

MAJOR ACTIVITIES

- Teaching: UG and PG level
- Research: Different aspects of Silviculture (Nursery, Plantation) and Agroforestry
- Extension activities: Krishi Mahotsava, Vanamahotsava, and interaction with farmers and imparting training on different aspects of forestry as well as agroforestry

FACILITIES:

1. **Arboretum, Biodiversity Park, Instructional and Research Farm:** An Arboretum of around 150 species from South Gujarat is established and the trees are around 20 years of age. Biodiversity park comprised of 170 species of plants. For day to day teaching of forestry it is very useful. An evaluation trial of 16 species from South Gujarat is also undertaken on the Instructional farm.
2. **Laboratory & Instrumentation Centre:** Different instruments like Microscope, Tree Calliper, Digital calliper, Ravi Altimeter & Multimeter, Relaskop, GRS densitometer, Electronic clinometers, TruPulse range finder, Bark gauge, Increment borer, Seed germinator, Silva clinometers, Penta-prism, Muffle furnace, Quartz distillation unit, Kjedal distillation unit, Electric balance, Hot air oven, Infra Red moisture meter, Digital moisture meter, Spectrophotometer, Chlorophyll content meter, Tree canopy analyzer, Leaf area meter, Dendrometer, Vertex Laser Hypsometer, Digitech Professional Calliper and with green gater eyes, Tree Canopy Analyser and other instruments are available.

EDUCATION

COURSES OFFERED AT UG LEVEL

Course Code	Course Title	Credits
SAF 1.1	Introduction to Forestry	2(2+0)
SAF 1.2	Introduction to Agronomy and Horticulture	3(2+1)
SAF 2.3	Principles of Silviculture	3(2+1)
SAF 3.4	Principles of Agroforestry	3(2+1)
SAF 3.5	Forest Mensuration	3(2+1)
SAF 3.6	Rangeland and livestock management	2(1+1)
SAF 4.7	Forest Inventory and Yield Prediction	2(1+1)
SAF 4.8	Silviculture of Indian Trees	3(2+1)
SAF 5.9	Practices of Silviculture	3(2+1)
SAF 6.10	Forest Extension & Community Forestry	3(2+1)
SAF 6.11	Recreation & Urban Forestry	2(1+1)
SAF 6.12	Plantation Forestry	3(2+1)
SAF 8.13	Agroforestry Systems and Management	2(1+1)

COURSES OFFERED AT PG LEVEL

COURSE NUMBER	TITLE OF THE COURSE	CREDITS
M. Sc. FORESTRY		
CORE COURSES		
FOR 501	Silviculture	2 (2+0)
FOR 502	Forest Biometry	2 (1+1)
FOR 503	Forest Management	2 (2+0)
FOR 505	Forest Ecology and Biodiversity Conservation	3 (2+1)
FOR 508	Forest Policy, Laws and International Conventions	2 (2+0)
FOR 510	Forests and People	2 (2+0)
SPECIALIZATION IN SILVICULTURE & AGROFORESTRY		
SAF 521	AGROFORESTRY SYSTEMS	3(2+1)
SAF 522	SOIL AND WATER MANAGEMENT IN AGROFORESTRY	2(1+1)
SAF 523	CROPS AND ANIMALS PRODUCTION MANAGEMENT IN AGROFORESTRY	3(2+1)
SAF 524	FRUIT PLANTS, TREES AND SHRUBS FOR AGROFORESTRY	3(2+1)
SAF 525	ECONOMICS OF AGROFORESTRY SYSTEMS	3(2+1)
SAF 526	RANGELAND AND PASTURE MANAGEMENT	2(2+0)
SAF 527	SEED COLLECTION, STORAGE AND TESTING	3(2+1)
SAF 528	MODERN NURSERY TECHNOLOGY	2(1+1)
SAF 529	NUTRIENT AND WEED MANAGEMENT IN NURSERY AND PLANTATION	3(2+1)
SAF 530	MANAGEMENT OF INSECT-PESTS AND DISEASES	2(1+1)
SAF 531	ENERGY PLANTATIONS AND BIO-FUELS	2(1+1)
SAF 532	PLANTATION FORESTRY	3(2+1)

CORE COURSES

FOR 601	QUANTITATIVE SILVICULTURE	3(2+1)
FOR 602	ADVANCES IN TREE IMPROVEMENT	3(2+1)
FOR 603	ADVANCES IN WOOD AND NON-WOOD FOREST PRODUCTS	3(3+0)
FOR 604	ADVANCES IN ECONOMIC ANALYSIS IN FORESTRY	2(2+0)
FOR 605	AGROFORESTRY SYSTEMS AND MANAGEMENT	2(1+1)
FOR 606	FORESTRY INTERVENTIONS FOR ENVIRONMENT AMELIORATION	2(1+1)
FOR. 691	DOCTORAL SEMINAR I	1(1+0)
FOR. 692	DOCTORAL SEMINAR II	1(1+0)
FOR. 699	DOCTORAL RESEARCH	45(0+45)

SPECIALIZATION IN SILVICULTURE & AGROFORESTRY

SAF 621	ADVANCES IN SILVICULTURE	2(1+1)
SAF 622	PLANTATION FOREST PRODUCTIVITY	2(1+1)
SAF 623	FOREST REGENERATION	2(1+1)
SAF 624	ECOLOGY OF FOREST FARMING	2(2+0)
SAF 625	ADVANCES IN FOREST SOIL MANAGEMENT	3(2+1)
SAF 626	LAND USE PLANNING AND WATERSHED MANAGEMENT	2(2+0)
SAF 627	FOREST SEED MANAGEMENT	2(1+1)
SAF 628	ADVANCES IN AGROFORESTRY RESEARCH AND MANAGEMENT	2(2+0)
SAF 629	PRODUCTIVITY OF AGROFORESTRY SYSTEMS	3(2+1)
SAF 630	LAND USE PLANNING AND WATERSHED MANAGEMENT	2(2+0)
SAF 631	ADVANCED AGROFORESTRY MANAGEMENT ANALYSES	3(2+1)
SAF 632	ADVANCES IN SOIL AND WATER MANAGEMENT IN AGROFORESTRY	3(2+1)

RESEARCH

A. RECOMMENDATIONS

1. **Evaluation of different forest species:** Jadeja, D. B.; Patel, N. B; Kukadia, M. U.; Vashi, B. G.; Patil, N. S.; Patel, D. P; Parmar M. R and Prajapati, V. M.

Recommendation: The tree growers and farmers of South Gujarat heavy rainfall zone-I, Southern moist mixed deciduous forest-3B/C2 and agricultural situation-III are advised to grow block plantations of *Albizzia procera* (Kilai, White Siris) or *Terminalia arjuna* (Arjun Sadad) at 4 m x 4 m spacing and long rotation (20 years) for better volume, improvement of soil pH, EC, Organic carbon, N, P, K and higher economic return (BCR after 20 years = 44.93 and 36.45 respectively). [Agresco-2011].

2. **To study the growth and yield of *Acacia mangium* in South Gujarat:** Jadeja, D. B.; Patel, N. B; Kukadia, M. U.; Vashi, B. G.; Patel, M. M.; Patel, D. P; Parmar M. R and Prajapati, V. M.

Recommendation: The tree growers and farmers of South Gujarat heavy rainfall zone-1, Southern moist mixed deciduous forest-3B/C2 and agricultural situation-III are advised to grow *Acacia mangium* (Mangium) in block plantation at the spacing of 2.5 m x 2.5 m for higher girth, crown diameter, number of branches and economic return (BCR after 5 year 13.99). [Agresco-2011].

3. **Growth and yield of *Tannia* (*Xanthosoma sagittifolium* L. Schott.) as affected by different pruning intensities of tree crops-** Sandip. M. Patel *et al.*

Recommendation-The farmers of South Gujarat heavy rainfall zone (AES- III) growing *Terminalia arjuna*- Arjun Sadad, *Mitragyna parvifolia* -Kalam and *Adina cordifolia*- Haldu at 10 X 2.5 m spacing and growing *Tannia* as an intercrop are advised to remove side branches up to 1/3 height of trees from ground level which is helpful in maximum utilization of land with additional income. [Agresco-2015]

4. Collection and evaluation of *Mucuna* germplasm from South Gujarat for L-DOPA and protein content - N.S. Thakur *et al.*
Recommendation-For higher L-DOPA (L-3, 4-dihydroxyphenylalanine) it is advisable to collect *Mucuna* from Valsad, Chikhali, Budhakeshwar village (Navsari Mahuva road), Bardoli and Vyara. Breeders willing to enhance L-DOPA content in *Mucuna pruriens* may incorporate accessions namely 29, 10, 14 and 13 in breeding stock. [Agresco-2015]
5. Rapid multiplication of *Dendrocalamus strictus* Nees. through in vitro regeneration techniques from juvenile explants- Jayesh Pathak *et al.*
Recommendation- It is recommend to scientific community and tissue culture industries involved bamboo tissue culture that to get rapid multiplication of *Dendrocalamus srtictus* L. through in vitro regeneration from juvenile explants using tissue culture technique for large scale multiplication of the plantlets in which farmers can get true to type plants with all the advantages of vegetative propagation (clonal propagation). it is recommended to use auxiliary bud as explants source and absolute alcohol (100%) for 30 Sec + mercuric chloride (0.1%) for 4 min. for contamination control and maximum establishment. Whereas, for culture establishment and for shoot multiplication it is advise to use MS liquid media with 2.0 mg/lit BAP. However, for rooting it is advice to use MS + 1.5mg/l NAA + 3mg/l IBA and for acclimatization it is advice to use FYM+ Soil + Cocopeat (1:1:1). [Agresco-2015]
6. Rapid multiplication of *Bamboosa vulgaris* through in vitro regeneration techniques from juvenile explants- Jayesh Pathak *et al.*
Recommendation- It is recommend to scientific community and tissue culture industries involved bamboo tissue culture that to get rapid multiplication of *Bamboosa vulgaris* L. through in vitro regeneration from juvenile explants using tissue culture technique to use auxiliary bud as explants source and absolute alcohol (100%) for 30 Sec + mercuric chloride (0.1%) for 4 min. for contamination control and maximum establishment. Whereas, for shoot multiplication, culture established on simple MS media followed MS + 1mg/l BAP + 0.25 Kin. However, for rooting it is advice to use MS + 20mg/l IBA which gives highest rooting percentage and for acclimatization FYM + Soil + Cocopeat (1:1:1). [Agresco-2015]

7. Performance of turmeric (*Curcuma longa*) grown as an intercrop under different tree species in South Gujarat conditions:

Mahesh K. Desai et al.

Recommendation: The farmers of South Gujarat heavy rainfall zone - I (AES- III) growing *Mitragyna parvifolia* (Kalam), *Adina cordifolia* (Haldu) and *Gmelina arborea* (Sevan) at 10 X 2.5 m spacing are advised to grow Turmeric Variety - Sugandham planted at 30 x 15 cm spacing 55 having 19 rows as an intercrop in plantation of *Gmelina arborea* (Sevan) for additional income. [Agresco-2016]

8. Effect of different tree species leaf leachate on germination and seedling growth of some vegetable crops:

Mukesh R. Parmar et al.

Recommendation: The leaf leachates of various tree species reduced germination and growth parameters of different vegetable crops in laboratory as well as in nursery condition. The percentage of inhibition was maximum in Eucalyptus as compared to other tree species leaf leachates in laboratory as well as in nursery condition. Moreover the percentage of inhibition was minimum in Teak. The different vegetable crops have different mode of inhibition during the study. In both the growing conditions Brinjal (*Solanum melongena*), Okra (*Abelmoschus esculentus*) and Tomato (*Lycopersicon esculentum*) performed better for all parameters under study for the respective years of investigation while, V5: Chilli (*Capsicum anum*) performed poor for all the parameters under study. In case of leachates concentration, all the parameters under study were decreased as the concentration of leaf leachates increased in both the growing conditions. This response showed concentration dependent phenomenon as highest inhibitory effects were observed with 20 % leaf leachate concentration of all the tree species. [Agresco-2016]

9. Evaluation of carbon sequestration potential of different bamboo species in South Gujarat: Dr. Jayesh Pathak et al

Recommendation: The farmers of South Gujarat heavy rainfall zone-I are advised to grow plantation of *Bambusa vulgaris* (green) for higher biomass and carbon sequestration. The thin walled and long internode bamboo species *Schizostachym pergracile* and *Schizostachym dullooa* are recommended for kite industry [Agresco-2017]

10. Growth and productivity of *Melia composita* Willd. under different spatial geometries:

Dr. N.S. Thakur *et al*

Recommendation: Farmers of South Gujarat heavy rain fall Zone-I are recommended to grow *M. composita* Syn. *M. dubia* (Malabar neem, Burma neem, nimbaro) at 2 x 2 m spacing for getting higher wood biomass and economic returns. [Agresco-2018]

11. Malabar Neem: Gujarat Navsari Melia Dubia 1 (GNMD-1)

N.S. Thakur *et al*

Recommendation: Malabar Neem (*Melia dubia* Cav.) tree variety GNMD-1 has performed very well in South Gujarat. After four years, the GNMD-1 has attained 10.90 m height with girth at breast height (GBH) of 49.50 cm. The volume at four years of age has been estimated 224.41 m³ /ha with good biomass of 103.23 tonnes/ha. It has clear bole up to 3.70 m free from knots. Its bole is round and clean. The GNMD-1 showed superiority of 9.0, 105.6 and 47.3 % in height; 7.84, 35.6 and 17.9 % in girth at breast height, and 26.77, 278.24 and 104.60 % in volume and biomass, over checks Kshitiz (NC), Ritu (NC) and Bahumukhi (NC), respectively. No incidence of insect pest was observed in GNMD-1. The variety GNMD-1 is recommended for farmers of South Gujarat for plantation. [Agresco-2018]

12. Progeny trials of *Melia composita* Willd. : N. S. Thakur *et al*.

Recommendation: Farmers of South Gujarat, heavy rain fall Zone-I, are recommended to grow plantation of *M. composita* Syn. *M. dubia* (Malabar neem, Burma neem, nimbaro) using seed source from families GJ (NAU-9) for getting higher biomass and economic returns. [Agresco-2018]

13. Seed germination and seedling emergence study in Dev shower (*Bombax insigne*): **Vijay M. Prajapati *et al.*** **Recommendation:** Farmers, conservationists and nursery entrepreneurs are recommended to treat *Bombax insigne* (Dev shower) seeds with 50 ppm GA₃ for 15 min before sowing for better germination in order to propagate and conserve this endangered tree. [Agresco-2019]

14. Performance of cucurbitaceous vegetable crops under Teak based Silvi-Horticultural system in South Gujarat: **Sandip. M. Patel *et al.***

Recommendation: Farmers of south Gujarat heavy rainfall zone-I, AES-III, growing teak at 3m X 2m spacing are advised to grow Smooth gourd and Bottle gourd (Cucurbitaceous vegetable crop) as an intercrop in Rabi season under teak based silvi-horticultural system to get additional income as compared to sole plantation of mature teak crop. [Agresco-2019]

15. Development of volumetric equation for Teak (*Tectona grandis* Linn. f.) in South Gujarat:

L. K. Behera *et al.*

Recommendation : Teak growers and wood merchants are recommended to use volumetric equation, $V = 0.00004D^2H + 0.014$ and local volume table (given below) for estimation of volume of standing teak trees grown under plantation and natural forest of South Gujarat (D = Diameter at breast height; H = Tree height). [Agresco-2019]

Table showing local volume table developed for teak trees grown in south Gujarat condition

		Height (m)													
		5	8	11	14	17	20	23	26	29	32	35	38	41	42
Diameter at breast height (cm)	10	0.055	0.073	0.092	0.111	0.130	0.148								
	15	0.094	0.130	0.167	0.204	0.241	0.277								
	20		0.206	0.267	0.328	0.389	0.449	0.510							
	25		0.301	0.392	0.483	0.574	0.664	0.755	0.846						
	30		0.415	0.542	0.669	0.796	0.922	1.049	1.176						
	35		0.548	0.717	0.886	1.055	1.223	1.392	1.561	1.730	1.898				
	40		0.700	0.917	1.134	1.351	1.567	1.784	2.001	2.218	2.434	2.651			
	45			1.142	1.413	1.684	1.954	2.225	2.496	2.767	3.037	3.308			
	50			1.392	1.723	2.054	2.384	2.715	3.046	3.377	3.707	4.038	4.369		
	55			1.667	2.064	2.461	2.857	3.254	3.651	4.048	4.444	4.841	5.238		
	60				2.436	2.905	3.373	3.842	4.311	4.780	5.248	5.717	6.186		
	65				2.839	3.386	3.932	4.479	5.026	5.573	6.119	6.666	7.213	7.760	8.306
	70					3.904	4.534	5.165	5.796	6.427	7.057	7.688	8.319	8.950	9.580
	75					4.459	5.179	5.900	6.621	7.342	8.062	8.783	9.504	10.225	10.945
80							6.684	7.501	8.318	9.134	9.951	10.768	11.585	12.401	

16. Study of Carbon Sequestration Potential of Important Tree Species: L. K. Behera *et al.*

Recommendation : Farmers are recommended to grow tree species such as *Casuarina*, *Eucalyptus* and *Bijasal* for obtaining higher biomass and carbon sequestration under South Gujarat. [Agresco-2019]

17. Effect of gibberellic acid (GA₃) and nitrogen on the growth of *Tectona grandis* Linn. f. for production of stumps for planting: Dr. L. K. Behera

Recommendation : The farmers and nursery entrepreneurs of South Gujarat are recommended to apply 100 mg N/kg soil (225 kg N/ha) in four equal splits *i.e.* at the time of sowing, 60, 120 and 180 days after sowing to produce the quality teak seedlings for stump preparation within 7-8 months. [Agresco-2019]

18. Integrated nutrient management of Brinjal (*Solanum melongena* L.) under Teak (*Tectona grandis* L.) based Silvi-horticultural system in South Gujarat region: M. B. Tandel *et al.*

Recommendation: Farmers of South Gujarat growing Brinjal (*Solanum melongena* L.) var. GNRB-1 as an intercrop under Teak having spacing of 3 x 2 m are recommended to apply 100 % RDF (100:50:50 NPK/ha) or 75 % RDN + 25 % Neem cake on the basis of cultivated area (6670 m²) in teak based silvi-horticultural system to get additional income and higher production. It also increased fertility status of soil as well as growth of teak. [Agresco-2021]

19. Annual biomass, volume and carbon stock estimation of *Melia dubia* Cav. through destructive method: N. S. Thakur et al.

Recommendation: Farmers of South Gujarat, cultivating Malabar Neem, and forester and timber traders are recommended to use the below given table to estimate fresh biomass and volume of standing Malabar Neem tree. [Agresco-2021]

Table - Estimated *M. dubia* fresh biomass (kg/tree) based on regression equations

		DBH (cm)													
		4	5	6	7	8	9	10	11	12	13	14	15	16	17
Tree height (m)	4	5.75	8.02	10.79	14.07										
	5	6.76	9.60	13.06	17.16										
	6				11.94	16.44	21.54	27.24	33.54						
	7				14.39	19.64	25.59	32.24	39.59	47.64					
	8					22.84	26.78	31.19	36.06	41.40	47.20	53.46			
	9					24.69	29.13	34.09	39.57	45.57	52.10	59.14	66.71		
	10							36.99	43.08	49.75	57.00	64.83	73.24	82.23	
	11										53.92	61.90	70.51	79.76	89.65

Table - Estimated *M. dubia* over bark volume (m³/tree) based on regression equation

		DBH (cm)													
		4	5	6	7	8	9	10	11	12	13	14	15	16	17
Tree height (m)	4	0.005	0.006	0.007	0.009										
	5	0.005	0.007	0.008	0.010										
	6				0.012	0.015	0.018	0.021	0.025						
	7				0.013	0.016	0.020	0.024	0.028	0.033					
	8					0.018	0.022	0.027	0.032	0.038	0.044	0.050			
	9					0.020	0.025	0.030	0.036	0.042	0.049	0.056	0.064		
	10							0.033	0.039	0.046	0.054	0.062	0.071	0.080	
	11										0.051	0.059	0.068	0.077	0.088

DBH=Di
ameter
at
breast
height

20. Development of local volume table for Saru (*Casuarina equisetifolia*): Rajesh P. Gunaga et al.

Recommendation: It is recommended that farmers, foresters and wood merchants of South Gujarat can use volumetric equations, $V_1 = 0.00005 \times HD^2 + 0.0196$ (trees with DBH of 10 to 45 cm) and volumetric equation, $V_2 = 0.00003 \times HD^2 + 0.6874$ (trees with DBH of 45 to 70 cm) and below given local volume table for estimation of volume of standing trees of *Casuarina equisetifolia*. [Agresco-2021]

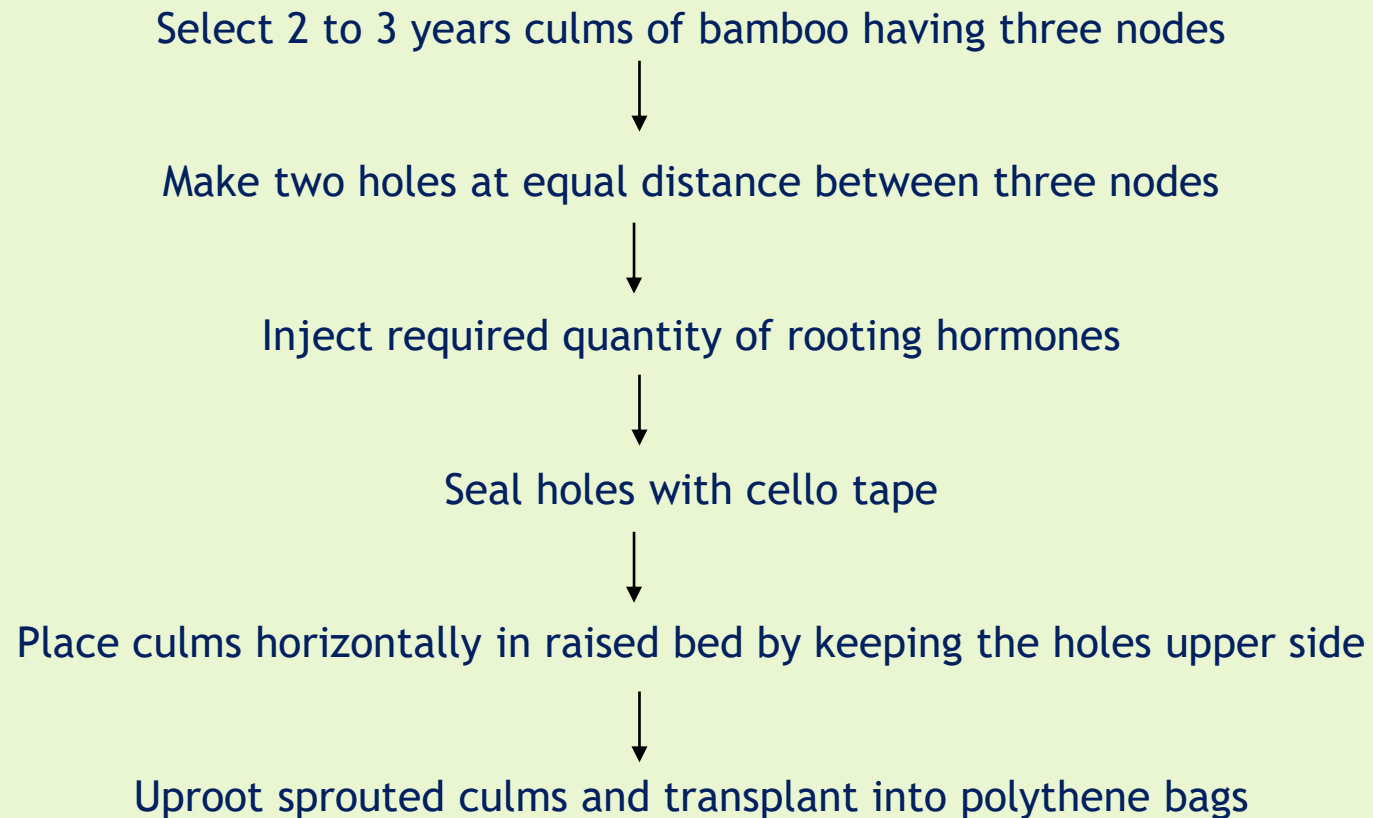
Table : Local volume table developed for Saru (*Casuarina equisetifolia*) trees grown in south Gujarat condition (m³/tree)

Diameter/ Height range		Height in m (Height range and mid value)													
		8-11	11-14	14-17	17-20	20-23	23-26	26-32	32-35	35-38	38-41	41-44	44-47		
Mid diameter / Height		9.5 m	12.5 m	15.5 m	18.5 m	21.5 m	24.5 m	27.5 m	33.5 m	36.5 m	39.5 m	42.5 m	45.5 m		
mid	10-15	12.5 cm	0.094	0.117	0.141	0.164	0.188	0.211	0.234						
	15-20	17.5 cm	0.165	0.211	0.257	0.303	0.349	0.395	0.441						
	20-25	22.5 cm		0.336	0.412	0.488	0.564	0.640	0.716	0.868					
	25-30	27.5 cm			0.606	0.719	0.833	0.946	1.059	1.286					
	30-35	32.5 cm				0.997	1.155	1.314	1.472	1.789	1.947	2.106	2.264	2.423	
	35-40	37.5 cm				1.320	1.531	1.742	1.953	2.375	2.586	2.797	3.008	3.219	
	40-45	42.5 cm				1.690	1.961	2.232	2.503	3.045	3.316	3.587	3.858	4.129	
	45-50	47.5 cm							2.346	2.549	2.955	3.158	3.361	3.564	3.767
	50-55	52.5 cm							2.713	2.961	3.457	3.705	3.954	4.202	4.450
	55-60	57.5 cm								3.415	4.010	4.308	4.605	4.903	5.200
DBH (cm) (Dia range and value)	60-65	62.5 cm								3.910	4.613	4.965	5.316	5.668	6.019
	65-70	67.5 cm									5.266	5.676	6.087	6.497	6.907

21. Macro propagation of different bamboo species by Culm Cutting with different root hormone treatments: Jayesh Pathak *et al.*

Recommendation: Farmers/nursery entrepreneurs of Gujarat are recommended to use 2 to 3 years culms of bamboo in the month of February-March by making two holes between two nodes and inject 120 ml (60 ml + 60 ml) NAA 500 ppm in *Bambusa balcooa*, 120 ml (60 ml + 60 ml) IBA 500 ppm in *Bambusa bambos* and *Dendrocalamus stocksii* and 120 ml (60 ml + 60 ml) IBA 200 ppm in *Bambusa vulgaris* var. *vulgaris* followed by sealing of holes for large scale propagation by culm cutting technique in the following manner.. [Agresco-2022]

Culm cutting process:



22. Development of volumetric equation for Eucalyptus (*Eucalyptus* spp.): L. K. Behera et al.

Recommendation: It is recommended that farmers, foresters and wood merchants of South Gujarat can use volumetric equation, $V = 0.0621 + 0.000037 D^2H - 0.0003D^2 + 0.0009DH - 0.0104 H$ ($R^2=0.951$) (V = Volume in m^3 , D = Diameter at Breast Height in cm, H = Height in m) for 10-60 cm DBH and below given local volume table for estimation of volume of standing Eucalyptus trees. [Agresco-2022]

Table: Local volume table developed for Eucalyptus (*Eucalyptus* spp.) trees grown in south Gujarat condition (m^3 /tree)

		Height in m (Height range and mid value)												
Diameter/ Height range		8-11	11-14	14-17	17-20	20-23	23-26	26-29	29-32	32-35	35-38	38-41	41-44	
Mid diameter/ Height		9.5 m	12.5m	15.5 m	18.5 m	21.5 m	24.5 m	27.5 m	30.5 m	33.5 m	36.5 m	39.5 m	42.5 m	
DBH (cm) (Dia. range and mid value)	10-15	12.5 cm	0.078	0.098	0.118	0.138	0.158	0.178						
	15-20	17.5 cm	0.129	0.179	0.229	0.279	0.329	0.379	0.429					
	20-25	22.5 cm	0.182	0.267	0.353	0.439	0.525	0.610	0.696	0.705				
	25-30	27.5 cm		0.364	0.491	0.618	0.745	0.872	0.999	1.126	1.253			
	30-35	32.5 cm		0.469	0.643	0.817	0.991	1.165	1.338	1.512	1.686			
	35-40	37.5 cm			0.809	1.035	1.261	1.487	1.713	1.939	2.165	2.392		
	40-45	42.5 cm			0.988	1.272	1.556	1.840	2.124	2.408	2.692	2.976		
	45-50	47.5 cm			1.181	1.528	1.876	2.223	2.571	2.918	3.266	3.613	3.961	
	50-55	52.5 cm				1.804	2.220	2.637	3.053	3.470	3.886	4.303	4.719	5.136
	55-60	57.5 cm					2.589	3.080	3.571	4.063	4.554	5.045	5.536	6.027

Table: Local volume table developed for Eucalyptus (*Eucalyptus* spp.) trees grown in south Gujarat condition (ft³/tree)

		Height in ft (Height range and mid value)												
Diameter/ Height range		26.25-36.09	36.09-45.93	45.93-55.77	55.77-65.62	65.62-75.46	75.46-85.30	85.30-95.14	95.14-104.99	104.99-114.83	114.83-124.67	124.67-134.51	134.51-144.36	
Mid diameter/ Height		31.17 ft	41.01 ft	50.85 ft	60.70 ft	70.54 ft	80.38 ft	90.22 ft	100.07 ft	109.91 ft	119.75 ft	129.59 ft	139.4 ft	
DBH (inch) (Dia. range and mid value)	4-6	5 inch	2.762	3.465	4.167	4.870	5.573	6.275						
	6-8	7 inch	4.545	6.312	8.079	9.847	11.614	13.381	15.149					
	8-10	9 inch	6.418	9.446	12.474	15.502	18.530	21.558	24.586	24.886				
	10-12	11 inch		12.867	17.352	21.837	26.322	30.806	35.291	39.776	44.261			
	12-14	13 inch		16.576	22.713	28.850	34.988	41.125	47.263	53.400	59.538			
	14-16	15 inch			28.557	36.543	44.529	52.515	60.501	68.488	76.474	84.460		
	16-18	17 inch			34.883	44.914	54.945	64.976	75.007	85.038	95.069	105.100		
	18-20	19 inch			41.693	53.965	66.236	78.508	90.779	103.051	115.323	127.594	139.866	
	20-22	21 inch				63.694	78.402	93.110	107.819	122.527	137.235	151.944	166.652	181.361
	22-24	23 inch					91.443	108.784	126.125	143.466	160.807	178.148	195.489	212.830

23. Effect of different pre-sowing treatments on germination of Red Sanders (*Pterocarpus santalinus* L. f.): M. B. Tandel et al.

Recommendation: Nurseryman and forest dwellers/ farmers are recommended to soak pods of Red Sanders (*Pterocarpus santalinus* L. f.) in GA₃ @ 500 mg/l for 1 day followed by sowing in the month of March in sand bed for sprouting and then after transplanting at two leaves stage in to growing media of Soil: Sand: FYM (2:1:2) to enhance seed germination and seedling growth. [Agresco-2022]

Note: Dilute 500 mg of GA₃ in 100 ml of water along with 5-10 ml of alcohol. Mix it properly till GA₃ dissolved and make final volume up to 1 litre.

24. Effect of Eucalyptus plantation on soil fertility in South Gujarat:

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Recommendation: It is recommended to farmers of Gujarat that under Eucalyptus plantation, Soil pH is reduced whereas organic carbon, available P₂O₅, available K₂O, soil bacterial and fungal population are increased. Moreover, soil EC and available nitrogen are not affected due to Eucalyptus plantation. [Agresco-2022]

B. COMPLETED PROJECTS

Sr. No.	Title of Project	Name of PI	Funding Agency	Duration
1.	Establishment of Model Nursery and Popularizing planting of superior quality planting material of economically important Agroforestry Tree Species.	Dr. D. B. Jadeja	RKVY, MoAC, New Delhi	3 year
2.	Forest Resource Survey of Vyara Forest Division	Dr. N. S. Thakur	Gujarat Forest Department	2 Year
3.	Developing Aqua Agroforestry base model for Dandi Village	Dr. M. B. Tandel	RKVY, MoAC, New Delhi	2012
4.	Promotion of Scientific management of Palmyra palm	Dr. Jayesh Pathak	RKVY, MoAC, New Delhi	2012

C. ONGOING PROJECTS

Sr. No.	Title of the Project	Name of PI	Funding Agency	Year of start
1.	Research in Agroforestry System	Dr. Mukesh R Parmar	Govt. of Gujarat	1998
2.	A Pilot Project for development of Aqua Agroforestry based model for coastal areas of south Gujarat- Dandi	Dr. M. B. Tandel	Govt. of Gujarat	2014
3.	Establishment of Bamboo centre	Dr. Jayesh Pathak	Govt. of Gujarat	2014
4.	Carbon Sequestration Potential of forest trees species of South Gujarat	Dr. R.P. Gunaga	Govt. of Gujarat	2014
5.	Popularizing Melia composita based agroforestry system in South Gujarat through production of quality planting material	Dr. N. S. Thakur	Govt. of Gujarat	2016
6.	Development of Industrial Agroforestry Model for South Gujarat Region	Dr. V. M. Prajapati	Govt. of Gujarat	2018
7.	Regeneration Techniques for Lesser Known and Threatened species of South Gujarat	Dr. L. K. Behera	Govt. of Gujarat	2019

D. SEMINAR/SYMPOSIUM/WORKSHOP ORGANIZED

Sr. No.	Title of the Seminar/Symposia/Workshop	Organising Secretary	Date & Venue
1.	National Seminar on “Interventions for Environmental Moderation”	Dr. D.B. Jadeja	8-10 th Jan. 2008, NAU, Navsari ,
2.	National Seminar on “Agroforestry: An evergreen agriculture for food security and environmental resilience”	Dr. D.B. Jadeja	2-4 th Feb. 2012, NAU, Navsari ,
3.	One day Workshop on “Bamboo for Rural Gujarat” & World Bamboo Day celebration	Dr. Jayesh Pathak	18 th Sept., 2013 NAU, Navsari
4.	Bamboo for Rural Farmers	Dr. Jayesh Pathak	18 th Sept., 2014 NAU, Navsari
5.	Bamboo Cultivation and Management	Dr. Jayesh Pathak	18 th Sept., 2015 NAU, Navsari
6.	National Seminar on Palmyra Palm	Dr. Jayesh Pathak	7-8 Jan., 2016 NAU, Navsari
7.	National Seminar on “Forest and Tree- Based Land Use Systems for Livelihood, Nutritional and Environmental Security”	Dr. N.S. Thakur	21-23 Dec., 2016 NAU, Navsari

	Title of the Seminar/Symposia/Workshop	Organising Secretary	Date & Venue
8.	Bamboo Farming and Its Management	Dr. Jayesh Pathak	18 th Sept., 2017 NAU, Navsari
9.	Bamboo Farming and Its Management	Dr. Jayesh Pathak	18 th Sept., 2019 NAU, Navsari
10.	Bamboo Farming and Its Management	Dr. Jayesh Pathak	18 th Sept., 2020 NAU, Navsari
11.	Bamboo Farming and Its Management	Dr. Jayesh Pathak	18 th Sept., 2021 NAU, Navsari

E. PUBLICATIONS:

(A) PAPER PUBLISHED IN NATIONAL AND INTERNATIONAL JOURNALS

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3. Behera, L. K., Nayak, M. R., Gunaga, R. P., Dobriyal, M. J. and Patel, D. P. (2015). A Land Use System Agroforestry for Biodiversity Conservation of Native Species, *Multilogic in Science*, **4**(12): 125-130.
4. Behera, L. K., Nayak, M. R., Mehta, A. A., Patel, S. M. and Jadeja, D. B. (2015). Optimization of *in vitro* culture conditions for multiplication of physic nut (*Jatropha curcas* L.). *International Journal of Usufructs Management*, **16**(2): 66-75.
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6. Behera, L. K., Patel, D. P., Sinha, S. K., Gunaga, R. P. and Jadeja, D. B. (2016). Variation in Physical Properties of Wood Among Twenty Clones of *Eucalyptus* in South Gujarat. *Advances in Life Sciences*, **5**(5): 1704-1708.
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11. Bhalawe, S., D.B. Jadeja, M.B. Tandel, P. Gayakwad and D. Nayak (2014). Atmospheric carbon capturing potential of block plantations, *Res. Environ. Life Sci.* **7**(1): 31-36.

12. Bhardwaj, S. K., Verma, K. S. and Thakur, N. S. (2009). Impact of exceptionally high rain and snowfall on chir pine plantations in Chamba district of Himachal Pradesh. *Indian Forester*, 135(12): 1737-1742.
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Sr. No.	Popular Articles in Gujarati
66.	One of the Important Vegetable vine crop - Bottle gourd S. N. Sarvaiya, Y. N. Tandel, M. B. Tandel, S. Y. Patel and Ku. Bhumica Tandel Krishi Jivan 45 (10) May 2013, Page No. 7-11
67.	Scientific management of Sandalwood [Santalum album L.] V.M. Prajapati, M. B. Tandel and Jayesh Pathak Ek Praysh- Krushi Vikas Mashik, (7) April 2013, Page No. 28-29
68.	Ailanthus (<i>Ailanthus excelsa</i> Roxb.) M. B. Tandel, B. S. Desai and V.M. Prajapati Krishi Jivan, June 2016, Page No. 28
69.	Scientific management of Bamboo Jayesh Pathak, V.M. Prajapati, M. B. Tandel, A. A. Kazi and S. K. Sinha University Prakashan No. 25/2015-16, Page No. 1-22
70.	Casuarina (<i>Casuarina equisetifolia</i> L.) M. B. Tandel, V.M. Prajapati and B. S. Desai Krishi Jivan, June 2016, Page No. 32
71.	An important tree for farmer - Sandalwood V.M. Prajapati, M. B. Tandel, Manmohan J. R., R. P. Gunaga and Jayesh Pathak Krushi Jivan, June 2016, Page No. 11-12
72.	Khair (<i>Acacia catechu</i> (L.) Willd.) M. B. Tandel, M. R. Parmar and V.M. Prajapati Krishi Jivan, June 2016, Page No. 34
73.	Ailanthus (<i>Ailanthus excelsa</i> Roxb.) M. B. Tandel, B. S. Desai and V.M. Prajapati Krishi Jivan, June 2016, Page No. 28
74.	Neem (<i>Azadirachta indica</i> A. Juss.) V.M. Prajapati, M. B. Tandel and B.S. Desai Krishi Jivan, June 2016, Page No. 33

Sr. No.	Popular Articles in Gujarati
75.	Plant trees on bunds to get additional income V.M. Prajapati, M. B. Tandel, M. K. Desai, D. Nayak and M. R. Parmar Krishi Jivan, June 2016, Page No. 18
76.	Scientific management of Simarouba glauca DC. V.M. Prajapati, M. B. Tandel, M. R. Parmar and S. A. Huse Krishi Jivan, June 2016, Page No. 24-26
77.	Sisham (<i>Dalbergia latifolia</i> Roxb.) V.M. Prajapati, M. B. Tandel and M. R. Parmar Krishi Jivan, June 2016, Page No. 29
78.	Success story of farming of trees V.M. Prajapati and M. B. Tandel Krishi Jivan, June 2016, Page No. 27
79.	Teak: A best timber wood V.M. Prajapati, M. B. Tandel and M. R. Parmar Krishi Jivan, June 2016, Page No. 9-10
80.	Timru (<i>Diospyros melanoxylon</i> Roxb.) V.M. Prajapati, M. B. Tandel and M. R. Parmar Krishi Jivan, June 2016, Page No. 30
81.	Scientific management of Simarouba glauca DC. V.M. Prajapati, M. B. Tandel, M. R. Parmar and S. A. Huse Krishi Jivan, June 2016, Page No. 24-26
82.	Sisham (<i>Dalbergia latifolia</i> Roxb.) V.M. Prajapati, M. B. Tandel and M. R. Parmar Krishi Jivan, June 2016, Page No. 29

F. M.Sc./ Ph.D. THESIS

DEPARTMENT OF SILVICULTURE & AGROFORESTRY

M. Sc. FORESTRY (Agroforestry & Ecology / Agroforestry / Plantation Technology/SAF)

SN	Name of Student	Research Title	Major Advisor	Year
1.	Mr. Ashish D. Patel 04-3287-92	Allelopathic effects of few multipurpose tree and arable crops on seed germination and seedling growth	Dr. R. R. Shah	1995
2.	Mr. Vitthal Ramakrishna Karoshi 04-3371-93	Allelopathic effect of agro-forestry tree species on arable crops	Dr. N. S. Patil	1995
3.	Mr. Hasmukhbhai Prabhudas Panchasara 04-3286-92	Effect on auxins on rooting of cuttings in <i>Dalbergia sissoo</i> Roxb.	Dr. B. G. Vashi	1995
4.	Mr. Bharatkumar Ravjibhai Vekariya 04-3290-92	Propagation of <i>Ficus glomerata</i> Roxb. By stem cutting with aid of auxins	Dr. B. G. Vashi	1995
5.	Mr. Kshitish Babarav Mehta 04-3285-92	Intercropping of agricultural crops with forest tree species.	Dr. M. U. Kukadia	1995
6.	Mr. Harshad Lalbhai Patel 04-3288-92	Effect of forest tree species on the production of agricultural crop.	Dr. N. S. Patil	1995
7.	Mr. Vijaykumar Somalal Patel 04-3289-92	Effect of pre -sowing treatment of seed on germination and subsequent growth of seedlings of some forest tree species.	Dr. M. U. Kukadia	1995
8.	Mr. Sanjay Vashista 04-3369-94	Effect of various potting mixtures on the germination and growth parameters of few agro-forestry tree species in the nursery stages	Dr. M. U. Kukadia	1996
9.	Mr. Kirtikumar B. Patel 04-3367-94	Growth and productivity of agricultural crop in Agri-silvicultural system	Dr. R. R. Shah	1996

SN	Name of Student	Research Title	Major Advisor	Year
10 .	Mr. Ashutosh Sharma 04-3365-94	Effect of different salinity level on germination and initial growth parameter of different agro-forestry tree species in nursery stage	Dr. M. U. Kukadia	1996
11 .	Mr. Navin Kumar Patle 04-3366-94	Growth and production of drilled paddy (<i>Oryza sativa</i> L). under <i>Terminalia arjuna</i> Bedd. and <i>Mitragyna parvifolia</i> Korth. in an Agro-silvicultural system	Dr. N. S. Patil	1996
12 .	Mr. Saboliya Khimjibhai M. 04-3780-95	The intercropping of flowers crops (<i>Gaillardia pulchella</i> Foug. and <i>Jagetes patula</i> L.) with forest tree species (<i>Terminalia arjuna</i> Bedd. and <i>Mitragyna parvifolia</i> Korth.)	Dr. N. S. Patil	1998
13 .	Mr. Dineshkumar D. Dasa 04-3776-95	Effect of different tree cover on soil characteristics	Dr. N. S. Patil	1998
14 .	Mr. Ghanshyam L. Gaudani 04-3777-95	Effect of plant growth regulation on growth & development of <i>Cassia fistula</i> seedling	Dr. B. G. Vashi	1998
15 .	Mr. Raghji H. Patel 04-3779-95	Effect of different size of polythene bags and fertilizers on the growth of some forestry tree species in the nursery stage	Dr. M. U. Kukadia	1998
16 .	Ms. Jilpa Hiren Khatri 04-3778-95	Micropropagation of Teak (<i>Tectona grandis</i> Linn. F)	Dr. M. U. Kukadia	1998
17 .	Ms. Urvashi I. Prajapati 04-4026-97	Micropropagation of rosewood (<i>Dalbergia latifolia</i> Roxb.)	Dr. R. R. Shah	2000
18 .	Mr. Prashant V. Patel 04-3851-96	Studies of soil parameters under different forest cover of Dangs district	Dr. M. U. Kukadia	2000
19 .	Mr. Ajay Sharma 04-4237-2000	Micro-propagation of <i>Paulownia tomentosa</i> Steud.	Dr. M. U. Kukadia	2001
20 .	Mr. Vishal Mahajan 04-4241-2000	Effect of different spacements and pruning intensities of <i>Casuarina equisetifolia</i> L. on growth and yield of <i>Trigonella foenum-graecum</i> grown as intercrop	Dr. D. B. Jadeja	2001

SN	Name of Student	Research Title	Major Advisor	Year
21.	Mr. Sachin B. Shinde 04-4028-97	Effect of forest tree species on the growth and production of forage crops.	Dr. N. S. Patil	2001
22.	Mr. Arvind D. Chavda 04-4238-2000	Feasibility of growing aromatic grasses in agro-forestry system	Dr. R. R. Shah	2002
23.	Mr. Bharatkumar S. Gunjal 04-4239-2000	Influence of bio-fertilizer on growth biomass and nutrient uptake in <i>Jatropha curcas</i> L.	Dr. B. G. Vashi	2002
24.	Mr. Goraniya Jayesh. S 04-4240-2000	Influence of nitrogen fixing trees on the status of soil micronutrient	Dr. M. U. Kukadia	2002
25.	Mr. Parekh Dhavalkumar J. 04-4833-2001	Feasibility of growing different pulse crop with forest tree species under Agroforestry system	Dr. N. S. Patil	2003
26.	Mr. Yogendrasing J. Rana 04-4389-2000	Micro-propagation of <i>Sterculia urens</i> Roxb.	Dr. M. U. Kukadia	2003
27.	Mr. Tandel Minalkumar B. 04-4834-2001	Influence of tree cover and litter fall on physico-chemical properties of soil and availability of nutrients.	Dr. M. U. Kukadia	2003
28.	Mr. Patel Dhanrajbhai R. 04-5255-2002	The effect of salinity on the growth of <i>Simmondsia chinensis</i> L. raised by seed and cutting at nursery stage.	Dr. M. U. Kukadia	2004
29.	Mr. Limbasiya Rakeshkumar T. 04-5255-2002	Effect of salinity on the growth of <i>Jatropha curcas</i> L. raised by seeds and cutting at an early stage	Dr. D. B. Jadeja	2004
30.	Mr. Rahul M. Patel 04-5587-2003	The effect of <i>Casuarina equisetifolia</i> L. raised at different spacements on physico-chemical properties of soil in South Gujarat condition.	Dr. D. B. Jadeja	2005
31.	Mr. Kathota J.C. 04-0006-2004	Performance of <i>Dendrocalamus strictus</i> Nees. and <i>Bambusa arundinacea</i> (Retz) Willd. for pickle making	Dr. B. G. Vashi	2006

SN	Name of Student	Research Title	Major Advisor	Year
32.	Mr. Kumar Gautam 04-0007-2004	Germination behavior of White teak, Mahuva, Indian Rosewood and Baheda as influenced by size of seeds	Dr. M. U. Kukadia	2006
33.	Mr. Desai Maheshkumar K. 04-0003-2004	Effect of different tree species on soil amelioration	Dr. B. G. Vashi	2006
34.	Mr. Sandip M. Patel 04-0008-2004	Influence of bio-fertilizer on growth, biomass and nutrient uptake in <i>Jatropha curcas</i> L.	Dr. N. S. Patil	2006
35.	Mr. Patel Vimalkumar S. 04-5588-2003	Influence of various potting mixture on germination of <i>Terminalia bellerica</i>	Dr. N. S. Patil	2006
36.	Mr. Prajapati Vijaykumar M 04-0009-2004	Assess the performance of <i>Curcuma longa</i> L. grown as an intercrop under tree species	Dr. N. S. Patil	2006
37.	Mr. Dileshwar Nayak 04-0004-2004	Evaluation of different provenances of <i>Jatropha curcas</i> L. in South Gujarat	Dr. D. B. Jadeja	2006
38.	Mr. Ahir Sanjaykumar M. 04-0001-2004	Performance of <i>Colocasia esculanta</i> (L) Schott. grown as an intercrop under tree species	Dr. B. G. Vashi	2006
39.	Mr. Prajapati Ketankumar N. 04-0147-2005	Effect of fertilizer and spacing on growth of <i>Jatropha curcas</i> L.	Dr. N. S. Patil	2007
40.	Mr. Laxmikanta Behera 04-0146-2005	Micro-propagation and development of salt tolerant cell line in <i>Jatropha curcas</i> L.	Dr. D. B. Jadeja	2007
41.	Mr. Ambuj Ranjan 04-0145-2005	Effect of various seed weight classes and depth of planting on germination behavior, growth and biomass of <i>Terminalia bellerica</i> L., <i>T. arjuna</i> and <i>Madhuca indica</i>	Dr. M. U. Kukadia	2007
42.	Mr. Mehta Abhishek A. 04-0248-2006	Efficacy of different methods for the extraction of annatto colour from the seed of <i>Bixa orellana</i>	Dr. B. G. Vashi	2008

SN	Name of Student	Research Title	Major Advisor	Year
43.	Mr. Parmar Mukeshbhai R. 04-0245-2006	Performance of <i>Jatropha curcas</i> L. under different pruning intensities and fertilizer under irrigated condition in South Gujarat	Dr. D. B. Jadeja	2008
44.	Mr. Abduladil A. Kazi 04-0247-2006	Soil attributes in the protected area of Vansda National Park Dangs under different vegetation and topography	Dr. M. U. Kukadia	2008
45.	Mr. Jayesh Pathak 04-0246-2006	Micropropagation of bamboo (<i>Dendrocalamus strictus</i>)	Dr. R. R. Shah	2008
46.	Mr. Zahoor Ahmad Sofi 04-0359-2007	Effect of plant growth regulators on rooting and sprouting behaviour of cutting of <i>Derris indica</i> L. Bennet.	Dr. M. U. Kukadia	2009
47.	Mr. Rajveer Singh Chauhan	<i>In-vitro</i> regeneration of <i>Acacia mangium</i> Willd.	Dr. S. K. Jha	2009
48.	Ms. Shedage Swati Mahipati 04-0358-2007	Effect of storage on germination and viability of <i>Jatropha curcas</i> L.	Dr. D. B. Jadeja	2009
49.	Mr. Rajmani Kumar 04-0249-2006	Evaluation of inter cropping of maize grown under Horti-silvicultural system of Agroforestry in South Gujarat condition	Dr. N. S. Patil	2009
50.	Ms. Vishnu Kanwar Solanki 04-0433-2008	Effect of different plant growth regulators on vegetative propagation of khair (<i>Acacia catechu</i> Willd.)	Dr. M. U. Kukadia	2010
51	Mr. Sahailendra Bhalawe 04-0431-2008	Studies on nutrient release pattern in decomposition litter of multipurpose trees	Dr. M. U. Kukadia	2010
52.	Ms. Sangode Ekta Sharad 04-0430-2008	Development of insect pest management module for eucalyptus gall insect (<i>Laptocybe invasa</i> Fisher and Lasalle; Hymenoptera: Eulophidae) in nursery and young plantation	Dr. D. B. Jadeja	2011
53.	Mr. Patel Tejas Rameshbhai 04-0429-2008	Surveillance of gall insect (<i>Laptocybe invasa</i> Fisher and Lasalle) in eucalyptus in different agroclimatic regions of south Gujarat and Vadodara	Dr. D. B. Jadeja	2010

SN	Name of Student	Research Title	Major Advisor	Year
54	Mr. Gaikwad Paresh Ganeshbhai - 04-0428-2008	Effect of foliar application of GA ₃ , Ethrel and copper sulphate on flowering behavior and yield of <i>Jatropha curcus</i> L.	Dr. D. B. Jadeja	2011
55.	Ms. Sreedevi Madhusudanan 04-0432-2008	Tree allometry and Carbon Sequestration potential in the above ground biomass of selected multipurpose tree species in South Gujarat	Dr. N. S. Patil	2011
56.	Mr. Mukesh Parihar 04-550-2009	Survey and surveillance of major pests of <i>Terminalia arjuna</i> (Roxb.) Wight & Arnold (Arjun) and their management	Dr. D. B. Jadeja	2011
57.	Mr. Rathwa Vikram Singh J. 04-0551-2009	Metabolic change in relation to heavy metal stress in Karanja.	Dr. S. K. Jha	2011
58.	Mr. Sharvan Kumar 04-0553-2009	Growth and production of green-gram under <i>Terminalia arjuna</i> and <i>Mitragyna parviflora</i> in an agri-silvicultural system	Dr. N. S. Patil	2011
59.	Mr. Makwana Hareshkumar Pitambarbhai 04-0351-2007	Effect of some plant growth regulating substances on the rooting of eucalyptus cutting	Dr. M. U. Kukadia	2011
60.	Mr. Shriram Nagar 04-0554-2009	Identification of suitable intercrop under perennial trees in south Gujarat	Dr. M. U. Kukadia	2011
61.	Mr. Sanjeev Ranjan 04-0522-2009	Morphological, Biochemical and molecular variations among different clones of Casuarina	Dr. D. B. Jadeja	2011
62.	Mr. Ramraj Meena 04-897-2010	Efficacy of some fodder crops grown under kalam and arjun based silvopastoral system in south Gujarat	Dr. D. B. Jadeja	2012
63.	Mr. Patel Ruchitkumar Ashwinbhai 04-0893-2010	Studies on phenological events of some agroforestry tree species.	Dr. B.S. Desai	2012

SN	Name of Student	Research Title	Major Advisor	Year
64.	Mr. Suvera Anilkumar Hujabhai 04-0904-2010	Performance of <i>Ocimum</i> spp. under silvi-medicinal agroforestry systems in south Gujarat	Dr. N. S. Thakur	2012
65.	Mr. Bhagirath Singh Meena 04-887-2010	Scarification and growth regulator treatments of Teak (<i>Tectona grandis</i> Linn. f.) drupes in relation to germination and seedling vigour	Dr. D. B. Jadeja	2012
66.	Mr. Choudhary Sandipbhai Surajbhai - 04-0889-2010	Influence of various bio fertilizers and organic manures on growth and development of Sisoo at nursery stage	Dr. M. B. Tandel	2012
67.	Mr. Vikas Kumar 04-0905-2010	Ecology of some rare and endangered plant spp. of the Dang forest	Dr. B.S. Desai	2012
68.	Mr. Sushil Kumar 04-0903-2010	Influence of de-oiled seedcakes as fertilizers on growth and biomass production of rosewood seedlings at nursery stage	Dr. N. S. Patil	2012
69.	Mr. Sachin Kumar Singh 04-0899-2010	Bio-chemical investigation of eucalyptus for gall tolerance	Dr. D. B. Jadeja	2012
70. #	Mr. Patel Satishkumar Sureshbhai 04-0894-2010	Morphological variations and carbon sequestration potential of various clones of eucalyptus	Dr. N. S. Patil	2012
71.	Mr. Mesariya Bhaveshkumar Devendrabhai - 04-1051-2011	Efficiency of rooting hormones on propagation of different bamboo spp. (<i>Dendrocalamus strictus</i> and <i>Bambusa vulgaris</i>)	Dr. M. B. Tandel	2013
72.	Mr. Chaudhary Dhavalkumar V. 04-0888-2010	Effect of various auxins on rooting of cuttings in rosewood	Dr. M. B. Tandel	2013
73.	Mr. Panchal Jeegarkumar S. 04-1052-2011	Productivity and carbon sequestration under prevalent agroforestry system in Navsari district	Dr. N. S. Thakur	2013

SN	Name of Student	Research Title	Major Advisor	Year
74.	Rabari Baldevbhai Muljibhai 04-0895-2010	Carbon sequestration by Eucalyptus plantation	Dr. D. B. Jadeja	2013
75.	Mr. Patel Navneet Kumar Maganlal 04-892-2010	Carbon sequestration potential of some important trees in south Gujarat	Dr. M. B. Tandel	2013
76.	Mr. Prajapati Dharamshibhai Hirabahi - 04-1056-2011	Effect of the tree species leaf leachate on germination and seedling growth of some vegetable crops	Dr. M. B. Tandel	2013
77.	Mr. Bhasotiya Harshal Chhaganbhai 04-1311-2012	Influence of seed source variation and potting mixtures on germination of <i>Ailanthus excelsa</i>	Dr. M. B. Tandel	2014
78.	Mr. Bhusara Jignesh B. 04-1312-2012	Productivity and carbon sequestration under prevalent Agroforestry systems in the Valsad district	Dr. N. S. Thakur	2014
79.	Mr. Sondarva Ramesh L. 04-1317-2012	Influence of various growing media on growth and vigour of <i>khaya senegalensis</i> (African mahogany) in nursery	Dr. V.M. Prajapati	2014
80.	Mr. Mukesh Kumar 04-1314-2012	Screening of <i>Cymbopogon</i> spp. and <i>Ocimum</i> spp. for development of teak based sivi medicinal systems in south Gujarat	Dr. N. S. Thakur	2014
81.	Mr. Modi Jay Sureshkumar 203031004	Molecular and morphological variations in Teak (<i>Tectona grandis</i>) clones	Dr. M.B. Tandel	2015
82.	Mr. Dinesh Kumar 2030313003	Studies on effect of leaf leachate of <i>Melia composita</i> and <i>Melia azaderach</i> on germination, growth and yield of some pulse crops	Dr. N. S. Thakur	2015
83.	Mr. Parmar Avinash Gordhanbhai 2030313005	Studies on effect of leaf leachate of <i>Melia composita</i> and <i>Melia azaderach</i> on germination, growth and yield of some tuber crops	Dr. N. S. Thakur	2015
84.	Mr. Vasava Miteshkumar Sureshbhai 2030313006	Diagnosis and evaluation on <i>fusarial</i> wilt of Garmalo (<i>Cassia fistula</i>) in nursery condition	Dr. V.M. Prajapati	2015

SN	Name of Student	Research Title	Major Advisor	Year
85.	Mr. Ahir Balvantkumar Ranabhai - 2030313001	Studies on below ground interaction and carbon sequestration in <i>Acacia mangium</i> Willd plantation	Dr. Manmohan J. Dobriyal	2015
86.	Mr. Pritam Choudhury 2030314012	Effect of host plant and biofertilizer on seedling growth performance in <i>Santalum album</i> Linn.	Dr. Manmohan J. Dobriyal	2016
87.	Ms Jharna Chetri 2030314007	Performance of <i>Coleus aromaticus</i> (Ajma paan) <i>Centella asiatica</i> (Brahmi) and <i>Psoralea corylifoila</i> (Babchi) growth as an intercrop under different spacing	Dr. V.M. Prajapati	2016
88.	Mr. Gamit Vikaskumar Premjibhai - 2030314006	Soil atmosphere exchange of N ₂ O and CH ₄ in forest floor, grassland, rice field and open field	Dr. V.M. Prajapati	2016
89.	Mr. Patel Sagarkumar Vinubhai - 2030314011	Study of productive potential of turmeric based Agri-silviculture System in South Gujarat condition.	Dr. Dileswar Nayak	2016
90.	Mr. Amlani Moulik Harishbhai 2030314001	Assessment of growth variation and carbon sequestration potential of different species of Bamboo	Dr. M.B. Tandel	2016
91.	Mr. Jilariya Devanand Jeelubhai - 2030314008	Performance of <i>Aloe vera</i> Linn. Under <i>Melia composita</i> Willd Plantations.	Dr. N. S. Thakur	2016
92.	Mr. Patel Jitendrakumar Nathubhai - 2030314009	Allelopathic effects of <i>Terminalia arjuna</i> (Roxb.) Wight & Aon. on <i>Oryza sativa</i> L. Var. ONR-2	Dr. Dileswar Nayak	2016
93.	Debiprasad Rout 2030315004	Study of seed mycoflora association with <i>Dalbergia sissoo</i> Roxb. and <i>Dalbergia latifolia</i> Roxb. in natural and storage condition	Dr. V. M. Prajapati	2017
94.	Gamit Priyanka Babubhai 2030315005	Status of leaf spot diseases of <i>Dalbergia latifolia</i> and <i>Dalbergia sissoo</i> in forest nurseries of Navsari district.	Dr. V. M. Prajapati	2017

SN	Name of Student	Research Title	Major Advisor	Year
95.	Malek Soufil Sharifmiya 2030315006	Propagation and cultivation of <i>Coleus aromaticus</i> Benth. and <i>Coleus forskohlii</i> (Pior) Briq. under Sapota- Jatropha based agroforestry system.	Dr. Manmohan J. Dobriyal	2017
96.	Mevada Ramabhai Jepabhai 2030315007	Effect of <i>Terminalia arjuna</i> (Roxb.) Wight. & Arn. hosted tassar silkworm excreta and leaf litter on growth and yield of <i>Oryza sativa</i> . L.	Dr. D. Nayak	2017
97.	Patel Harpal Shukkarbhai 2030315008	Effect of different pre-sowing treatments and growing conditions on germination of Red senders (<i>Pterocarpus santalinus</i> L. f.)	Dr. M.B. Tandel	2017
98.	Sumit Mohanty 2030315014	Evaluation of <i>Cymbopogon flexuosus</i> (Nees Ex.Steud) Co. Watson and <i>Cymbopogon martini</i> (Roxb.) Wats. for development of <i>Melia composita</i> Willd. based silvi medicinal systems.	Dr. N.S. Thakur	2017
99.	Sukhadiya Madhuri Laljibhai 2030316006	Evaluation of nutritive value and drupe pulp of <i>Melia dubia</i> Cav. and its feeding effect on Shruti goat (<i>Capres aegagrus hircus</i> L.) kids.	Dr. N.S. Thakur	2018
100.	Rashmiparva Maharana 2030316005	Enhancement of Seed Germination and Seedling Vigour in <i>Gmelina arborea</i> Roxb.	Dr. Manmohan J Dobriyal	2018
101.	Dholariya Chintan Ashwinbhai 2030316001	Impact of different salinity on growth and physiological performance in <i>Leucaena leucocephala</i> Lam.	Dr. L. K. Behera	2018
102.	Odedera Versha Hamirbhai 2030316003	Assessment of different agroforestry land use system using remote sensing and GIS of Navsari district	Dr. Dleswar Nayak	2018
103.	Mr. Govind 2030317003	Effect of integrated nutrient management on seedling growth and biomass of Sandal wood (<i>Santalum album</i> L.)	Dr. V.M. Prajapati	2019

SN	Name of Student	Research Title	Major Advisor	Year
104.	Ms. Chaudhary Vrushali Vijay 2030317002	Intercropping of Japanese mint (<i>Mentha arvensis</i> L.) under ashoka (<i>Saraca asoca</i> L.) in different spatial arrangement	Dr. Manmohan Dobriyal	2019
105.	Mr. Varun Saini 2030317005	Assessment of seedling vigour using organic manure and bio-fertilizer in <i>Swietenia macrophylla</i> King.	Dr. L.K. Behera	2019
106.	Mr. Jayeshkumar Baldaniya 2030317001	Performance of different varieties of wheat under <i>Ailanthus excelsa</i> (Maharukh) based Agroforestry system	Dr. D. Nayak	2019
107.	Mr. Bhaveshkumar Purohit 2030318007	Influence of <i>Melia dubia</i> Cav. Drupe pulp leachates on germination , growth, biomass and yield of <i>Capsicum annuum</i> L. and <i>Vigna radiata</i> L.	Dr. N.S. Thakur	2020
108.	Mr. Viragkumar Chaudhari 2030318001	Effect of Biopriming on seed germination and seedling vigour of waras (<i>Heterophragma quasriloculare</i> Roxb.)	V. M. Prajapati	2020
109.	Mr. Yogeshkumar D. Patel 2030317004	Effect of growing media and integrated nutrient management on seed germination and seedling growth of red sanders (<i>Pterocarpus santalinus</i> Linn. f.)	Dr. M.B. Tandel	2020
110.	Ms. Mehfuza M. Patel 2030318003	Influence of various levels of growth hormones on rooting of cutting and biofertilizer on growth of rooted cuttings of Casuarina (<i>Casuarina equisetifolia</i> L.)	Dr. M.B. Tandel	2020
111.	Ms. Chauhan Poonamkumari Chandrajit - 2030318002	Influence of various different biofertiliser on seedling vigour in kadam (<i>Anthocephalus cadamba</i> Roxb.)	Dr. L.K. Beherea	2020
112.	Ms. Rudani Kejal V. 2030319008	Performance of spacings and varieties of drilled Rice (<i>Oryza sativa</i> L.) under Arduso (<i>Ailanthus excelsa</i> Roxb.) based agroforestry system	Dr. S. M. Patel	2021

SN	Name of Student	Research Title	Major Advisor	Year
113.	Mr. Manojkumar S. 2030319003	Stands structure, germination and seedling vigour in <i>Dalbergia lanceolaria</i> L. f.	Dr. L. K. Behera	2021
114.	Mr. Prajapati Jigneshkumar Pravin bhai - 2030318006	Evaluation of germination media and organic manures for production of quality seedlings <i>Soyamida fabrifuga</i> Roxb.	Dr. L.K. Beherea	2021
115.	Ramani Darshana Jayantibhai - 2030320006	Enhancement of seedling growth and vigour using biofertilisers in Anjan (<i>Hardwickia binata</i> Roxb.)	Dr. S.M. Patel	2022
116.	Patel Twinkal Sanjaybhai 2030320005	Effect of salinity levels of irrigation water on growth of <i>Bambusa</i> Species in nursery	Dr. Jayesh Pathak	2022

Ph. D. FORESTRY (AGROFORESTRY & ECOLOGY / AGROFORESTRY/ SAF)

SN	Name of Student	Research Title	Major Advisor	Year
1.	Mr. Minal B Tandel 04-0251-2006	Molecular and morphological variation among different accession of <i>Jatropha curcas</i> L.	Dr. M. U. Kukadia	2009
2.	Mr. Parekh Dhavalkumar Jayantilal 04-0354-2007	Effect of different time and intensities of pruning on growth and yield of <i>Jatropha curcas</i> L.	Dr. D. B. Jadeja	2011
3.	Mr. Sanjay M. Ahir 04-0348-2007	Feasibility of inter cropping of different pulse crop under <i>Jatropha curcus</i> L.	Dr. N. S. Patil	2010
4.	Mr. Prajapati Vijay Manilal 04-0356-2007	Morphological and biochemical variations of teak (<i>Tectona grandis</i> L.) clones in relation to resistance against leaf defoliator (<i>Hyblaea puera</i> Cramer) and skeletonizer (<i>Eutectona machaeralis</i> Walker).	Dr. M. U. Kukadia	2011
5.	Mr. Anil Kumar 04-0425-2008	Effect of Irrigation and Fertiliser on growth and Yield of <i>Jatropha (Jatropha curcus)</i> under south Gujarat condition	Dr. N.S. Patil	2012
6.	Mr. Dileswar Nayak 04-0350-2007	Induced variability in <i>Jatropha curcus</i> by gamma rays	Dr. N. S. Patil	2012
7.	Ms. Vishnu Kanwar Solanki 04-0906-2010	Silvicultural, Horticultural and Medicinal crops in three tier agroforestry system	Dr. D. B. Jadeja	2014
8.	Ms. Shedage Swati Mahipati 04-0900-2010	Effect of microsymbionts on forest tree seedlings under different moisture regimes and salinity levels	Dr. N. S. Patil	2014
9.	Mr. Shailendra Bhalawe 04-1057-2011	Carbon sequestration potential of different land use systems in South Gujarat condition	Dr. D. B. Jadeja	2015

SN	Name of Student	Research Title	Major Advisor	Year
10.	Mr. Gayakvad Pareshbhai Ganeshbhai - 04-1050-2011	Carbon sequestration potential of different land use systems in Dangs district	Dr. D. B. Jadeja	2015
11.	Mr. Laxmikanta Behera 04-1059-2011	Clonal variation in physical, anatomical and chemical properties of wood in <i>Eucalyptus</i>	Dr. D. B. Jadeja	2016
12.	Mr. Kazi Abduladil Abdulhami 02-1319- 2012	Potentiality of tuber intercrops under naturally occurring <i>Palmyra palm</i> in South Gujarat condition	Dr. D. B. Jadeja	2016
13.	Mr. Sashi Bhushan Saran Pandey 04-1316-2012	Intercropping of Ginger (<i>Zingiber officinale</i> L.) and Turmeric (<i>Curcuma longa</i> L.) under Sapota- Jatropha based agroforestry system in South Gujarat	Dr. D. B. Jadeja	2016
14.	Mr. Abhishek A. Mehta 04-1060-2011	Evaluation of Safed musali (<i>Chlorophytum borivilianum</i>) Sant & Fernand. Germplasm for growth, yield, saponin content and suitability in agroforestry system.	Dr. D. B. Jadeja	2016
15.	Mr. Manas Ranjan Nayak 1030313002	Performance of Eucalyptus clone in relation to sodicity in nursery stage	Dr. D. B. Jadeja	2016
16.	Nongmaithem Raju Singh 1030314003	Crop diversity, productivity and soil nutrient dynamics of dominant agroforestry systems of Navsari district, Gujarat.	Dr. A. Arunachalam	2017
17.	Jayesh Pathak 04-1318- 2012	Macro and micro propagation of few long internodes species.	Dr. D. B. Jadeja	2017
18.	Patel Sandipkumar Mukundlal 1030313003	Performance of cucuritaceous vegetables crops under Teak (<i>Tectona grandis</i> L.f.) based silvihorticultural system in south Gujarat region.	Dr. M.B. Tandel	2018

SN	Name of Student	Research Title	Major Advisor	Year
19.	Sondarva Ramesh L. 1030314005	Integrtaed nutrient mangment of Brinjal (<i>Solanum melogena</i> L.) under Teak (<i>Tectona grandis</i> L.f.) based silvihorticultural system in south Gujarat region.	Dr. M.B. Tandel	2018
20.	Bhusara Jigneshkumar Balubhai 1030314001	Intercropping of Okra and green gram with different spacing of <i>Melia composita</i> plantation.	Dr. Manmohan J. Dobriyal	2018
21.	Rajveer Singh Chauhan 04-1320-2012	Selection of candidate plus trees (CPTs) and their evaluation for seed traits, germination and seedling vigour in <i>Melia dubia</i> Cav. in south Gujarat	Dr. D. B. Jadeja	2018
22.	Desai Maheshkumar Karamsibhai 1030313001	Intercropping of medicinal crops Castor and Babchi under Sapota-Jatropha based Horti-Silvi system	Dr. Manmohan J. Dobriyal	2018
23.	Mr. Dhavalkumar R. Prajapati 1030316001	Development of <i>Melia dubia</i> Cav. Hybrid Napier (<i>Pennisetum purpureum</i> X <i>P. americanum</i>) / Sorghum sudan grass (<i>Sorghum bicolor</i> X <i>Sorghum bicolor</i> Var. Sudanese) Based silvi-pasture systems.	Dr. N.S. Thakur	2020
24.	Mr. Harshavardhan K. Deshmukh 1030317001	Assessment of management of Agroforestry systems adopted by the farmers in South Gujarat.	Dr. M.B. Tandel	2020
25.	Mr. Ramabhai J. Mevada 1030317002	Integrated Nitrogen Management on growth, yield and quality of Okara (<i>Abelmoschus esculentus</i> L.) under teak (<i>Tectona grandis</i> L. f.) based Agroforestry system .	Dr. M.B. Tandel	2020
26.	Mr. Parmar Mukeshbhai Rameshbhai - 1030314004	Ecological studies on selected horticulture-based agroforestry systems in South Gujarat	Dr. A. Arunachalam	2021