



## Popularization of 'Ready Compost'

Bangladesh - জৈব সার জনপ্রিয়করণ

### A program based approach to popularization of ready compost.

Ready Compost is a mixture of manure with chemical fertilizers—a harmless combination with an improved and rapid growth response to the horticultural crops.

It is fact that chemical fertilizer is corrosive, volatile to the soil. Particularly urea- the biggest component of NPK( Nitrogen-Phosphorus-Potassium), adversely increases soil acidity. Again manure is a low NPK containing slow fertilizer. Ready Compost is a mixture of non-harmful compost with corrosive NPK chemicals.

The Approach to promoting ready compost in farmer's homestead is as follows:

Homestead Farmers (HFs) were first selected and on-farm demonstration of the technology was organized. Initially, 3 days' hands-on training among the farmer of a batch of 25 HFs was organized. 10 HFs from each village were trained on conditions that they would take the responsibility of promoting the technology and they were considered as trained cadre for the popularization of the technology. Among the main responsibility- every HF is obliged to disseminate the technology among 2 HFs who will adopt the technology and finally promote it to other HFs. For more user friendly rectification of the technology, all HFs were invited to attend a follow-up training. This approach was expanded to other HFs of other villages covering more areas one after another.

**left:** Demonstration of Ready compost. (Francis Halder).

**right:** Homestead land users using ready composts. (Francis Halder).



**Location:** Village: Bhurvuria, Atia Union under Delduar Upazila( 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:** Program based approach  
**Focus:** Increasing soil fertility applying reactivated manure

**BANCAT database reference:** QA BAN 10

**Related technology (ies):** QT BAN 13

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## Problem, objectives and constraints

### Problems

- Lack of organization with knowledge and funding to address soil acidity, searching for the alternatives of NPK chemical fertilizers.
- Non-availability of locally suitable substitution of NPK chemical fertilizers, as a result, community is dependent of chemical fertilizers as soil nutrient supplier.  
Increasing costs of chemical fertilizers with low output  
Higher gaseous emission of chemical fertilizers, particularly from Urea.
- Shortage of manure is very common concern, moreover, compost is very low containing slow fertilizer for plant growth. As an inappropriate alternative- the chemical fertilizers act as a burning and corrosive effects to the top layer of the soil- the beneficial zone for soil flora & fauna. Chemical fertilizer applied directly on soil could be compared as a burning oven because it burns the air through elimination of gases like CH<sub>4</sub>, NO<sub>2</sub>, NO<sub>3</sub>, etc. Simultaneously it burns the soil with its higher acidic by-products specially when applied with urea -CO(NH<sub>2</sub>)<sub>2</sub>. Consequently turns the top soil hard, gradually soil loses the productive characteristics.

### Aims / Objectives:

- Helping in maintaining neutral soil pH i.e. saving soil from extreme acidity
- Reducing absolute dependency on NPK chemical fertilizers  
Reducing cost of production
- Improving human health as ready compost is environment friendly

### Constraints addressed

Major	Constraint	Treatment
Soil physical properties	Soil becomes hard and infertile	Application of ready compost i.e. mixed manure
Soil biological properties	Higher soil acidity is harmful to soil flora & fauna	Application of Ready Compost along with other soil regenerative mechanism
Economic	Yield becomes gradually reduced, consequently productive cost increased	Application of Ready Compost along with use of good seeds, water etc. in due course.
Minor	Constraint	Treatment
Inputs non-availability	Managing all the ingredients of Ready Compost in time	Practice advance planning through applied training
Application technique	Possibility of mismanaging the formulation of Ready Compost as the farmers are not literate enough	Application of pictorial method for rapid recollection & correct field application
Allowance	Demanding full day allowance while attending training i.e. costly budget	Motivational agreement

## Participation and decision making

### Stakeholders / target groups



Organizational staff/planners



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



Politicians

### Approach costs met by:

Training cost by the organization	20%
Establishment & Production cost by the Homestead land users	80%
<b>TOTAL</b>	<b>100%</b>

### Annual budget for SLM component:

3000 5000 US\$ covering a medium village of 200 family

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

As homestead land users (HLU) are the principal extension agent of Anando in regard to extension of homestead approach to ready composting, so, the HLUs (as cadre) should have a free choice on technology. Actually, Anando does it in consultation with HLUs as they believe in participatory management in development and dissemination of technology.

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

The Project Coordination Cell (PCC) of Anando tests and verifies the results for field implementation of the technology in land users' homestead. However, the selected technology is assembled in the project proposal as per the need and recommendation of the community and is being implemented with the participation of the land users.

### Approach designed by:

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### Implementing bodies:

Anando (Promotion of Culture & Youth Resource Development) 13A/3A; Babar Road (3rd floor), Block-B, Mohammadpur, Dhaka-1207  
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## Land user involvement

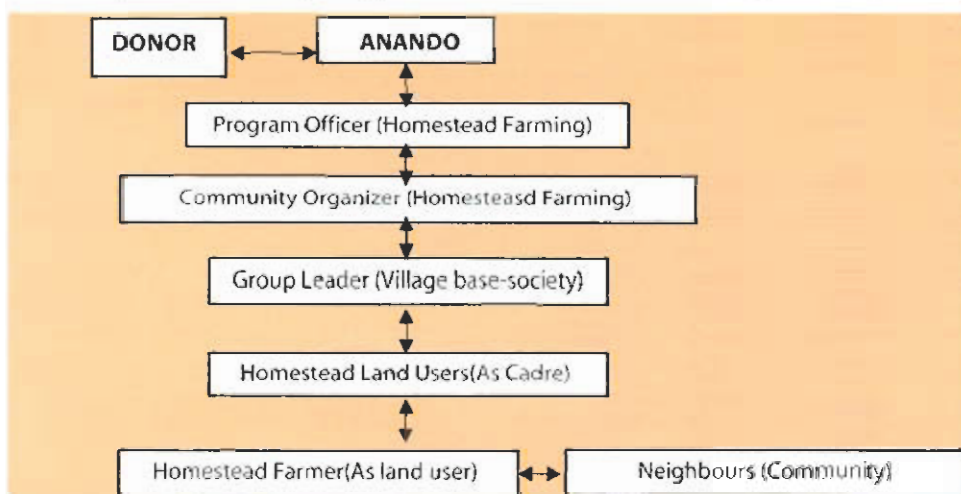
Phase	Involvement	Activities
Initiation/motivation	Homestead Farmers (HF)	Survey/ selection and participation into discussion
Planning	Key staff of the organization/Selected HF/ Line functioning researchers	Review of implementation strategy/ Verify problem solving measures,
Implementation	Organizational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

### Differences between participation of men and women:

In regard to extension of homestead approach- Homestead Farmers (both male & female) are main beneficiaries. So far the ratio is almost equal i.e. 50: 50. So, hardly their is no find differences in participation of men and women in technology dissemination. But in locality there is a clean difference in wage distribution and approach to the women yet.

### 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 by homestead at least), homestead farmers belong to the disadvantaged groups. Anando is very much careful in food production utilizing every pros and cons of homestead involving the homestead farmers.



Organogram of Ananda's Approach (Francis Halder).

## Technical support

### Training / awareness raising:

- Extending basic training (three days) among the homestead land users (HLUs)
- Monitor the conditions as stated in basic training
- Follow up of training (two days)
- Bio-resource support (by own cost)

**Advisory service:** Anando has no such formal cell yet but in need, Anando contacts the scientists of Bangladesh Agriculture Research Institute (BARI) for advisory services

**Research:** Anando's Project Coordinator (PC) is a technical hand in homestead land use practice. ANANDO has different projects on community development. Homestead agriculture is one of the vital components of community livelihood. Some technical hands are employed under the leadership of the Project Coordinator. His continuous endeavour as well as applied research is the outcome of today's result i.e. Ready Compost.

**External material support / subsidies:** All the support materials are provided by the HFs except cost for training and credit capital. Anando extends credit support (12% interest) from its credit revolving fund and operates as per their policy

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

**Labour:** No

**Inputs:** No

**Credit:** No

**Support to local institutions:** As stated above i.e. with 12% interest. Other than Cadre Approach, this Ready Compost is also demonstrated to local groups directly through demonstration and fortnightly samity dialogue.

## Monitoring and evaluation

Monitored aspects	Methods and indicators
Bio-physical	Nos. of HLUs established the shed for Ready Compost
Technical	Nos. of HLUs utilized Ready Compost as per formulation
Socio-cultural	A trend established to use Ready Compost instead of corrosive chemicals
Economic/production	% of farming cost saved
Area treated	200 villagers of 2 villages adapted the technology
No. of land users involved	200 HLUs are involved initially
Management of Approach	Training & Visit System Approach (T & V)
Other	% of sale reduced in chemical fertilizer through local dealers

## Changes as result of monitoring and evaluation:

It is expected that there will be a community led movement in the line of Ready Compost use, knowing its details on its overall benefit.

## Impacts of the Approach

### Improved sustainable land management:

- Retain neutral soil pH
- Less harmful as it improves soil health reducing acid burning
- Improves soil quality as it maintains eco-friendly micro-environment on top soil zone
- Overall crop improvement

**Adoption by other land users / projects/:** HLU's are committed to replicate the ready compost at least among 3 neighbours. In this regard, they will set demonstration to replicate this concept. Anando also uses promotional aid materials highlighting the negative effects of chemical fertilizers, when applied directly on soil.

**Improved livelihoods / human well-being:** Not only this low-cost Ready Compost but a package of technologies developed by Anando will improve crop growth with minimum investment. Anando have other programs towards livelihood improvement including credit. Definitely this all together will affect on livelihood and human well-being.

**Improved situation of disadvantaged groups:** As Anando's beneficiaries are homestead land users so, improvement of their farming situation means improvement of disadvantaged 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 as Anando has also other package of technologies along with revolving credit fund for poverty alleviation in homestead farming sector

**Training, advisory service and research:** Training, extension services and applied research are the key elements of successful homestead farming. Anando applies all those activities through participatory approach among the group members and among the cadres

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

**Long-term impact of subsidies:** Anando has no long-term subsidies except training which would improve the overall situation of the farming community through Cadre's interventions

## Concluding statements :

**Main motivation of land users to implement SLM:** Out of the 1st Five of Agriculture- the Soil is the prime source to accelerate crop growth. So, keeping the safe soil health first; including managing the other factors also i.e. seed, fertilizer, water and its management through participatory approach.

**Sustainability of activities:** The technology on Ready Compost is based on low input minimizing the dose of sole chemical fertilizer. This reduces the farming cost. Simultaneously, now a days, the farmers are very much affected by the harmful affect of chemical fertilizer so, they are taken to classes to make them realize the negative effect of chemical fertilizers. Having after its clear understanding, this HLU's serve the community as Cadres of promoting the SLM technologies. So, this approach along with other small scale technologies will get a sustainable mandate for application in the farmers field by local initiative.

### Strengths and → how to sustain/improve

The technology is simple, applicable and its impact is easily understood among the community → When the community owns the Approach and community Approach to diffusion.

Both women and men's participation and employment are ensured round the year → Gender equity may be maintained.

The local HLU's are participating as Cadre for further replication → Cadre need to be oriented and HLU's should be friendly to farmer.

Easy learning through method of training and demonstration → Refresher training, on-farm demonstration and community awareness

### Weaknesses and how to overcome

Updating of formulation as well as managing all ingredients in time. → The formulation are to be depicted in front of the HLU's door in pictorial form for recollection & frequent use.

All Homestead Farmers (HFs) are not literate. → So leaflets are to be distributed to the literate neighbours in local language for further use

Time consuming as strong extension is a felt-need. → Frequent reminder and follow up may be a need with persistent motivation

Difficult to differentiate the result from the outcome of result demonstration → Easy differentiation may be ensured.

### Key reference(s):

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