



Pilot Project on Agriculture Innovation

**With support
SIR DORABJI TATA TRUST, MUMBAI**

**Implementing
RURAL COMMUNES IN PARTNERSHIP WITH
10 NGO PARTNERS**



Project Goal

- The goal of the proposed program is to increase the agriculture productivity of the various crops – specially cereals, minor millets and pulses for food, nutrition and livelihood security in the region

Core of the programme

- Introduced improved package of practices for intensifying the existing agricultural crops in the regions –
 - Promoting intensification of agri. Crops specially, cereals, minor millets & pulses as per demand of farmers
 - Introducing agri.intensification systems – seed treatments, raised bed nurseries, organic land treatments & transplanting single seedling
 - Bringing varietal changes.
 - Promoting integrated pest management
 - Introducing LEISA techniques
 - Intercropping.

Field NGO Partners

- Centre for Experiential Learning (CEL)-Rural Communes, Raigad
- Tribal Intervention - RC, Jawhar & Mokhada, Thane
- Medicinal Plants Conservation Centre and Trust (MPCCTRUST), Pune
- Shramjivi Janata Sahayyak Mandal (SJSM), Satara
- Centre for Experiential Learning -RC, Ratnagiri
- Sakav Gramin Vikas Sanstha (Sakav), Raigad
- Gomukh, Pune
- Matrumandir, Ratnagiri
- Parivartan, Ratnagiri
- Jivhala Gramin Vikas Sanstha (Jivhala), Raigad

IMPLEMENTATION AREA

- **District Covered:** Raigad, Thane, Pune, Ratnagiri, Sindhudurg, Satara
- **The target group:** Rural Poor – Tribal, Farmers, Women, Landless, Youth, SHG Members, Cooperatives, VWCs, and Farmer Associations.
- **Tribal Blocks:** comprising of Katkaris, Thakurs, Varlis, Dhorkolis, Mahadev Kolis, Malhar Kolis, Raj Kolis, Kokanas and other poor.

Methodology Rationale of KSS

- It is a group based learning process
- KSS is primarily a group of involved active farmers of the village.(25-30 members)
- Within members there should be at least one progressive farmer.
- Live farmers field demonstration should be conducted by farmers themselves.
- The members should meet at regular intervals for KSS sessions
- KSS farmers should understand systematic farm planning, seed processing, improved nursery raising techniques.
- Farmers should learn to work in a collectively or group wise decision making, planning.
- Special training to the progressive farmers should be imparted along with material.
- The KSS meeting place is near to the learning plot.
- All KSS should done AESA & make the presentation.
- Every meeting of the KSS often include planning for follow – up activities.

Methodology for KSS formation

- Community mobilization for KSS initiation.
- Conducted village meetings (Gram sabhas)with farmers.
- Also communicated with Grampanchayats in the villages.
- Conducted awareness camps & slide shows in the selected villages.
- Participatory selection of the progressive & extension farmers.
- Formulated base line survey formats and filled up by the field staff.
- After formation & selection of the demo. Farmers & crops conducted the training programmes for thePFs.

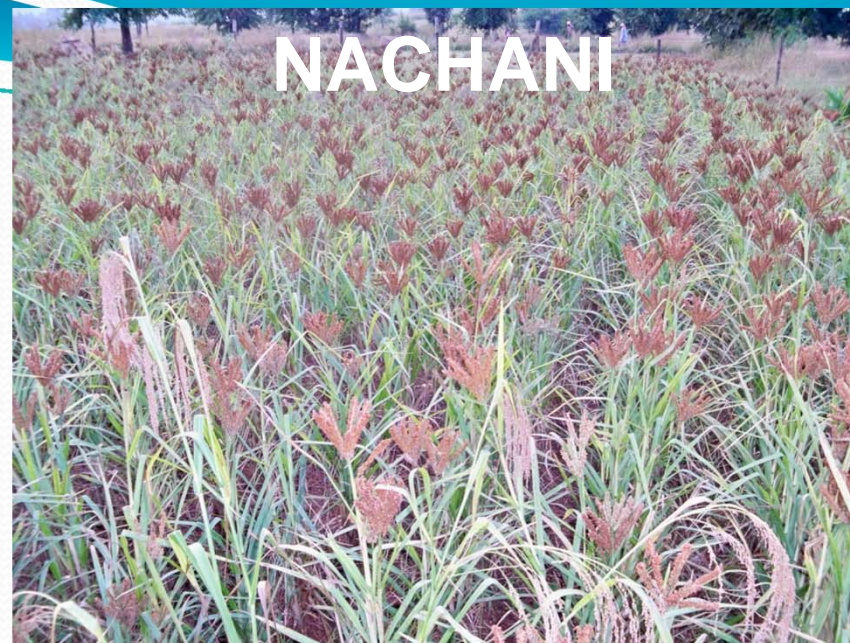


KSS Mobilisation

COMPILE INFORMATION - KHARIF SEASON

Sr. No.	Name of the organization	Total no. of KSS	Tur			Nagali			Paddy/Groundnut		
			No. of KSS	Total no. of farmers Progressive / Extn.	Total Area(acre) Progressive /Extn.	No. of KSS	Total no. of farmers Progressive/ Extn.	Total Area(acre) Progressive/ Extn.	No. of KSS	Total no. of farmers Progressive /Extn.	Total Area(acre) Progressive /Extn.
1	RC-CEL	6	3	71	4.35	3	83	7.2	-	-	-
2	RC-Chiplun	9	4	163	21.995	4	136	17.08	1	27	6
3	RC-Jawhar	10	5	42	11	5	69	19	-	-	-
4	MPCC&Trust	11	6	126	9.45	4	81	6.0	1	22	1.65
5	Jiwhala	7	3	58	7.46	4	85	6.97	-	-	-
6	SJSM	5	1	24	2.31	4	83	10.7	-	-	-
7	Gomukh	6	2	40	5	3	60	7.5	1	25	3.125
8	Matrumandir	4	1	27	1.25	2	41	5.075	1	26	2.175
9	Sakav	7	-	-	-	2	20	1.5	5	30	2.7
10	Parivartan	7	5	34	3.75	2	43	6.22	-	-	-
	TOTAL	72	30	585	66.56	33	701	87.25	9	130	15.66





Methodology rationale - AESA

- AESA- Agro ecosystem analysis.
- AESA is one of the core activity of the KSS. It is the heart of the KSS.
- The main aim of the AESA is to take the decision regarding the crop management by observing the field / crop at regular interval.
- AESA is conducted to see the effect of ecological factors on the crop and find the remedies.

Three important steps of AESA:-

- Observation
- Analysis &
- Decision making

Process of AESA in KSS

- Selection of KSS plot i.e. 1m x 1m.
- Prepared four groups of farmers.
- Started AESA at early in the morning
- Observations recorded –
 - ✓ Plant height
 - ✓ Plant width
 - ✓ No. of tillers/ pods
 - ✓ Soil moisture(%)
 - ✓ Weeds, disease attacked
 - ✓ Pest attacked & beneficiary insects
 - ✓ Yield Data

Technical Training Kits

for Progressive Farmers and Technical Field Staff of all NGO partners

- Bag with Training Kit
- Training Material (Session guides, observation cards)
- Material for sessions of KSS (Specially AESA)
- Material for Documentation



SUPPORT & TRAINING

NGO Partners

- Two dossiers in English & Marathi
- Reference & Reading Materials on Sustainable Agriculture, Cereals, Pulses, Cropping Systems and Basic Farmers Farm Schools
- Visit organized to senior NGO Partners & field staff to AME Foundation, Dharwad -3 days
- Various meeting on concept building
- Meetings conducted to explain the baseline survey & MIS Formats

Material Developed

- KSS field Manual prepared in marathi

Kharif Season:

- Prepared POPs for Nagali, Tur & Paddy
- Session guides for Nagali & Tur – Marathi
- Observations & demonstrations cards
- Calendars of operations for selected crops

Rabbi Season:

- POPs for Wal, cowpea, Green gram, Gram, Lentil, Horse gram, Wheat & Groundnut
- Session guides for wal, Cowpea, Green gram, & Gram
- Observation cards
- Calendars of operations

Formats developed for Baseline Survey & MIS Formats and Reporting

- Base line Survey- a) Revenue Information; b) KSS information; c) KSS members information; d) cropping system
- MIS formats – a) Common MIS; b) Sample study; c) Cost benefit Analysis for Rice, Nagali and Tur
- Reporting format – a) Physical (quarterly); b) Financial (Quarterly); c) Monthly
- Monitoring format

Training Workshops

Training workshop	Group Involved	No. of Participants	Details	Subject / Topics covered
NGO Partners training at Dharwad	NGOs Representatives and Technical Staff	31	3 -5 th May 2011 by AME foundation	Clear the concept of KSS
Facilitators and progressive farmers training	Progressive farmers, Field Technical Staff & NGO Representatives	82	6-9 th June 2011 at RC-CEL	Session on Package of Practices of selected crops (Tur/Nagali/Rice)
Facilitators training	NGO representatives, Facilitators, Progressive Farmers	76	16 -20 th August 2011 at RAMETI, Khopoli	Working of KSS and Integrated Pest & Disease Management of Kharif Crops
Progressive farmer's training	Progressive farmers	66	22-24 th Sept 2011 at Nandanpada	Working of KSS and practical applications
Progressive farmer's training	Progressive farmers	61	15 th – 17 th Dec. 2011 at SJSM, Satara.	Working of KSS and practical applications for Rabbi Crops
Training of Trainers	Progressive farmers	46	9 th – 11 th Jan 2012 at CEL Raigad	Topics on Land & Water Management, Seed Production, Cropping Systems & KSS Sustainability – Advanced
Exposure Field Visit to PRADAN, FES & WWF, Mandla	Sr. NGO Representatives & Technical Staffs	14	21 st – 24 th Feb 2012	Activities implemented by PRADAN, FES & WWF under FFS and Sustainable Agriculture
Progressive Farmers Training	Progressive Farmers	20	6 th – 7 th June 2012	Conducted the Session on Package of Practices of selected crops (Tur/Nagali/Rice)



Training at AME Dharwad



Group Dynamics

Training for NGO at Dharwad



Observation recording



AESA chart preparation



Session



Farmers sharing



Seed treatment demonstration

Progressive farmer's training at Nandanpada



Group Dynamics



Nursery Demonstration



Organic Pesticides preparation



Learning working of KSS



Presentation of AESA chart

Facilitators training at RAMETI



AESA in Tur Field



Special Session on IPM

COMPILE REPORT OF RABBI SEASON (KONKAN REGION)

Sr. No.	Name of the organization	Total no. of KSS	Wal			Cowpea			Green Gram			Bengal Gram			Horse Gram			Ground nut		
			No. of KSS	Total no. of demonstrations	Total Area(Acre.) Progressive/Extn.	No. of KSS	Total no. of demonstrations	Total Area(ha.) Progressive/Extn.	No. of KSS	Total no. of demonstrations	Total Area(Acre.) Progressive/Extn.	No. of KSS	Total no. of demonstrations	Total Area(Acre.) Progressive/Extn.	No. of KSS	Total no. of demonstrations	Total Area(ha.) Progressive/Extn.	No. of KSS	Total no. of demonstrations	Total Area(Acre.) Progressive/Extn.
1	RC-CEL	6	4	93	10.75	1	20	1.6	1	20	1.6	-	-	-	-	-	-	-	-	-
2	RC-Chiplun	8	2	50	6.25	5	116	14.5	-	-	-	-	-	-	-	-	-	1	30	3.75
3	RC-Jawhar	20	2	39	3.025	-	-	-	-	-	-	14	227	18.77	-	-	-	4	65	5.10
4	Jiwhala	7	3	113	6.3	4	165	8.45	-	-	-	-	-	-	-	-	-	-	-	-
5	Gomukh	8	-	-	-	7	255	31.87	-	-	-	-	-	-	1	25	3.125	-	-	-
6	Matrumandir	5	2	35	2.72	-	-	-	-	-	-	-	-	-	3	60	3.75	-	-	-
7	Sakav	8	7	148	11.25	1	73	1.77	-	-	-	-	-	-	-	-	-	-	-	-
8	Parivartan	7	4	103	8.025	1	32	2.5	-	-	-	-	-	-	-	-	-	2	80	6.17
Total		69	24	581	48.32	19	661	60.7	1	20	1.6	14	227	18.77	4	85	6.875	7	175	15

COMPILE REPORT OF RABBI SEASON - Deccan Plateau

Sr. No.	Name of the organization	Total no. of KSS	Wheat			Ground nut			Bengal Gram			Lentil		
			No. of KSS	Total no. of demonstrations	Total Area(Acre.) Progressive/Extn.	No. of KSS	Total no. of demonstrations	Total Area(Acre.) Progressive/Extn.	No. of KSS	Total no. of demonstrations	Total Area(Acre.) Progressive/Extn.	No. of KSS	Total no. of demonstrations	Total Area(Acre.) Progressive/Extn.
1	SJSM	5	4	66	5.95	1	25	3.312	-	-	-	-	-	-
2	MPCC Trust	12	1	25	1.925	-	-	-	7	205	15.72	4	120	9.17
Total		17	5	91	7.87	1	25	3.312	7	205	15.72	4	120	9.17

Summary

Sr. No.	Name of the Crop	Total no. of KSS	Total no. of Demo.	Total Area(Acre.)
1	Wal	24	581	48.32
2	Cowpea	19	661	60.7
3	Green Gram	1	20	1.6
4	Bengal Gram	21	432	34.5
5	Horse Greem	4	85	6.87
6	Lentil	4	120	9.17
7	Ground nut	8	200	16.32
8	Wheat	5	91	7.87
Total		86	2190	185.35

RABBI





Land & Water Management

Farm Pond



Drip Irrigation



Spring Water



Land & Water Management



Natural Stream water collected through PVC - Pipes and Wooden Flakes

Progressive Farmers Training at SJSM Rammala, Satara



Training of Trainers at CEL Raigad



Exposure visit at Mandla(M.P.)







Crop & Area wise details Kharif 2012

Sr. No.	Name of the Organisation	Name of the crop	No. of Demonstrations	Total Area in Acre
1	RC-CEL	Tur, Nagali, Vari & Paddy	690	134.5
2	RC-Chiplun	Tur, Nagali & Paddy	402	41.75
3	RC-Jawhar	Tur, Nagali & Paddy	601	142.76
4	MPCC&Trust	Nagali& Paddy	198	22.365
5	Jiwhala	Tur, Nagali, Vari & Paddy	569	100.27
6	SJSM	Nagali & Tur	361	38.2
7	Gomukh	Nagali, Tur, Groundnut & Paddy	621	94.025
8	Matrumandir	Tur, Nagali	36	3.57
9	Sakav	Tur, Nagali & Paddy	95	10.5
10	Parivartan	Tur, Nagali & Paddy	406	56.12
	TOTAL		3979	644.06

COMPARATIVE STUDY OF DEMOS & AREA

SR.NO	NAME OF THE ORGANISATION	KHARIF 2011				RABBI 2011-12				KHARIF 2012			
		No. of KSS	Name of the crop	No. of Demos.	Area(Acre s)	No. of KSS	Name of the crop	No. of Demos.	Area(Acr es)	No. of KSS	Name of the crop	No. of Demos.	Area(Acre s)
1	RC- CEL Narangi Khopoli, Raigad	6	Tur & Nagali	139	10.1	6	Wal, Cowpea & Green gram	148	12.6	17	Tur, Nagali, Vari & Paddy	690	134.5
2	RC-Chiplun, Ratnagiri	9	Tur, Nagali & Paddy	326	46.07	8	Wal, Cowpea & Groundnut	171	21.37	12	Tur, Nagali & Paddy	402	41.75
3	RC- Jawhar, Thane	10	Tur & Nagali	111	30	20	Wal, Bengal gram & Groundnut	331	26.87	20	Tur, Nagali & Paddy	601	142.76
4	MPCCTRUST, Pune	11	Tur, Nagali & Paddy	229	17.1	12	Wheat, Bengal gram & Lentil	345	27.07	7	Nagali & Paddy	198	22.365
5	Jiwhala, Raigad	7	Tur & Nagali	143	14.43	7	Wal	298	14.75	26	Tur, Nagali, Vari & Paddy	569	100.27
6	SJSM, Satara	5	Tur & Nagali	107	13.61	5	Wheat & Groundnut	99	12.37	5	Nagali & Tur	361	38.2
7	Gomukh, Pune	6	Tur, Nagali & Groundnut	125	15.62	8	Cow pea & Lentil	280	35	22	Nagali, Tur, Groundnut & Paddy	621	94.025
8	Matrumandir, Ratnagiri	4	Tur, Nagali & Paddy	97	7.72	6	Wal & Horse gram	98	7.6	5	Tur, Nagali	36	3.57
9	Sakav, Raigad	7	Nagali & Paddy	50	4.2	8	Wal & Cow pea	218	9.75	7	Nagali & Paddy	95	10.5
10	Parivartan- Chiplun, Ratnagiri	7	Tur & Nagali	150	20.13	5	Wal & Cow pea	135	10.37	10	Tur, Nagali & Paddy	406	56.12
	TOTAL	72		1477	178.98	85		2123	177.75	131		3979	644.06

List of innovation points

Sr. No.	Particular	Current practices by farmers	Innovative Practices by project
1.	Field preparation	No field preparation practice followed	Field preparation with deep ploughing & FYM application. Also used green manures.
2.	Seed & Sowing	Sowed seed by broadcasting method, Spacing is not maintained. For preparation of seedlings rabbing practice was followed.	Line sowing or dibbling method with maintaining spacing according to crops. Instead of rabbing introduced raised bed nursery & mat nursery techniques for seedling preparation.
3.	Seed treatment	No any Seed treatment practiced by farmer	Fungicide like Thiram or Bavistin treatment for cereals & millets. For pulses used fungicide & rhizobium treatment. Also used azotobactor treatment for wheat crop.
4.	Variety	They used only local varieties which are available in their region.	Introduced improved varieties crop wise i.e. Nagali- Dapoli 1, Tur- Kanta & Maruti, G'nut – SB11 & TAG24 etc.
5.	Fertilizer application	Not all farmers used FYM & chemical fertilizers, & those who used it they are not applied it in proper quantity.	Application of fertilizer was done as per the dose recommended by university.
6.	Intercultural operations	Only follows hand weeding if possible.	Intercultural operations like weeding (hand or mechanical) . also done earthing up, gap filling, thinning etc.
7.	Water management	Most of the crops grows on residual soil moisture& farmers didn't give irrigation except ground nut & wheat.	Wherever irrigation required used lift irrigation, drip irrigation by using diesel engine, treadle pumps etc. Also provided storage tanks.
8.	Pest & disease management	At the preliminary stage no application of any pesticides. If severe attacked is observed then used chemical measures. Do not use IPM techniques.	Applied Integrated pest & disease management techniques to control diseases & pests on the crops.
9.	KSS Concept	Farmers were cultivated their land by taking individual decisions. They were not shared any of their experience among them. Not took any observations of the crops.	Farmers gathered together in the KSS. They are taking decisions in the group & start sharing their experiences to each others, so that they come to the common point. They also ready to take observations from their fields by doing the AESA.



Thank You!!