



**WEL COME TO ALL**

**MAA THOTA**

*Integrated Tribal Development Programme*

**BREDS**



## YEAR WISE PLANTATION

BATCH	YEAR	PLANTATION COVERAGE		CUMULATIVE	
		Families	Extent (in ac)	Families	Extent (in ac)
Batch- 1	2006	100	100	100	100
Batch- 2	2007	245	245	345	345
Batch- 3	2008	184	155	529	440
Batch- 4	2009	170	140	699	640
Batch- 5	2010	184	160	883	800
Batch- 6	2011	221	200	1104	1000
Batch- 7	2012	358	300	1462	1300
Batch- 8	2013	429	353	1891	1657
Batch- 9	2014	235	172	2126	1829
Batch- 10	2015	216	171	2342	2000
<b>TOTAL</b>		2342	2000		

# PROCESS FOLLOWED

Meeting with farmers at  
Village level

Site/plot physical verification

Entered agreement with farmers

Layout marking for plantation

Pit digging

Pit refilling with manure and basal dose



Then . . . We go to Plantation



# INTERVENTION STRATEGIES

**PROMOTION OF INDIGENEOUS METHODS**

**PROMOTION OF MODEL/DEMONISTRATION PLOTS**

**COMMUNITY OWNERSHIP AND PARTICIPATION**

**ENCOURAGE COMMITTED FARMERS WITH SPECIAL INPUTS TO STAND AS ROLE MODEL TO OTHERS**

**FACILITATE FARMERS TO EXPLORE IDEAS AND SHARE VIEWS**

**ORGANIZE NEED BASED TRAININGS AT MAA THOTA PLOTS**

**EMPHASIS ON ORGANIC FARMING**

**CONVERGENCE WITH ALL LINE DEPARTMEMNT TO CREATE AND SUSTAIN IMPACT**



# STEPS FOLLOWED DURING PLANTATION

**ENSURED NO WATER STAGNATION IN PIT**

**PLANTED IN CLOUDY AND COLD WEATHER**

**REMOVED PLASTIC BAG CAREFULLY BY USING BLADE WITHOUT DISTURBING THE BALL**

**KEPT GRAFT PORTION 15 cm ABOVE THE GROUND**

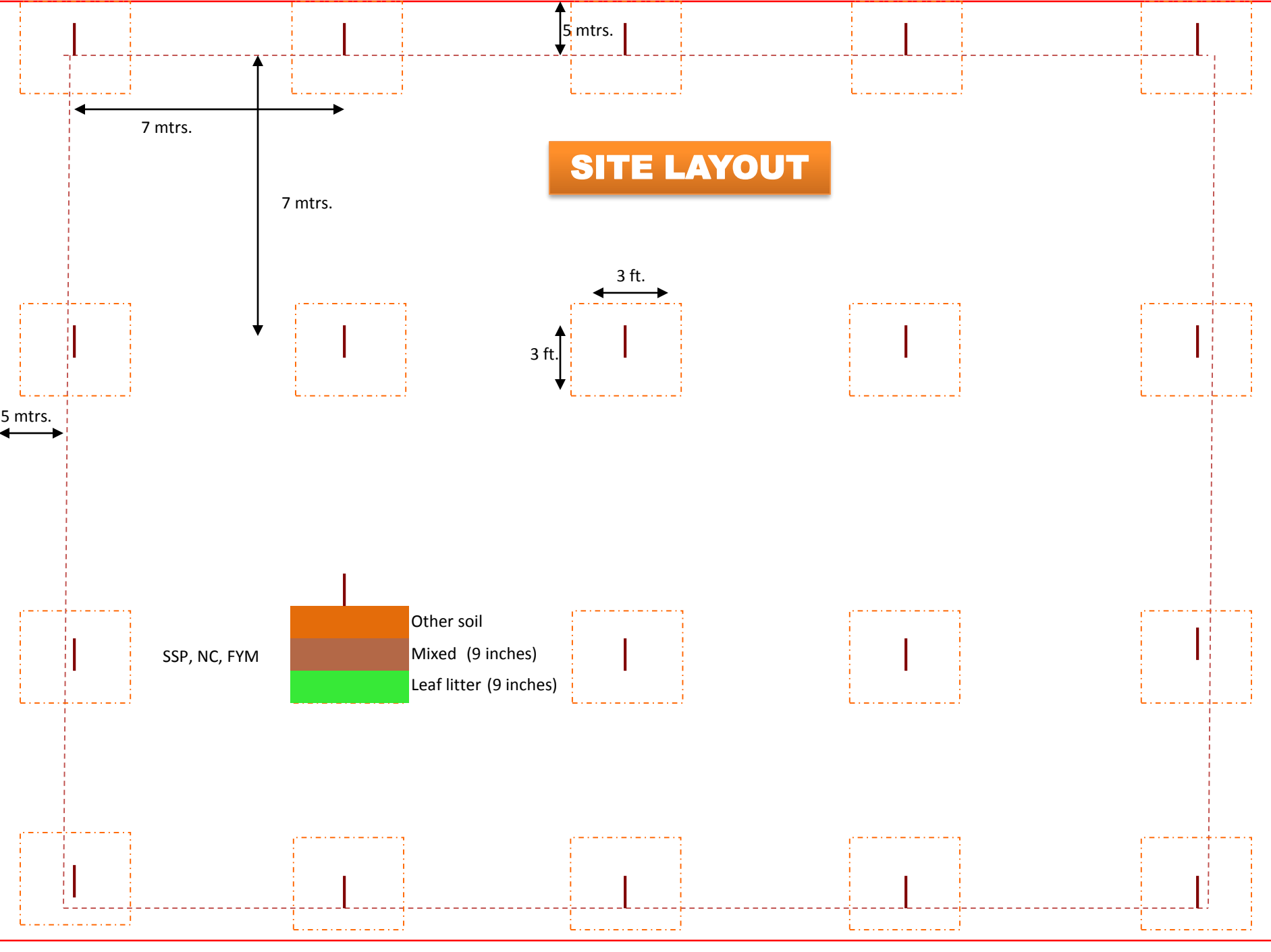
**KEPT THE PLANT AT MIDDLE OF THE PIT**

**ENSURED NO AIR IN THE PIT**

**WATERING THE PLANTS IMMEDIATELY AFTER PLANTATION**

**STALKED THE PLANT WITH STICK**

# SITE LAYOUT



5 mtrs.

7 mtrs.

7 mtrs.

3 ft.  
3 ft.

5 mtrs.

SSP, NC, FYM

Other soil  
Mixed (9 inches)  
Leaf litter (9 inches)



CROP- 1

CROP- 2

**PLANTATION MODEL (TYPICAL WADI)**



# TECHNICAL PARAMETRES FOLLOWED

## Before plantation:

Spacing : 7 X 7 mtrs.

Pit dimension : Square

Pit size (in mtrs.) : 0.90 x 0.90 x 0.90 mtrs.

Plant material : Grafts

Planting system : Square

# SOME OF THE PLANT CARE ACTIVITIES

**WEEDING**

**REMOVING THE LOCAL SHOOTS**

**INTERCULTURE**

**EARTHING UP**

**PREPARATION OF RING BASINS**

**STAKING**

**SHADE CREATION**

**PRUNING**

**MULCHING**

## PLANT SPECIES UNDER MAA THOTA PROGRAMME (per acre)

CROP	VARIETY	SPACING	PLANT POPULATION
CASHEW	BPT- 8&9, Venugurla	7 x 7 mtrs	40
MANGO	Banginapalli & Thothapuri	7.5 x 7.5 mtrs	36
AMLA	NA_7, Kanchan, BSR	7 x 7 mtrs	40
TEAK/ BROOM STICK (Boundary Plantation )	Local	1.5 mtrs.	200 to 300
HENNA/ AGAVE/BROOM STICK (Live Hedge/fencing)	Local	1.5 mtrs.	100 to 200
INTER CROP	Ground nut, Topiaco, Finger millets, Banana, Vegetables, Turmeric, Pine apple etc.,		



# PLANTATION

PLANTATION			
Core Plantation	Border Plantation	Live/dry fencing	Intercropping
Amla, Mango & Cashew	Teak	Broom Stick & Henna	Banana, Vegetables, Ground nut, Green gram, Red gram, Horse gram, Black gram, Turmeric, Ginger,

## INPUTS SUPPLIED

TYPE	KIND/SPECIES	PURPOSE
Orchard Development	Mango, Cashew and Amla	Create sustainable income source
	Guava, Sapota, Pomegranate, Citrus, Custered apple, Papaya, Drumstick (each for one family)	To avail fruits in all seasons for family consumption
Forest species	Teak, Hill broom & Henna (Boundary and Live hedge fencing)	To protect plants from winds and free grazing of animals and getting lumpsum amount at regular intervals
Seeds	Ground nut, Green gram, Red gram, Horse gram, Black gram, Turmeric, Ginger, vetables etc.,	To cover entire plantation plot to avoid expose land and get immediate/instant income
Vegetable kits	10 varieties of vegetables	To intake fresh and nutritious food and reduce daily expenses and save money

## INPUTS given

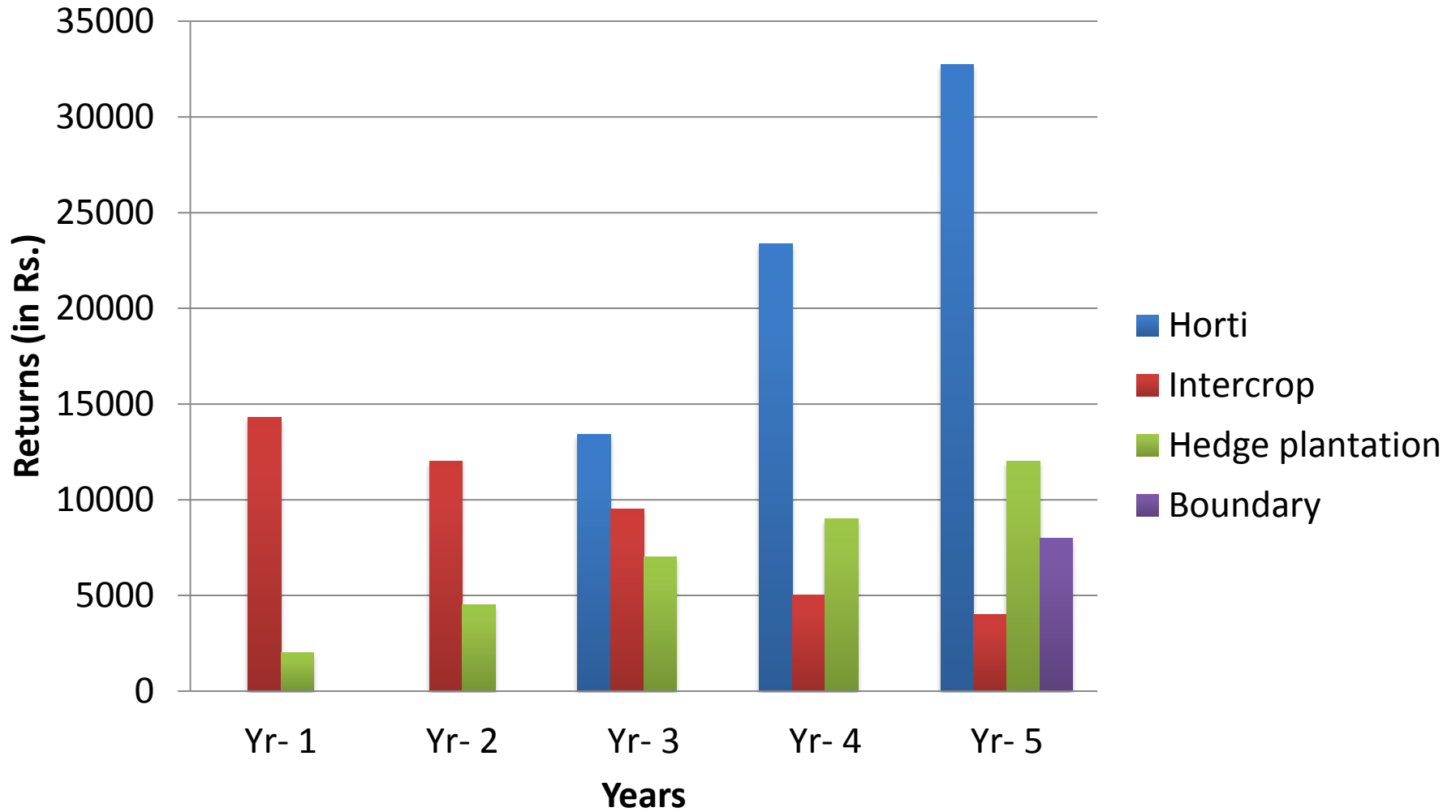
TYPE	SUPPLIED MATERIAL	PURPOSE
FERTILIZER	Enriched vermi castings, Neem cake, Neem oil and bio-biofertilizer	To plant growth
LABOUR CHARGES	Soil and moisture conservation and water resource development works	To enrich soil fertility and retains soil moisture and water storage capacities developed for horticulture development
Technical guidance	Impart technical guidance at every step of horticulture development	To acquire and adopt proper plantation techniques and followed the same parameters in their own plots



# Income from Model plots

Income from plantation (in Rs.) (per annum)(on an average)					
Year	Horti	Inter-crop	Hedge plantation	Boundary	Year wise income
Yr- 1	0	14300	2000		16300
Yr- 2	0	12000	4500		16500
Yr- 3		9500	7000		16500
Yr- 4	13000	5000	9000		27000
Yr- 5	23000	4000	12000	8000	47000
At the end of 5 <sup>th</sup> Year	36000	44800	34500	8000	123300

# CROP WISE RETURNS PER ACRE



# CORE ACTIVITIES

Plantation

Soil Conservation

Water Resource Development

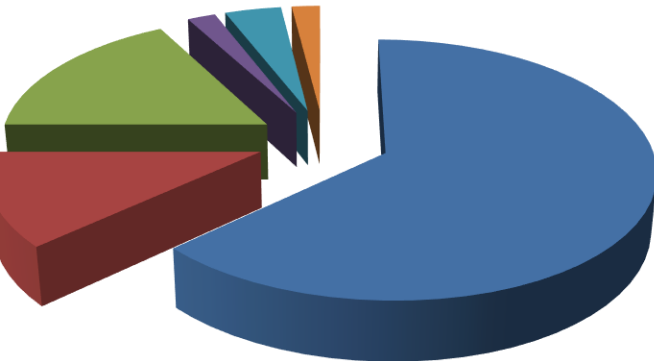
Women Development

Health

Training & Capacity building



## Allocation



- Plantation
- SWC
- WRD
- Women delp
- Health
- Trg & cap bldg



Post  
plantation

# PLANT CARE ACTIVITIES



**Stacking**



# PLANT CARE ACTIVITIES



**Mulching**





# PLANT CARE ACTIVITIES



**De-blossoming**



# PLANT CARE ACTIVITIES



**Pruning**

# SOIL CONSERVATION WORKS

- HALF MOON TRENCHES
- RING BASINS
- CONTOUR BUNDING
- EARTHEN BUND
- BENCH TERRACING
- STONE BUNDING
- VEGETATIVE BARRIERS
- STAGGERED TRENCHES



# HALF MOON TRENCHES



# RING BASINS





# CONTOUR BUNDING



# EARTHEN BUNDS





# BENCH TERRACING



# STONE BUNDING





# VEGETATIVE BARRIERS





# STAGGERED TRENCHES



# WATER RESOURCE DEVELOPMENT

- FARM PONDS
- PITCHER IRRIGATION
- DUGWELLS
- SUB-SURFACE WATER TANKS/DRUMS
- PERCOLATION TANKS
- OPEN WELLS
- TUBE WELLS
- OIL ENGINES



# FARM POND





# PITCHER IRRIGATION



# PERCOLATION TANKS





# OPEN WELLS



# TUBE WELLS



# OTHER ACTIVITIES

Chlorination

Kitchen gardening

Promotion of seasonal fruit crops

Repair of platforms & tubes

De siltation of open wells

Refferal services

Village sanitation



# Some innovative methods taken up

## ***Sub-surface water drums***

We have used Water Drums to preserve the water in many villages. These Drums are kept under the surface and filled with overhead water. The farmers fetch this water for plants either in the morning or in the evening. This is one kind of water preservation method to facilitate the farmer to carry water from the drum to pour in the pot kept nearby the plant.





# Some innovative methods taken up

## ***Shade Huts***

The ***Shade huts*** are used for younger plants. These are most useful to protect the tender leaves from the hot sun. It also enables to retain the moisture in the soil around the plant. It has become a very common practice in all maathota models.



# Some innovative methods taken up

## ***Usage of spring water***

Spring water is one of the most important sources of water for horticulture development. With intervention of TDF we have treated this source in different ways according to the situation emerged. In Burujuwada village we have treated this water fitting a pipe at the origin point and diverted to a constructed tank. In another village Chinna Gujjuwada we have treated the perennial spring water by constructing a structure to collect and preserve the water. In Penguwada village we have constructed a tank applying the stone pitching method to preserve the water for dual purposes, one is to feed the plants and another is to provide drinking water facility which is still in process.





# Some innovative methods taken up

## ***Mulching with Crop residues***

We have encouraged the community to utilize the ***crop residues*** (Ground nut) of first year as mulching materials for the plants to retain the soil moisture and same formulated as manure for the plant in the second year. Also this mulches will control the weeds.





# Some innovative methods taken up

## ***Saline Bottle dripping***

This is another kind of water feeding to plants. The saline bottles which are already used in the Hospitals/ dispensaries are collected and filled with water to feed plants especially the mulches to enable the moisture retention around the plants since it releases water drop by drop. Each bottle can feed plants atleast for two days. We have adopted this system because 80% of the water can be utilized properly and also it is purely a low cost model. These bottles are tied to the stacking sticks or shade huts.



# Rural Mart

- Rural Mart is a hub for marketing of Maathota produces
- All the produces from inter-cropping are the sales items of Rural Mart.
- The intercropping produces like Finger millets Horse Gram, Black Gram, Green Gram, Groundnut, Sunflower, Vegetables, broom sticks etc.
- It has found a place in the general market with the demand of the above produces since the present health condition of the people is seeking so.

The processed produces are available in two shapes like raw and in the form of flour which are properly packed and labeled with price.





# Demonstration Plot/ Model plot/Farm School

- Demonstration of Efficient cropping patterns & systems.
- Crop Diversification and introducing new farm technologies and innovations.
- Demonstration of Effective Water & Soil Conservation Methods.
- Soil enrichment through mulching and organic practices
- Promotion of Vegetable Gardening and Floriculture including ornamental plants
  - Learning lab concept to motivate farmers to take up this model on their own.
- 100 Farmer level demonstration plots established in 3 mandals i.e. Pathapatnam, Meliaputti, Hiramandalam of Srikakulam district.



# Preparation of Soil Enhancer:

**Production of Soil enhancer to revitalize depleted soils and plants**

BREDS supports production of natural and organic Soil Enhancer locally with vermi castings, Coir pith, Neem cake and micro nutrients and supplying





# Livelihood & Enterprise Development Program (LEDP):



Bamboo furniture and crafts production training organized for tribal women where 60 women covered .The training cost was mobilized from NABARD and a tool kit worth of Rs.1500/- will be given to women trainees after the training to continue this activity in their villages and marketing will be done by

# LIVELIHOOD & ENTERPRISE DEVELOPMENT PROGRAM (LEDP):



Training on apiculture has been organised for 50 tribal women (ongoing activity) with the support of NABARD and the convergence of horticulture department. The training cost has been funded by NABARD. After the training the horticulture department will support the trainees for unit establishment (8 boxes and 1 expeller) i.e 36,000 per unit (Total Unit cost is Rs 40,000)



# Photo Gallery



# PROCESS FOLLOWED



## Step-1: Layout preparation



# SITE LAYOUT





# PITTING





# PROCESS FOLLOWED



## Step-2: Pit digging

# PROCESS FOLLOWED



**Step-3: Pit filling after basal dose application**



# PROCESS FOLLOWED



## Step-4: Plantation



# PROCESS FOLLOWED



- Removal of plastic ribbon
- Stacking
- Removal of local shoots
- Preparation of basins
- Application of fertilizer
- Watering
- Shade creation
- De blossoming
- Pruning

# PLANT CARE ACTIVITIES



**Removal of plastic ribbon**

# PLANT CARE ACTIVITIES



**Stacking**



# PLANT CARE ACTIVITIES



**Basin preparation & fertilization**

# PLANT CARE ACTIVITIES



**De-blossoming**



# BOUNDARY PLANTATION





# MAJOR HORTICULTURE CROPS



**CASHEW**

# MAJOR HORTICULTURE CROPS



**AMLA**



# MANGO





# DRY/LIVE FENCING





# INTER CROP





# BENCH TERRACING (SOIL CONSERVATION WORKS)





# STONE BUNDING (SOIL CONSERVATION WORKS)



# RING BASINS





# STAGGERED TRENCHES (WATER RESOURCE DEVELOPMENT)





# FARM POND (WATER RESOURCE DEVELOPMENT)





# PERCOLATION TANKS



# PITCHER IRRIGATION (WATER RESOURCE DEVELOPMENT)

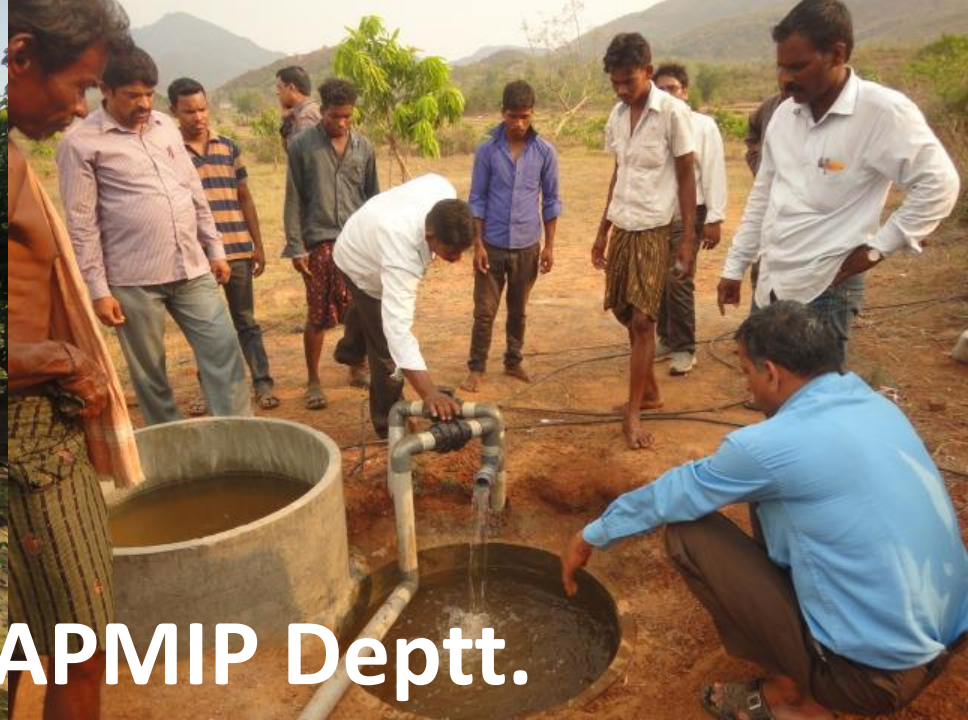




# Inputs-farm implements







**Micro- drip Irrigation - APMIP Deptt.**





**Vermi compost unit**



# OTHER LAND BASED ACTIVITIES



SRI PADDY



# Mushroom cultivation and training centre







**VISITORS**



## OUTCOME

2342 families secured sustainable assets with the integrated development of 2000 acres of waste land into productive land.

Regular income from the MAATHOTA farm ensured food and livelihood security of poor Tribal Farmers.

There is significant increase in the land value (asset) and income (4-6 times )

The non-tribals also adopted this model by the inspiration and our beneficiaries also followed the same model in rest of their lands on their own as we only supported ONE ACRE ONE FAMILY

## OUTCOME

Migration checked with the year long and continuous interventions and integrated farm management

Social status of the members increased.

Present value of Teak plants of five years old is not less than 80,000/- and it is a long term asset security .

Bankers are pleased to come forward to sanction loans to Maa thota farmers

Traditional water bodies renovated and new water bodies created, which enhanced the water table.





THANK YOU

**BREDS - MAA THOTA TEAM**