of a pilot project 1,000 groups are to be formed with 30,000 members (30 members in each group) who will each own one cow. Kishoreganj District has been selected as the target area, mainly due to two reasons, (i) the paucity of cattle in this area (less than 50 heads of cattle per Km<sup>2</sup>) and (ii) its proximity to Dhaka which has the largest market in the country.

It may be mentioned here that cattle projects are not new to Kishoreganj. The Kuliarchar Dairy Complex (KDC) which has been producing the famed ‘Kisan’ cheese and butter since 1969, is located at Kishoreganj.

### IV. Business Case

More than 65% Bangladeshis live in rural areas and according to Islam (2014), around 16.01% of the households in the country are the proud owners of just one milch cow<sup>2</sup>. Due to this reason Bangladesh has the third-largest cattle population in Asia and the 12th-largest in the world. These cows provide the country with milk and meat in addition to other products. Despite these, Moazzem and Sehrin (2015) explained that about 1.5 million cows are informally brought in every year from India<sup>3</sup> and 130,000 tonnes of powdered milk were imported in 2015-16<sup>4</sup>. There is a considerable gap between the supply and demand situations in these areas. The main barrier faced by the poor cattle farmers is access to the market. Some other obstacles include availability of finance, good veterinary services, feed, training, etc. However, these barriers can be removed through the design and application of proper interventions that will help the poor break the chains of poverty constricting them.

An inclusive market development intervention (IMDI) is a deliberate action undertaken by a facilitator for activating the market mechanism in such a way that ensures fair and durable participation of different market actors into the industry value chains.

Table 1: A brief of the interventions that are to be carried out under this project

Area for Intervention	Target Group(s)	Type of Intervention Required	Details
Finance	Financial Institutions	Advocacy	Banks have to be persuaded to give loans to the farmers for the project. The poor are considered to be ‘unbankable.’ Also, in Bangladesh ‘banks’ do not go to the customers; customers have to go to the banks. The poor do not have the audacity to approach financial institutions for loan just to buy one cow. However, the group (collective) approach may make it a more attractive proposition for the banks.
	Government	Lobbying	Government laws may make it mandatory for banks to

			finance the projects
Stock Development	Importers, breeders of cattle	Establishment of linkage	Development of relationship between farmers and providers of quality cattle may prove to be a win-win situation for both
	Government	Lobbying	Encouraging R&D to develop cattle with high productivity and higher resistance to local diseases
Veterinary Services	Veterinary Doctors	Establishment of linkage	Each group should have a veterinary on retention to ensure good health of the livestock. The linkage will be beneficial to both farmers and veterinarians.
Feed	Producers	Establishment of linkage	Development of relationship between farmers and importers/producers of cattle-feed may prove to be a win-win situation for both
Training	Dairy Factories	Establishment of linkage	Development of a source of raw-material will be beneficial for the dairy factories in the long-run
	Government	Lobbying	
	Donor Funded NGOs	Advocacy	
Business Development Services	Accounting Firms, Brand Development Firms, etc.	Establishment of linkage	A win-win proposition for both parties. Development of an own brand may make it possible for the groups to market dairy products directly to customers
Micro-insurance	Insurance Companies	Advocacy	Insurance should be made compulsory for the livestock as it will be a major investment for the farmers. Insurance Companies may have to be persuaded to cover the livestock
Cattle Fattening / Butchering Plants	Partners	Advocacy	Bull calves and unproductive cows are to be off-loaded to these partners. A win-win situation for both.
Bio-gas and Fertilizer Plants	Partners	Advocacy	Local entrepreneurs are to be persuaded to invest in and operate these projects. They may be assured of guaranteed business. Win-win situation for the partners and the farmers.
Dairy Factory	Commercial Buyers (Partners)	Advocacy	The major buyers for the micro cattle farms. May provide training to farmers and collectors and assistance with procurement of good breed of cattle and feed.

According to Engg. Md. Nazrul Islam Khan, Project Director, Community Biogas Project, Rural Development Academy, Bogra manure from one hundred fully grown cows is sufficient to produce more than 2,000 m<sup>3</sup> of biogas and 12 metric tons of bio-fertilizer every month. The revenue generated by a plant of this capacity should exceed Tk.1,00,000/- every month. The cost to set up the plant will be around Tk.6,00,000/-. Smaller plants can also be set up for approximately Tk.35,000/- which will operate on the manure of 3/4 cows.

## V. Methodology of Project

### 5.1. Schedule

The project is expected to have a life of four years, which can be extended by a year if required by the stakeholders. The conceptualization and design stage will require six months. A pilot project will be launched immediately thereafter, with 20 groups each consisting of 30 members each (every member has to have a cow). Establishment of linkage with commercial buyers will also commence since then. The project should be ready for scale up by the middle of year two, when 1,000 groups that is 30,000 farmers (each having a cow) will be brought under its jurisdiction. The facilitators will start their winding up operation by the middle of the fourth year. Hopefully, by then the project will be self-sustaining.

**Table 2:** Four years schedule of the project

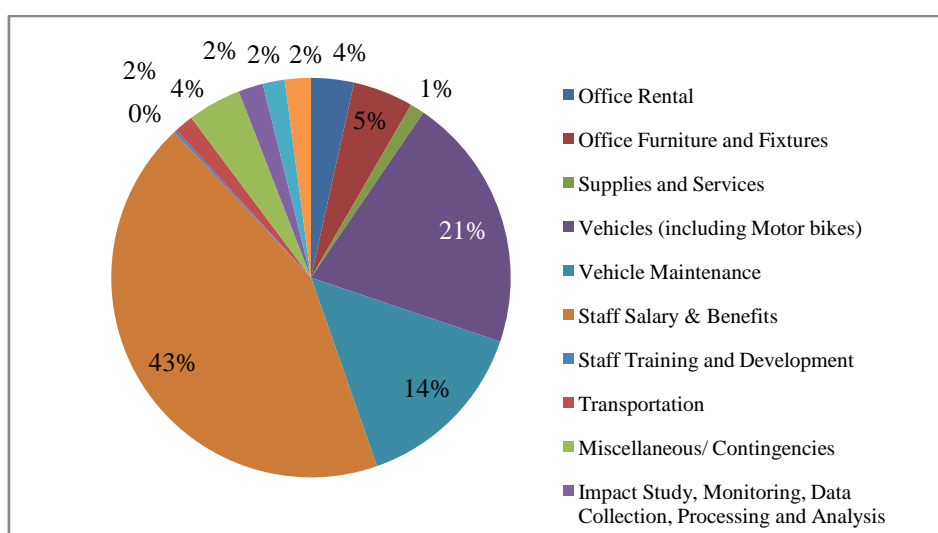
TASK	Year 1		Year 2		Year 3		Year 4	
	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
Intervention conceptualization & design	✓							
Establishment of linkage with key partners		✓	✓					
Operating pilot program with 600 farmers.		✓	✓					
Project scale up with 1,000 groups				✓	✓	✓	✓	✓
Handholding, final evaluation and facilitator's exit							✓	✓

### 5.2. Resource and Cost Implications

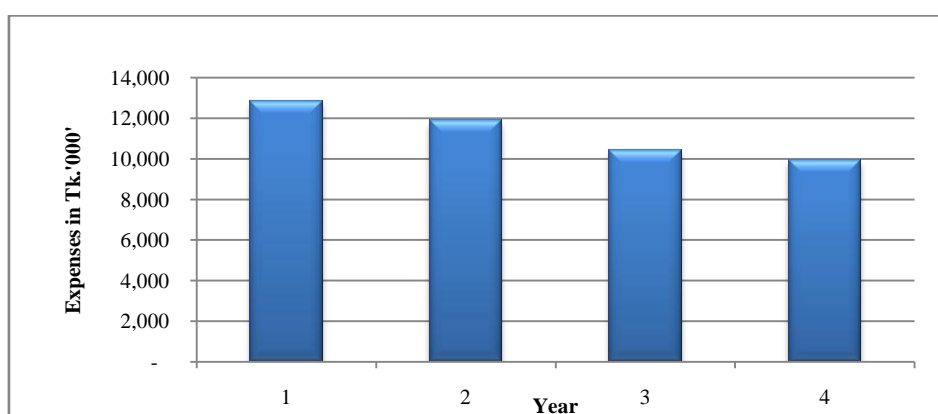
Funding for the facilitation component of the project is to be entirely procured from donors. The cost implications are given below:

**Table 3: Cost implications**

Head of Expense	Year				Total Amount
	1	2	3	4	
Office Rental	240	360	480	480	1,560
Office Furniture and Fixtures	1,200	1,000			2,200
Supplies and Services	100	120	150	150	520
Vehicles (including Motor bikes)	6,300	3,000			9,300
Vehicle Maintenance	1,200	1,300	2,000	2,000	6,500
Staff Salary & Benefits	3,000	4,500	6,000	6,000	19,500
Staff Training and Development	25	75			100
Transportation	100	200	250	150	700
Miscellaneous/ Contingencies	300	450	750	450	1,950
Impact Study, Monitoring, Data Collection, Processing and Analysis	100	50	250	500	900
Awareness Building, Advocacy and Lobbying	200	300	200	100	800
Training Programs	50	500	300	100	950
<b>Total :</b>					<b>44,980</b>



**Figure 2: Break-up of Project Costs**



**Figure 3: Year Wise Project Costs**

### 5.3. Personnel

A provisional organogram for the project is given below. The number of personnel, especially in the operations section will increase when the project swings into full gear in the second year.

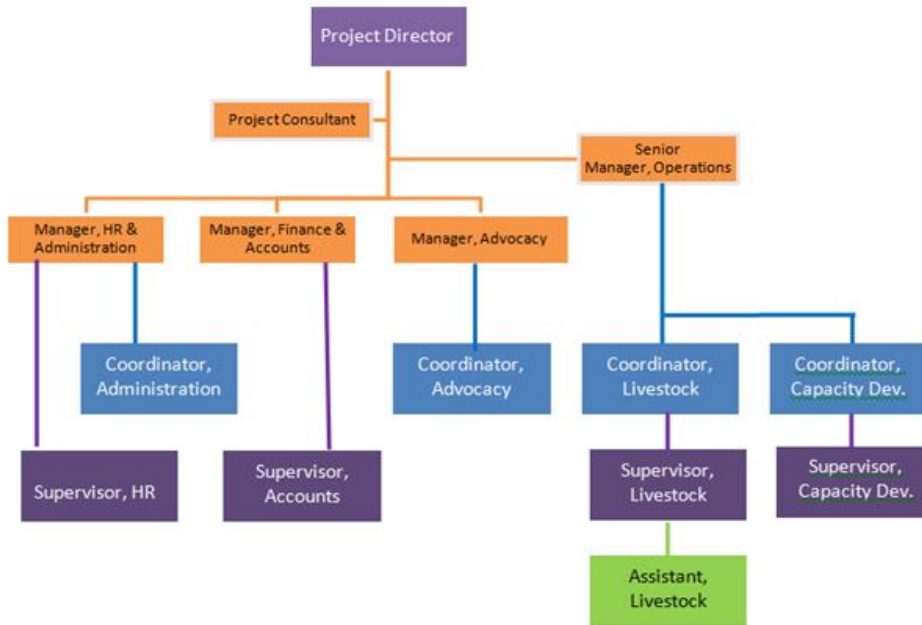


Figure 4: Provisional organogram

#### 5.4. Risk Management Plan

It is better to deal with project risks proactively than reactively. To do so risks have to be identified early. The risks this project may face and the ways to mitigate the risks are given below:

To lessen the impact to scope risk (eg. the project; becomes complex as requirements increase) the project deliverables, objectives, project charter and the scope needs to be clearly defined.

The project is not expected to be bothered by scheduling risk that is, unexpected delays at starting components of the project, as the project will be scaled up one and one-half years after launching. This should give enough time to iron out scheduling risk.

However business risks may create more of a problem. These may arise from partners backing down from their commitment, theft or death of cows, political disturbance, natural disasters (eg. floods), etc.

Introduction of written agreements between farmers and buyers may prevent parties from failing to fulfill their obligations.

The death or theft of the only cow owned by a poor farmer may mean the end of his/her business venture. The underprivileged farmer may not get the opportunity to own a cow again. To prevent against this sort of mishap, all cattle under this program is to be insured.

Cows which have below average productive capacity may have to be culled. Farmers may resort to beef fattening programs (these are in practice in the country) and sell these cattle to butchering factories to recover part of their capital, at least, if not the whole. Bull calves may also be unburdened in this manner.

Resistance from local groups may create problems for all projects. Maximum possible involvement of local groups in the project is to be ensured to reduce any conflict of interest and win the full support of all.

#### 5.5. Evaluation Methods

Success of the micro farms may be measured using two types of measurements. These are the rise in income of the farmers and the increase of their assets.

Increase of dignity or social status of the target group is another criterion that may also be utilized.

Base-line survey, interim assessment and end-line survey may be used as the measuring tools. Impact assessment should also be conducted.

### VI. Conclusion

In this project the Facilitator acts almost wholly as a catalyst who stimulates the markets while remaining outside of the market themselves. As such, the withdrawal of the Facilitator from the project should not prove to be very difficult.

In most cases the owners of the project will be the poor farmers, sellers of feed and medicine, veterinarians, BDS Providers, etc. Even local underprivileged people, who due to genuine reasons do not own cattle, will have the option of becoming stakeholders (owners) of the project by becoming collectors; who will collect milk from the farmers, conduct quality tests and deliver the milk to nearby facilities. Local entrepreneurs

will also be encouraged to invest in components of the dairy product value chain and benefit from it. Large dairies will obtain a genuine source of their basic raw material, milk.

There are also no reasons to believe that the project will not be sustainable in the future, especially after the Facilitator withdraws from it. It is expected that the assets of the BOP farmers (members) will grow and they will gradually become owners of more than one cow each thus effectively stepping out from poverty. Their success will encourage others to follow in their footsteps.

### References

- [1]. Moazzem, K.G. and Rayan, K. (2015) Roundtable Discussion Report - Inclusive Business in the Context of Bangladesh: Prospect and Challenges, Prepared by Katalyst, Volume 1 Issue 1 February 2015
- [2]. Islam, S. & Jamal, A.A.ed. (2012), "Cattle", Banglapedia: National Encyclopedia of Bangladesh (Second ed.), Asiatic Society of Bangladesh
- [3]. Moazzem, K.G. and Sehrin, F. (2015), Informal Cattle Trade between Bangladesh and India, Centre for Policy Dialogue (CPD), available at: <http://cpd.org.bd/index.php/cattle-trade-bangladesh-india-sarcist-cpd-golam-moazzem/> as on: 08-May-2018
- [4]. The Daily Star (7-Aug-2017) *Import of powdered Milk Almost Doubles*, available at: <https://www.thedailystar.net/business/import-powdered-milk-almost-doubles-1444687> as on: 08-May-2018

### Annexure: The Project Charter

<b>Objective</b> Prime Objective is to create the market mechanism for the inclusion of BOP farmers into the Dairy Value Chain in the country to improve their economic condition. A more specific objective is to empower 6,000 BOP farmers in rearing milch cows and gaining access to the market.	<b>Approach</b> <b>Technical</b> Application of inclusive market development interventions to create a win-win situation for farmers and other stakeholders.  <b>Managerial</b> Short-term Management and Technical Consultants.		<b>Risk-Management Plan</b> <ul style="list-style-type: none"> <li>• Scope risk – the project becomes complex as requirements increase</li> <li>• Scheduling risk – unexpected delays at starting components of the project</li> <li>• Business risk – arising from partners backing down from their commitment, theft or death of cows, political disturbance, natural disasters like floods, etc.</li> <li>• Resistance from local groups.</li> </ul>	<b>Risk-Mitigation Plan</b> <ul style="list-style-type: none"> <li>• Deliverables, objectives, project charter and the scope needs to be clearly defined.</li> <li>• Commencement of the scale-up project one and one-half years after launching of the actual project should somewhat iron out scheduling risk.</li> <li>• Introduction of written agreement, micro-insurance, creation of alternate markets and other tools may be used to reduce business risks.</li> <li>• Maximum possible involvement of local groups in the project to reduce any conflict of interest and win their full support.</li> </ul>																																																														
<b>Personnel</b> 1 Project Director 1 Consultant 4 Managers 7 Coordinators 18 Supervisors 10 Assistants	<b>Partners</b> <b>Implementation:</b> Bangladesh Livestock Research Institute (BLRI), Department of Livestock Services (DLS), Bangladesh Agricultural University, Rural Development Academy (RDA) <b>Stakeholder engagement:</b> Pran Dairy Ltd., MilkVita, Aarong Dairy, Kuliarchar Dairy. <b>Other partners:</b> Grameen Bank. BRAC, Char Livelihood Program	<b>Business Case</b> <ul style="list-style-type: none"> <li>• 16.01% of all households in Bangladesh own a cow. A large number of cow owners are BOP farmers who are experienced in this field of work.</li> <li>• Yet 750 crore worth of powdered milk and 1.5 million cattle have to be imported every year. A gap between supply and demand is evident.</li> <li>• Cattle-farming has potential in Bangladesh. Creation of the market mechanism ensuring market access of farm (dairy) products and assistance on developing micro farms will provide BOP farmers with a sustainable, secure and profitable livelihood and help lift them out of poverty.</li> </ul>	<b>Exit Strategy</b> <ul style="list-style-type: none"> <li>• The project aims at <i>stimulating</i> the markets while remaining outside.</li> <li>• As such, on completion the model will be handed over to the private sector stakeholders and the facilitator will withdraw.</li> </ul>	<b>Sustainability</b> <ul style="list-style-type: none"> <li>• Assets of the BOP farmers (members) will grow. They will gradually become owners of more than one cow each, thus effectively stepping out of poverty.</li> <li>• Observing their success, others will follow their steps.</li> <li>• There will be market development</li> </ul>																																																														
<b>Major Activities</b> <ul style="list-style-type: none"> <li>• Identifying key buyers (dairy factories) and establishing linkage with them.</li> <li>• Establishing linkages with financiers, insurance providers, BDS providers etc.</li> <li>• Establishing backward linkages with input suppliers (stock, feed, medicine, etc.) and veterinarian services.</li> <li>• Group formation and training of farmers.</li> <li>• Formation and training of collectors.</li> <li>• Identifying local entrepreneurs and encouraging them to invest in and operate bio gas &amp; fertilizer plants, cattle fattening &amp; butchering plants etc.</li> </ul>	<b>Evaluation Method</b> <ul style="list-style-type: none"> <li>• Base-line survey, interim assessment and end-line survey to measure the rise in income of the farmers and increase of the farmers and increase of these assets. Impact assessment will also be done.</li> </ul>	<b>Ownership</b> <ul style="list-style-type: none"> <li>• BOP farmers and other stakeholders (Private Stakeholders) in the long run.</li> </ul>																																																																
<b>Scheduling</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">TASK</th> <th colspan="2">Year 1</th> <th colspan="2">Year 2</th> <th colspan="2">Year 3</th> <th colspan="2">Year 4</th> </tr> <tr> <th>1</th> <th>2</th> <th>1</th> <th>2</th> <th>1</th> <th>2</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>Intervention conceptualization &amp; design</td> <td style="background-color: #90EE90;"></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Establishment of linkage with key partners</td> <td></td> <td style="background-color: #90EE90;"></td> <td style="background-color: #90EE90;"></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Operating pilot program with 600 farmers.</td> <td></td> <td></td> <td style="background-color: #90EE90;"></td> <td style="background-color: #90EE90;"></td> <td style="background-color: #90EE90;"></td> <td style="background-color: #90EE90;"></td> <td style="background-color: #90EE90;"></td> <td style="background-color: #90EE90;"></td> </tr> <tr> <td>Project scale up with 1,000 groups</td> <td></td> <td></td> <td></td> <td style="background-color: #90EE90;"></td> <td style="background-color: #90EE90;"></td> <td style="background-color: #90EE90;"></td> <td style="background-color: #90EE90;"></td> <td style="background-color: #90EE90;"></td> </tr> <tr> <td>Handholding, final evaluation and facilitator's exit</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="background-color: #90EE90;"></td> <td style="background-color: #90EE90;"></td> </tr> </tbody> </table>					TASK	Year 1		Year 2		Year 3		Year 4		1	2	1	2	1	2	1	2	Intervention conceptualization & design									Establishment of linkage with key partners									Operating pilot program with 600 farmers.									Project scale up with 1,000 groups									Handholding, final evaluation and facilitator's exit								
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