



Agroforestry Model in Permanent Fallow Lands – July 2025

SABAL Program – Eastern Ghats, Andhra Pradesh

Introduction:

This concept outlines the strategy for implementing an Intensive Agroforestry Model in the Eastern Ghats of Andhra Pradesh under the SABAL Program. The initiative aims to **enhance biodiversity, reduce land degradation, Nutritional Security** and **increase farmer income** by promoting the cultivation of diverse fruit-bearing plants and supporting the shift towards natural farming and organic practices.

The focus is on transforming barren lands/ Permanent Fallow Lands in identified micro-landscapes into productive agroforestry orchards, with interventions designed to improve soil health, crop diversity, and climate resilience through year-round cultivation.

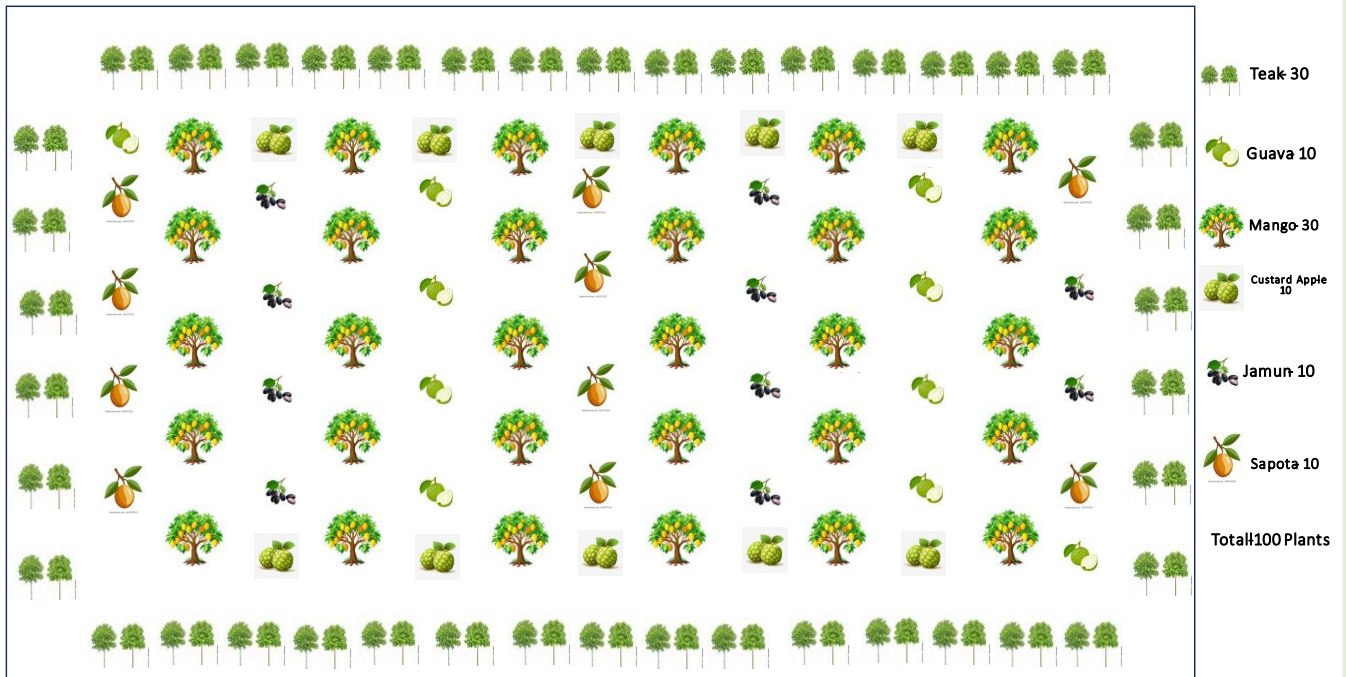
In consultation with the Horticulture Department, Paderu, a suitable plantation layout and species mix were finalized based on the agro-climatic conditions prevailing in the Alluri Sitharama Raju (ASR) District. Each beneficiary was provided with 100 plants comprising a combination of fruit and timber species to ensure diversified production and staggered harvesting seasons.

S.No	Name of the Plant	Variety	Units	Height in Feet	Age of the Plant	Size of the Bag	Harvesting Season
1	Mango	Banginapalle	30	3	1 Year	9*11	May-June
2	Sapota	Pala Sapota	10	3	1.6 Years	9*11	January-February & May-June
3	Jamun	Badolia (Jumbo)	10	3	1 Year	8*10	June-July
4	Guava	Thaiwan	10	3	1.6 Years	9*11	August-September & Nove-Dec
5	Custard Apple	Balanagar	10	3	1.6 Years	8*10	October- March
6	Teak	Stumps/Tuber	30	1			After 15 Years
			100				

Criteria followed in Beneficiary Identification

- Land must remain barren for the past 5–10 years
- Farmers must show willingness to adopt agroforestry model by taking VO resolution
- Plots should be near villages, foothill-located, and easily accessible
- Priority was given to small and marginal tribal farmers possessing suitable fallow land for long-term agroforestry development.
- Select 15 plots (of the 150) for gravity-based irrigation trials

Layout for the Agroforestry Model Plantation- 1 Acre



Key Practices Implemented Under the Agroforestry Model

To ensure successful establishment and long-term sustainability of the agroforestry plantations, the following activities were undertaken across all selected plots:

1. Recorded the GPS coordinates and land measurements of each beneficiary plot for monitoring and documentation purposes.
2. Conducted division-level training programs and field demonstrations to build farmers' capacities on agroforestry practices, plantation management, and natural farming techniques.
3. Established diversified agroforestry plantations by transplanting **100 trees per acre**
4. Farmers carried out pit digging and transplantation activities following the recommended plantation layout and spacing guidelines.
5. Applied 100 grams of Neem Cake per plant along with compost during transplantation to improve soil fertility, enhance root development, and reduce pest incidence.
6. Provided support structures such as sticks, basins, and fencing to protect young saplings and improve plant establishment.
7. Facilitated water management measures and ensured the availability of irrigation support, particularly during the summer season, to improve plant survival.

Note: The cost of planting material was borne by the project, while beneficiaries contributed towards local transportation and actively participated in plantation and maintenance activities.

Note: Supplied Lime (10) & Orange (10) instead of 30 Mangos in Pinakota & D Gonduru Landscapes as there were huge Mango trees existed. So divided Mango-10, Lime-10 & Orange-10

Recently, conducted a tree audit in the May 2026 by using the Digital Assistants through ODK in the Micro-Landscapes; The result is as follows;

S.No	Plant Name	No of Plants Supplied	Survival	Survival
1	Mango	2100	1520	72.38
2	Lime	1200	882	73.5
3	Orange	1200	854	71.17
4	Sapota	1500	997	66.47
5	Jamun	1500	1002	66.8
6	Guava	1500	1004	66.8
7	Custard Apple	1500	1019	68
8	Teak	4500	3524	78.3
		15000	10802	72.00%



- Diversified Plants Distribution to the Beneficiaries
- Demo training on Layout
- Transplantation Demo





Supporting Stick Arrangement



Dr.SunnySir Visited a Agroforestry Model Plot



Neem Cake Application while Transplantation



Supporting Stick Arrangement

Survival Study in June 2026



S.No	Landscape Name	Village Name	Farmer Name	Mango Survival	Lime Survival	Orange Survival	Sapota Survival	Jamun Survival	Guava Survival	Custard Apple Survival	Teak Survival
1	PKT	Korrapatthi	Dhusari .Chinalamma	6	8	9	7	8	8	6	24
2	PKT	Korrapatthi	Lingaboyina .Jamulamma	7	6	7	9	10	9	10	20
3	PKT	Korrapatthi	Bongija .Achamma	10	8	10	10	9	7	6	24
4	PKT	Korrapatthi	Lingaboyina .Laxmi	5	10	6	10	6	7	4	26
5	PKT	Korrapatthi	Bongija .Eswaramma	4	10	7	6	8	6	6	24
6	PKT	Korrapatthi	Dhusari .Achibabu	3	8	6	7	8	10	9	21
7	PKT	Korrapatthi	Boraboyina .Eswarao	5	10	6	8	10	10	8	22
8	PKT	Korrapatthi	Bongija .Devayya	8	7	8	7	6	5	7	23
9	PKT	Korrapatthi	Bhuri .Eswarao	7	5	10	4	6	8	7	23
10	PKT	Korrapatthi	Jammu .Manga	7	6	7	8	4	10	6	24
11	PKT	Velagalapadu	Pandhi .Achamma	7	8	7	4	5	6	7	23
12	PKT	Velagalapadu	Pandhi .Laxmi	6	10	6	8	7	8	9	21
13	PKT	Velagalapadu	Pandhi .Dhalamma	8	9	7	4	7	10	10	20
14	PKT	Velagalapadu	Pandhi .Ganagamma	7	10	6	8	10	10	10	20
15	PKT	Velagalapadu	Pandhi .Laxmi	5	7	10	5	8	9	6	24
16	PKT	Velagalapadu	Pandhi .Jamunna	6	9	5	7	6	10	10	20
17	PKT	Velagalapadu	Bongija .Devi	4	10	8	6	3	5	2	28
18	PKT	Velagalapadu	Thuriya .Bhemalamma	6	6	6	7	10	9	4	26
19	PKT	Velagalapadu	Pathaboyina .Mutyalu	9	10	10	6	7	8	6	24
20	PKT	Velagalapadu	Pandhi .Sanyasamma	5	6	7	2	4	2	5	25
21	PKT	Armengaruvu	Madhela .Achamma	2	6	8	8	5	8	6	24
22	PKT	Armengaruvu	Diraboyina .Jamulamma	5	6	5	4	5	10	8	22
23	PKT	Armengaruvu	Pandhi .Malamma	7	6	3	9	10	10	8	22
24	PKT	Armengaruvu	Pandhi .Gangamma	10	5	4	9	4	9	7	23
25	PKT	Armengaruvu	Pandhi .Gadamma	6	9	8	6	8	10	10	20
26	PKT	Pinakota	Dhuriya .Anjitha	10	10	7	10	8	6	9	21
27	PKT	Pinakota	Sonabariki .Kasulamma	7	6	9	10	10	4	8	22
28	PKT	Pinakota	Jakiri .Muthayalamma	2	6	4	7	5	10	10	20
29	PKT	Pinakota	Galli .Demudu	8	7	7	9	6	7	5	25
30	PKT	Pinakota	Joge .Ammaji	4	10	7	9	4	8	8	22
31	PKT	Pinakota	Padiseti .Shanthi	6	7	9	8	8	7	8	22
32	PKT	Pinakota	Vurama .Jaganadham	8	9	10	6	8	9	5	25
33	PKT	Pinakota	Kurupa .Appalakonda	9	9	7	10	10	8	6	24
34	PKT	Pinakota	Ketha .Gangathalli	4	6	5	10	8	9	6	24
35	PKT	Pinakota	Dhepari .Majji kumari	10	8	6	9	8	7	5	25
36	PKT	Pinakota	Pathaboyina .Vinodh kumar	2	6	7	9	6	4	8	22
37	PKT	Pinakota	Kuda .Srinu	6	8	9	7	8	8	8	22
38	PKT	Pinakota	Korra .Bairava murthi	7	8	9	10	7	8	9	21
39	PKT	Pinakota	Sonabariki .Sanyasarao	5	8	8	9	10	6	8	22
40	PKT	Pinakota	Dhuru .Ravanamurthi	6	7	8	9	10	8	8	22
41	PKT	Pedakota	Siragam .Kasulamma	7	8	9	10	9	5	8	22
42	PKT	Pedakota	Siragam .Anapurna devi	6	7	8	6	7	9	9	21
43	PKT	Pedakota	Gogam .Kanayamma	10	8	7	8	8	10	10	20
44	PKT	Pedakota	Soba .Paravathamma	7	10	7	10	10	6	5	25
45	PKT	Pedakota	Jamparangi .Bhavani	6	7	5	8	7	9	8	22
46	PKT	Pedakota	Bhoodha .Varalaxmi	8	7	10	6	10	10	8	22
47	PKT	Pedakota	Dhuru .Pentamma	4	6	8	7	10	7	10	20
48	PKT	Pedakota	Dhombangi .Bhudevi	6	7	8	10	8	9	5	25
49	PKT	Pedakota	Jamparangi .Laxmi	5	8	7	5	8	9	10	20

50	PKT	Pedakota	Siragam .Varalamma	8	7	4	7	8	6	7	23
51	PKT	Pedakota	Gongam .Devudamma	5	7	8	9	6	7	4	26
52	PKT	Pedakota	Siragam .Laxmi	6	7	8	9	3	10	8	22
53	PKT	Regualapalem	Konepu .Pedhalaxmi	7	8	10	6	2	8	9	21
54	PKT	Regualapalem	Kuripela .Ravanamma	6	8	9	7	10	6	10	20
55	PKT	Regualapalem	Gemeli .Puspalatha	2	6	7	9	6	4	7	23
56	PKT	Regualapalem	Pathuni .Anuradha	8	9	10	10	9	7	8	22
57	PKT	Kondibakota	Kolori .Rajulamma	5	6	8	4	7	10	9	21
58	PKT	Kondibakota	Sare .Kasulamma	8	9	10	10	7	9	6	24
59	PKT	Kondibakota	Gunta .Laxmi	10	8	10	10	9	6	10	20
60	PKT	Kondibakota	Gunta .Subbayamma	7	8	9	6	10	10	8	22
61	PKT	Kondibakota	Golori .Rajeswari	5	10	10	8	4	7	9	21
62	PKT	Kondibakota	Konthela .Laxmi	2	6	5	8	6	8	10	20
63	PKT	Thamuttu	Konepu .Pavani	7	8	8	7	6	8	3	27
64	PKT	Thamuttu	Sivari .Simhachalam	4	7	10	10	8	5	6	24
65	PKT	Thamuttu	Somela .Sanyasamma	10	10	9	6	7	9	8	22
66	PKT	Thamuttu	Majji .Somulamma	2	9	8	7	8	6	9	21
67	PKT	Thamuttu	Sidhari .Gangamma	6	10	10	9	5	9	8	22
68	PKT	Thamuttu	Konepu .Kanayya	7	10	8	8	7	6	9	21
69	PKT	Thamuttu	Sidari .Laxmi	5	9	10	8	10	9	10	20
70	PKT	Thamuttu	Konepu .Sarojini	7	8	9	10	10	8	10	20
71	PKT	Thamuttu	Somela .Sathyavathi	6	8	9	9	8	7	6	24
72	PKT	Thamuttu	Konepu .Ramba	7	10	10	8	5	9	8	22
73	PKT	Thamuttu	Konepu .Kasulamma	10	9	10	10	9	7	10	20
74	PKT	Thamuttu	Pangi .Laxmi	4	10	7	9	5	8	9	21
75	PKT	Thamuttu	Badnaini .Pottamma	2	10	10	9	10	10	6	24
76	PKT	Thamuttu	Pangi .Pentamma	6	10	9	10	10	8	4	26
77	PKT	Thamuttu	Madhela .Rathana kumari	10	7	8	5	8	7	8	22
78	PKT	Thamuttu	Sidhari .Devudamma	3	6	8	7	6	9	7	23
79	PKT	Thamuttu	Sidhari .Simhachalam	7	9	10	10	8	6	4	26
80	PKT	Thamuttu	Konepu .Laxmi .	6	7	9	10	8	9	10	20
81	DGR	Sukuruputtu	Kuda Subadramma	8	6	7	5	8	6	8	26
82	DGR	Sukuruputtu	Kuda Kondababu	9	5	4	3	9	7	6	28
83	DGR	Kokkellu	Sathaka Satthibabu	7	9	5	5	6	5	7	26
84	DGR	Kokkellu	Badnayani Visweswararao	8	7	6	8	9	5	6	12
85	DGR	Sukuruputtu	Kuda Balaraju	5	6	5	6	8	5	7	18
86	DGR	Sukuruputtu	Sathaka Laxmayya	6	7	4	4	6	7	8	19
87	DGR	Sukuruputtu	Kuda Panthulu	8	6	7	5	8	6	7	15
88	DGR	Sukuruputtu	Kadeli Yendanna	7	8	5	4	7	7	8	18
89	DGR	Sukuruputtu	Kuda Somanna	6	7	5	6	5	8	9	21
90	DGR	Sukuruputtu	Sathaka Balaraju	7	6	5	6	6	7	8	23
91	DGR	Kokkellu	Sathaka Somanna	7	5	7	4	6	6	9	18
92	DGR	Gurrampanuku	Kuda Simhachalama	8	7	6	6	8	5	6	22
93	DGR	Gurrampanuku	Kuda Kamaraju	7	6	5	5	7	6	8	26
94	DGR	Karakaputtu	Surra Eswaramma	6	5	6	5	7	6	8	28
95	DGR	Karakaputtu	Surra Bonjubabu	6	7	6	6	8	6	8	26
96	DGR	Karakaputtu	Surra Chittibabu	7	6	6	5	7	6	7	29

97	DGR	Karakaputtu	Kuda Kondababu	7	6	6	5	8	6	6	26
98	DGR	Karakaputtu	Badnayanai Balamani	7	6	5	6	7	6	5	24
99	DGR	Karakaputtu	Kuda Nagaraju	6	7	5	6	6	5	5	27
100	DGR	Karakaputtu	Surra Ramya	7	6	5	5	6	5	7	26
101	DGR	Karakaputtu	Kuda Sandhya	8	7	6	6	7	4	7	23
102	DGR	Karakaputtu	Kuda Midhinamma	6	5	5	7	4	4	6	22
103	DGR	Karakaputtu	Surra Ramalaxmi	5	6	6	5	7	6	6	26
104	DGR	Karakaputtu	Kuda Nageswararao	8	6	5	6	7	6	5	25
105	DGR	Sukuruputtu	Sathaka Chiranjeevi	7	6	5	7	6	5	5	26
106	DGR	Sukuruputtu	Sathaka Sobhan	6	5	6	6	7	5	6	25
107	DGR	Sukuruputtu	Kadeli Kasulamma	7	6	5	5	7	6	5	24
108	DGR	D Gonduru	Kadeli Kondamma	6	5	5	5	6	5	5	26
109	DGR	D Gonduru	Dippala Laxmi	8	6	5	5	6	4	7	28
110	DGR	D Gonduru	Chikati Kondamma	8	7	6	6	5	6	8	28
111	DGR	D Gonduru	Bonkula Satyavathi	6	7	5	6	5	5	6	26
112	DGR	D Gonduru	Ch Ramesh	10	10	10	5	5	6	6	27
113	DGR	D Gonduru	Chikati Krushnarao	6	5	5	6	8	5	5	26
114	DGR	D Gonduru	Deesari Krushnarao	8	6	6	5	5	5	8	28
115	DGR	D Gonduru	Dippala Gandhi	5	6	5	6	7	5	7	26
116	DGR	D Gonduru	Sathaka Rambabu	7	5	6	5	5	6	6	28
117	DGR	D Gonduru	Dippala Chinnalamma	6	5	6	7	8	6	5	28
118	DGR	D Gonduru	Dippala Gangamma	5	6	6	5	7	5	5	26
119	DGR	Ladaputtu	Badnayani Sombabu	5	6	7	4	5	5	6	22
120	DGR	E Kotturu	Mudili Appalakondababu	6	5	7	5	5	6	7	26
121	MNP	G.Nittaputtu	Gemmel.Subhadramma	24	0	0	4	5	5	5	23
122	MNP	G.Nittaputtu	Gemmel.Raghuramnaidu	25	0	0	6	5	4	5	26
123	MNP	G.Nittaputtu	Koda.Chinnammi	26	0	0	5	6	4	6	24
124	MNP	G.Nittaputtu	Koda.Chittibabu	24	0	0	6	5	5	4	25
125	MNP	G.Nittaputtu	Koda.Krishnarao	24	0	0	4	5	4	5	26
126	MNP	G.Nittaputtu	Boya.Dillidora	26	0	0	4	5	6	6	25
127	MNP	G.Nittaputtu	Boya.Varalaxmi	26	0	0	5	5	5	5	24
128	MNP	G.Nittaputtu	Korabu.Chandramma	27	0	0	5	4	5	4	26
129	MNP	G.Nittaputtu	Katari.Chittinaidu	26	0	0	6	5	4	4	24
130	MNP	Nimmaveedhi	Koda.Sudhan	24	0	0	5	4	5	6	26
131	MNP	Nimmaveedhi	Koda.Linganna	23	0	0	6	5	4	6	25
132	MNP	Nimmaveedhi	Panpa.Ramakrishna	24	0	0	5	4	5	6	24
133	MNP	Nimmaveedhi	Koda.Purusotham	26	0	0	6	4	6	4	26
134	MNP	Nimmaveedhi	Koda.Bujjibabu	25	0	0	5	4	6	6	25
135	MNP	Nimmaveedhi	Koda.Kameswarao	24	0	0	4	5	5	5	24
136	MNP	Nimmaveedhi	Koda.Jaganadarao	26	0	0	6	4	5	6	25
137	MNP	Nimmaveedhi	Bonangi.Ramesh	25	0	0	6	6	4	4	26
138	MNP	Porlu	Kota.Sudhakar	24	0	0	5	5	5	4	25
139	MNP	Porlu	Kota.Chittibabu	26	0	0	6	5	5	6	24
140	MNP	Porlu	Kota.Sankarayya	24	0	0	4	5	7	7	26
141	MNP	Porlu	Kota.Chinnakondababu	25	0	0	6	5	6	4	27
142	MNP	Porlu	Mathe.Chinnakondababu	24	0	0	4	4	5	5	26
143	MNP	Porlu	Kota.Anilkumar	26	0	0	5	6	7	5	25

144	MNP	Porlu	Boyini.Thawdayya	25	0	0	4	6	5	5	24
145	MNP	Porlu	Kota.Konababu	26	0	0	6	5	6	4	25
146	MNP	Porlu	Kota.Appalakondababu	27	0	0	4	4	5	6	26
147	MNP	Porlu	Kota.Matyaraju	25	0	0	5	6	6	5	24
148	MNP	Porlu	Pangi.Panduraju	24	0	0	5	6	5	4	24
149	MNP	Porlu	Sageni.Baburao	26	0	0	6	4	5	6	25
150	MNP	Porlu	Sageni.Krishnarao	25	0	0	6	4	5	6	26
				1520	882	854	997	1002	1004	1019	3524

Conclusion

The Intensive Agroforestry Model implemented under the SABAL Program has demonstrated encouraging outcomes in converting permanent fallow lands into productive and ecologically sustainable farming systems across the Eastern Ghats region of Andhra Pradesh. Through the establishment of diversified fruit and timber-based plantations, the intervention has enhanced the productive use of degraded lands while promoting biodiversity conservation, climate resilience, and long-term livelihood security for tribal farmers.

The tree audit conducted in May 2026 revealed an overall survival rate of **72.0%**, with **10,802 plants surviving out of 15,000 plants supplied** across the four micro-landscapes. Among the species, Teak recorded the highest survival rate (78.3%), followed by Lime (73.5%) and Mango (72.38%). The survival percentages indicate that the majority of beneficiaries have effectively adopted the recommended plantation and maintenance practices despite challenges such as prolonged dry spells, water scarcity, grazing pressure, and difficult terrain conditions.

The successful establishment of these plantations reflects the effectiveness of the beneficiary selection process, community participation through Village Organization resolutions, technical guidance from the Horticulture Department, capacity-building efforts, and continuous field support provided by the SABAL team. The contribution of beneficiaries towards transportation, pit preparation, watering, and protection measures has further strengthened ownership and sustainability of the intervention.

Moving forward, the focus should be on gap filling of mortality plants, strengthening irrigation support in critical locations, promoting natural farming practices, and conducting periodic monitoring to ensure healthy plant growth and orchard development. With continued support and proper maintenance, these agroforestry plots are expected to improve household nutrition, generate sustainable income, enhance carbon sequestration, and serve as demonstration models for large-scale restoration of permanent fallow lands across the Eastern Ghats landscape.

Overall, the intervention has successfully laid the foundation for transforming unproductive lands into resilient agroforestry systems that contribute to ecological restoration, climate adaptation, and improved livelihoods for tribal communities.