



## Training and Visit Approach for manure preparation from banana pseudo-base decomposition

**Bangladesh-** প্রশিক্ষণ ও পরিদর্শনের মাধ্যমে কলার পড়া পঁচা সার সম্প্রসারণ

**Promotion of banana pseudo base decomposed manure through visit, training and demonstration Approach.**

In Bangladesh, it is really difficult to trace homesteads without banana plantation. It grows with or without fertilizer. After harvesting the banana bunch, the remaining pseudo base gradually dries up, treated it as a hazard (extra labour etc) to the farmer, and that can be utilized by preparing compost through a decomposition process for the young rising sucker in ratoon banana field.

The approach was initiated in farmer's homestead as follows:

Homestead farmers (HFs) were selected and on-farm demonstration (following the methodology) was organized for the farmers. Initially, a batch of 25 HFs were offered a 2 days' hands-on training. 10 HFs representing a village are considered as Trained Cadre for the promotion of the approach. The trainee participants were given some responsibility. Each and every trained HF was entrusted to take the responsibility of on-farm demonstration who was committed to disseminate the technology among two other fellow HFs of the same community. For more rectification, the trained HFs were invited to a follow-up training too. This approach was a continuous process covering more HFs in neighboring communities.

**left:** Training on banana pseudo-base decomposition process. (Francis Halder).

**right:** On-farm demonstration of banana pseudo-base decomposition. (Francis Halder).



**Location:** Village: Bhurvuria, Atia Union under Delduar Upazilla(Sub-district) of Tangail district, Bangladesh, AEZ-9 ( Old Brahmaputra Flood Plain)

**Approach area:** 6 km<sup>2</sup>

**Land use type:** Homestead land use

**Type of Approach:** Project approach

**Focus:** Supplying nutrients to the young sucker from decomposing mother's pseudo base

**BANCAT database reference:** QA BAN 09

**Related technology (ies):** QT BAN 14

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## Problem, objectives and constraints

### Problems

- Banana is a soil exhaustive horticultural crop, needs high amount of chemical fertilizer after each harvest
- Excess chemical fertilizer makes the soil acidic, consequently making the soil sickness and unproductive.
- Again after each harvesting, the pseudo base turns as a dried hazard, which deserves extra labour for removal
- Increased overall cost of cultivation.

### Aims / Objectives:

- Good cropping in banana ratoon, which is commonly unusual
- Using hazardous banana pseudo base as manure for young sucker
- Helping in maintaining neutral soil pH i.e. saving soil from excess chemical fertilizer use
- Reducing gradually the cost of production

### Constraints addressed

Major	Constraint	Treatment
Outdated attitude	Incorporation of additional technology needed time, attention and adaptation.	Frequent motivation
Ready made evidence	Needed to set demonstration before its extension	Believing by seeing
Economic	Now a days chemical fertilizer is costly.	Cow dung could be used as an alternative.
Minor	Constraint	Treatment
Follow up	Time to time observation etc.	An advance action plan in pictorial form

## Participation and decision making

### Stakeholders / target groups



Organizational staff / planners



Selected homestead farmers (HF) as cadre and Small & medium homestead farmers



Village Headmen

### Approach costs met by:

Training cost by the organization	100%
Establishment & Production cost by the HFs	0%
<b>TOTAL</b>	<b>100%</b>

### Annual budget for SLM component:

2000 to 3000 US\$ covering a medium village of 200 family

### Decisions on choice of the Technology (ies):

As HFs are the principal extension agent of Anando with regard to extension of homestead technology promotion approach so, the HFs (as cadre) have a free choice on technology. Actually, relating to the local problems, Anando implements and promotes in consultation with HFs, as ANANDO believes in participatory management in development and dissemination of various homestead farming technologies.

### Decisions on method of implementing the Technology (ies):

The Project Coordination Cell (PCC) of Anando tests and verifies the results for field implementation process of the technology adoption in farmer's homestead. However, the selected technology is assembled in the project proposal as per the need and recommendation of the community and implemented in due consideration of farmers' participation receiving due approval from the donor.

### Approach designed by:

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### Implementing bodies:

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## Land user involvement

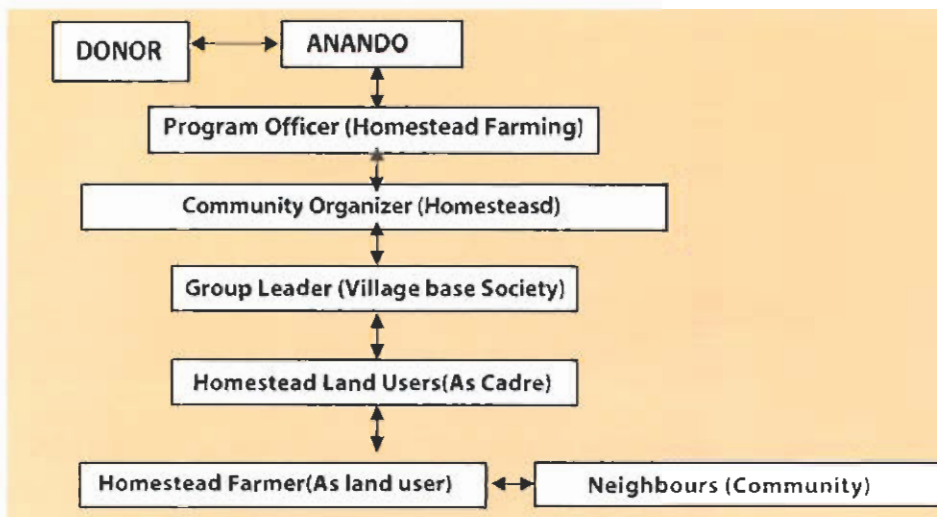
Phase	Involvement	Activities
Initiation/motivation	Homestead Farmers (HF)	Survey/ selection and participation into discussion
Planning	Key staff of the organization/ Selected HF/ Line functioning researchers	Review of implementation strategy/ Verify problem solving measures,
Implementation	Organizational staff, HF & community leaders	Training, field application, setting demonstration, yield verification etc.
Monitoring/evaluation	Key staff of the organization/ Selected HF/ Line functioning researchers	Preparing and following the project planning matrix.
Research	Key staff of the organization/ Selected HF/ Line functioning researchers	Field survey, soil test, status of microbes, yield-comparison with non treated ratoon etc.

### Differences between participation of men and women:

As regard to extension of homestead land use approach- homestead farmers (both male & female) are the main beneficiaries of ANANDO. So far the male-female ratio is almost equal i.e. 50: 50. So, hardly, there is any difference in participation of men and women in technology dissemination. But in the locality, there is a clear difference in wage earning between male and female labour.

### Involvement of disadvantaged groups:

Considering the selection criteria, Anando works only with homestead farmers as 58% people are landless in Bangladesh though most of them own at least a homestead. Homestead farmers belong to the disadvantaged groups. Anando is very much careful in food production utilizing every pros and cons of the homestead farmers.



Organogram of Technology promotion Approach (Francis Halder).

### Technical support

#### Training / awareness raising:

- Extending basic training (two days) among the homestead farmers (HFs)
- Follow-up monitoring services as stated in basic training
- Follow up of training (one day)
- Bio-resource support (by own cost)

#### Advisory service:

Anarido has no such formal advisory cell yet, but in need, Anando makes contact with the scientists of Bangladesh Agriculture Research Institute (BARI) for necessary advisory services

**Research:** No formal research.

#### External material support / subsidies :

All the support materials are provided by the HFs except credit support cost for training and credit capital. Anando extends credit support (12% interest) from its credit revolving fund and operates as per the organizational policy

#### Contribution per area (state/private sector):

<b>Labour:</b>	No
<b>Inputs:</b>	No
<b>Credit:</b>	No
<b>Support to local institutions:</b>	As stated above i.e. with 12% interest Other than Cadre Approach, the approach to Banana Pseudo Base Decomposition is also supporting to local farmers groups directly through setting on-farm demonstration in selected farmers homestead.

### Monitoring and evaluation

Monitored aspects	Methods and indicators
Bio-physical	Total nos. of HFs selected for the technology
Technical	Nos. of HFs adapted the technology with complete approach
Socio-cultural	A trend established to use the technology in the community
Economic/production	% of increasing yield i.e. % of saving cost
Area treated	70 villagers of 2 villages adapted the technology
No. of land users involved	70 HFs are involved initially
Management of Approach	Training & Visit System Approach (T & V)
Other	Assess longevity of ratoon crops

### Changes as result of monitoring and evaluation:

It is expected that a community led movement will be in place in the promotion of homestead farming technologies having made them aware of its overall benefits on human and soil health.

### Impacts of the Approach

#### Improved sustainable land management:

- Banana Ratoon longevity will be extended reducing run off, soil erosion etc
- Less harmful as it improves soil health eliminating the adverse effects of chemical fertilizers,
- Improves soil quality as it maintains eco-friendly micro-environment on top soil micro-flora and fauna.

#### Adoption by other land users / projects/:

HF's are committed to replicate the technology at least among 3 neighboring HF's. In this regard, they will set demonstration of technologies in their homesteads to replicate the homestead farming technologies. Anando also uses other promotional aid materials highlighting the negativity of chemical fertilizer, when applied directly on soil.

#### Improved livelihoods / human well-being:

Anando has also other programs towards livelihood improvement including credit services. Definitely this, all together, will affect on livelihood support services towards their socio-economic well-being.

#### Improved situation of disadvantaged groups:

As Anando's beneficiaries are homestead farmers, so, improvement of their homestead crops means improvement of dis-advantaged group members in the community.

#### Poverty alleviation:

Harmless but beneficial technology application has an impact over poverty reduction by reducing cost etc but as a package it is more powerful i.e. Anando has other technology also along with revolving credit fund for poverty alleviation in home-stead farming sector. Finally sustainable ratoon will ensure overall crop improvement in the long run.

#### Training, advisory service and research:

**Training:** Visit and other extension services including on-farm demonstration are the key elements of successful homestead farming. Anando applies all those extension approaches in participatory manner among the group members and among the cadres of community promoters.

**Land/water use rights:** Landlessness is one of the crucial problems in Bangladesh (57.5%) though 97.5% of them have at least a homestead. Considering this, Anando has decided to work with the homestead farmers only. This initiative will protect at least HF's livelihood rights to some extent.

#### Long-term impact of subsidies:

Anando has no program for providing subsidies except training. Definitely, this training and visit approach will improve the overall homestead farming situation of the homestead land users community through Cadres of community interventions.

### Concluding statements

#### Main motivation of land users to implement SLM:

Saving cost is one of the key factors in farming investment. The approach to promote the associated technology would reduce cost by extending longevity of ratoon, as well as reducing additional fertilizer application costs in the banana crop.

#### Sustainability of activities:

The training and visit approach to promote a program based associated technology on Manure preparation from Banana Pseudo Base Decomposition is based on low input approach minimizing the cost of production. Simultaneously, the approach will sustain the farming possibility by extending the longevity of ratoon like banana crop. Having such understanding, this HF's will serve the community as Cadre of promoting the approach. So, this approach along with the approach of promoting other small scale technologies will get a sustainable approach for replication in the farmer's field by community initiative.

#### Strengths and → how to sustain/improve

Simple, and adaptable → On-farm demonstration through community participation

Low cost infrastructure → Durable and cost effective infrastructure

The local HF's are participating as Cadre for further replication → HF's cadres may get organized in working chain

Less time consuming for extension at community level → Extension strengthened

#### Weaknesses and → how to overcome

Knowledge gap → Farmer's acceptance by improving their knowledge base through motivation & training

Approach is time consuming → Farmer friendly extension message is a felt-need and setting on-farm demonstration etc for replication

Needed crop rotation essentially in next crop phase → Time to time follow up may be needed.

#### Key references:

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