

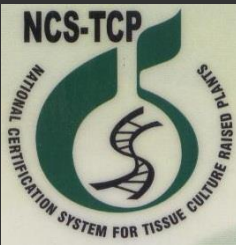
AGbioteck



AG Bioteck
Tissue cultured Teak
(Tectona grandis)
*production and Field
plantation.*

www.agbiotek.com

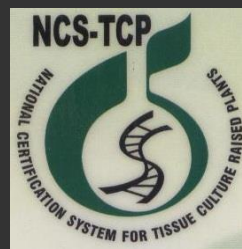
agbiotek@gmail.com





AGbioteck

AG Bioteck Laboratories is the realization of the dream of technocrat entrepreneurs to build a biotechnology company in the year 1992 by leveraging their scientific temper and environmental consciousness to deliver technologically proven and qualitatively superior products and services in the areas of Plant Tissue Culture, cloning in plants and Organic Farming.



Fruit crops:

Banana (all cultivars)
Citrus (Rangapur Lime)
Fig (*Ficus carica*)
Dragon Fruit
Strawberry
Pine apple
Pomegranate

Spices & Medicinal plants:

Curcuma longa
Gingiber officinalis
Aloe barbadensis
Vanilla planifolia
Stevia rebaudiana
Costus sps
Sabah Snake grass

Forestry plants:

Tectona grandis
Paulownia sps.
Gmelina arborea
Conocarpus sp
Bambusa vulgaris
Acacia mangium
Albizia odoratissima

Oil yielding plants

Jatropha curcus
Simarouba glauca
Azardirecta indica
Madhuca longifolia
Pongamia pinnata

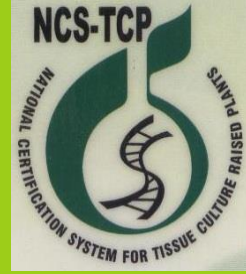
Flower plants:

Anthurium
Carnation
Chrysanthimum
Gerbera
Tropical orchids

Foliage plants

Aglaonema
Cordyline
Diffenbachea
Ficus
Phelodendron
Spathyphyllum
Syngonium

Technology for Productivity



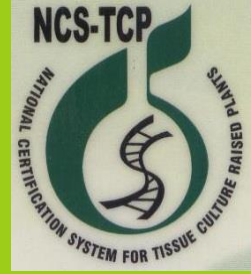
Tissue Culture – Forestry species

Timber yielding trees:

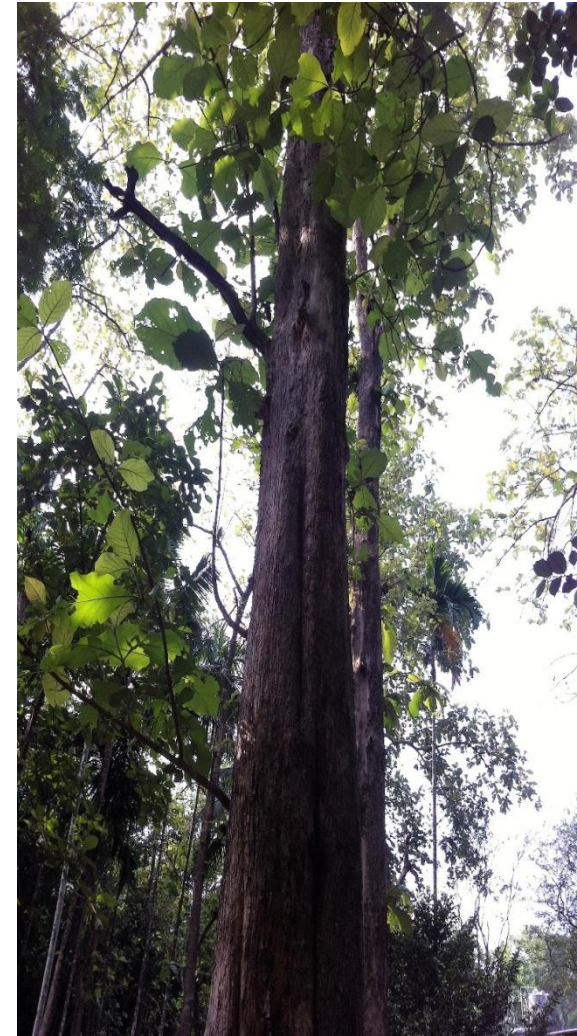
- AG Bioteck stands unique in the country, which identifies, develops protocols and produces tissue culture tropical hard wood species, including teak (***Tectona grandis***).
- World's first teak tissue culture plants were raised in India and AG Bioteck was part of it.
- AG Bioteck is only commercial Lab in the country producing Tissue culture Teak plants since 15 years



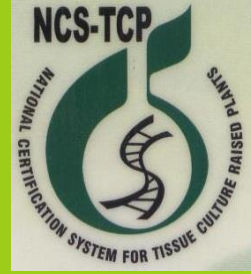
Teak – *Tectona grandis* Mother plant selection



- Teak (*Tectona grandis*), is a genus of Tropical Hard wood trees in the family Verbinaceae.
- They are large trees, growing to 30-40 m tall, deciduous in the dry season
- Teak timber qualities include attractiveness in colour and grain, durability, lightness with strength, ease of seasoning without splitting and cracking, ease of working and carving, resistance to termite, fungus, and weathering.



Teak Mother plant – Explants/tissues collection



Teak Tissue culture Process

Tissue culture is the modern Plant Biotechnology that is applied for mass production of superior planting material.

Tissue culture technology be utilized as a means to produce uniform desirable planting material on a large scale in Teak

a. Selection of Mother plants/clones

- AG Bioteck is successful in identifying the “Plus Trees” with desirable characters in Teak in all major growing states and developed the tissue culture techniques for mass multiplication with clone marking



In vitro propagation/tissue culture

Teak Tissues mass multiplication inside the Lab

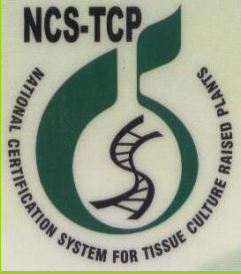


Plant tissue culture :Inoculation & Incubation Facility in the AGB Laboratory



Tissue cultured Teak

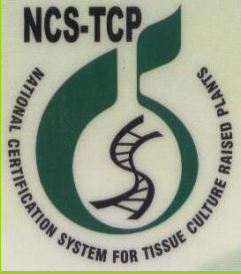
Sterile packing of plantlets for Primary hardening/Export



Tissue cultured Teak in Jiffy pots packing of primary hardening Plants for export



Tissue culture Teak- Laboratory to Green House for hardening



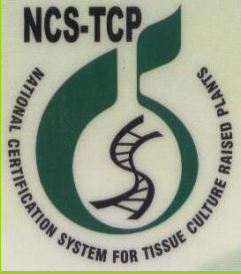
Acclimatization process



Tissue cultured Teak Plants Ready for field plantation after hardening



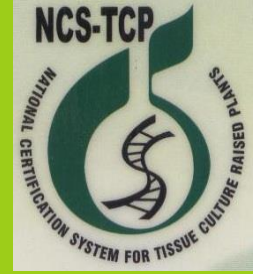
advantage – AG Bioteck tissue culture Teak



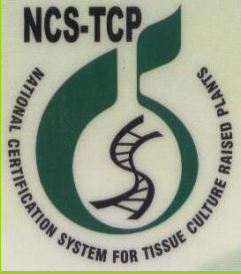
- **Left Image:** Tissue culture plants come with well established root system, grows straight, less branching
- **Right Image:** Stumps made from Seed grown nurseries, less root establishment, grows bushy, mother plant characters not known.
- Tissue culture plants developed from single meristem tissues, isolated from known, established Plus Trees, with all desirable characters.
- Hence yield is at expected levels
- Thinning is not required.



AG Biotech Tissue cultured Teak in field plantation (3 months old)



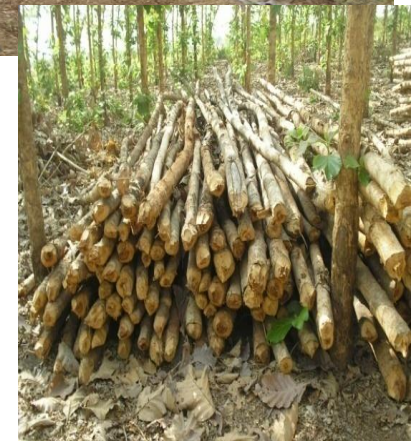
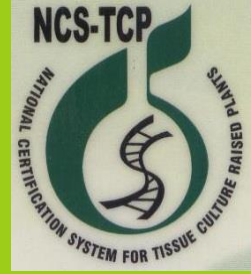
AG Bioteck Tissue cultured Teak in farmers' field (9 months old plantation)



AG Biotech Tissue cultured Teak in Farmers' field in different regions



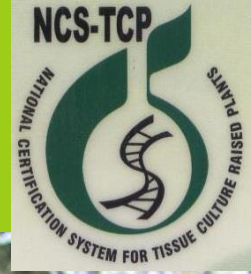
AG Bioteck Tissue culture Teak plants growing in the farmers field (6 months to 6 years old)



AG Bioteck Tissue cultured Teak in field 2'5" to 2'6" GBH in 6 years old teak plants



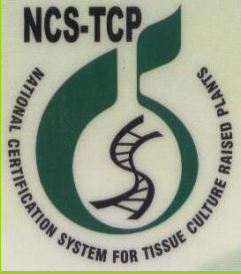
AG Biotech Tissue cultured Teak field 3' GBH in 9 years old teak plantation



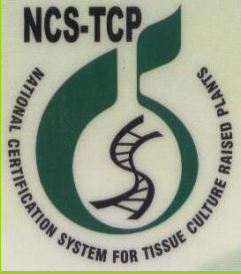
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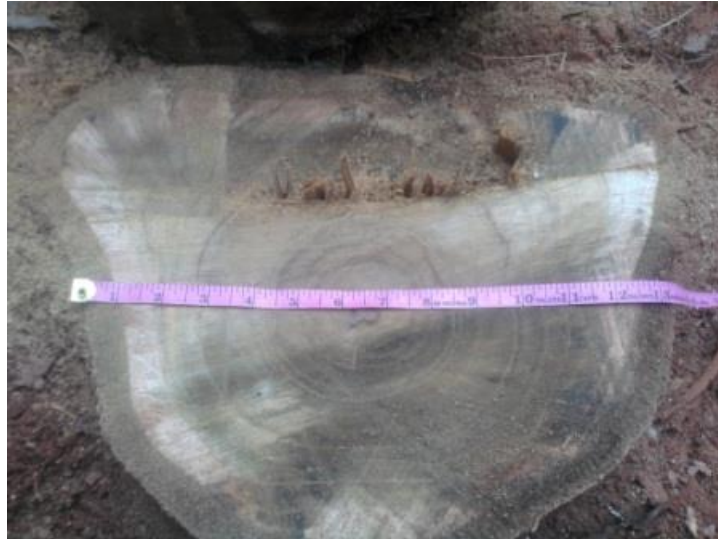
AG Bioteck Tissue culture Teak plants ready for harvesting in the farmers field (9 years old)



AG Bioteck Tissue culture Teak plants ready for harvesting in the farmers field (9 years old)



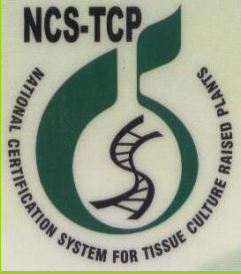
AG Bioteck Tissue culture Teak plants harvesting in the farmers field (9 years old)



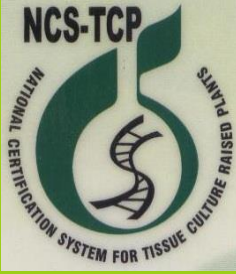
AG Bioteck Tissue culture Teak plants regenerated from the harvested stump (9yrs old)



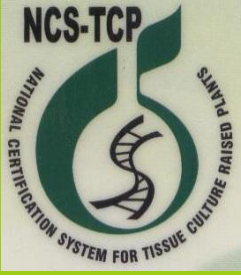
AG Bioteck Tissue culture Teak plants regeneration after 45 days harvesting in the farmers field



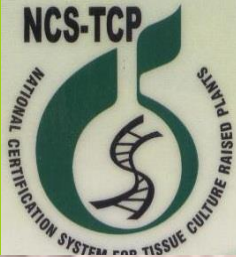
AG Bioteck Tissue culture Teak Tree Trunk with 90% heart wood after harvesting in the farmers' field (9 years old)



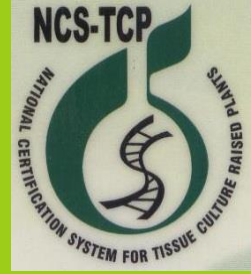
AG Bioteck Tissue culture Teak Tree Trunk with 90% heart wood after harvesting in the farmers' field (9 years old)



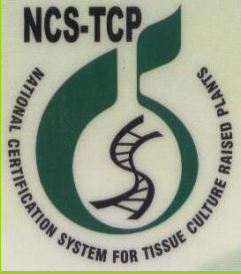
AG Bioteck Tissue culture Teak Trees harvested & Logged in the the farmer' field (9 years old)



AG Bioteck Tissue culture Teak trees kept in Logs after harvesting in the farmers' field (9 years old)



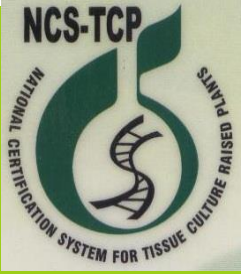
AG Bioteck Tissue culture Teak Tress Loga after harvesting in the farmers' field (9 years old)



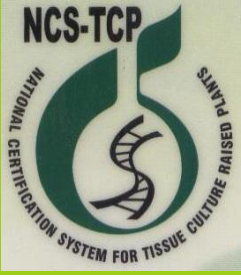
AG Bioteck Tissue culture Teak plants ready for harvesting in the farmers field (9 years old)



AG Bioteck TEAK Tree logs after harvest with Forest Dept .Permission (9 years Old)

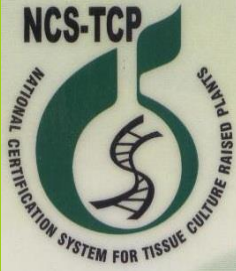


Teak Tree Trunk with 50" girth after 12 years of plantation



2018-5

AG Biotech Tissue culture Teak Plantation Felling permission by Govt. of AP



Forest Department

Rc.No.4340/2015-P2.
Dated: 13.11.2015.

Office of the Divisional Forest Officer,
Kakinada Division, Kakinada.

Proceedings of the Divisional Forest Officer, Kakinada Division, Kakinada. Present :: Sri M.Srinivasa Rao, S.F.S.,

Sub: Patta lands – Teak trees existing in patta lands – Sy.nos.271 & 279 of Koduru Village, Rowthulapudi (M), E.G.Dist - Application of Sri Guttamukkala Venugopalaraju, S/o Subrahmanyaraju and Smt Guttamukkala Annapurna, W/o Venugopalaraju, Parupaka (V), Rowthulapudi (M), E.G.Dist - Felling permission – Granted – Regarding.

Ref: 1. Tahsildar, Rowthulapudi Mandal, Ref.L Dis.B/492/2015, dt.09.07.2015.
2. D.F.O., Kakinada, Rc.no.4340/2015- M, Dt:24.07.2015
3. F.R.O., Yeleswaram, Rc.no.397/2015,dt.27.10.2015.

In pursuance of the instructions issued by the Pri. Chief Conservator of Forests, Andhra Pradesh, Hyderabad in Circular No 1 A/2003 and in the circumstances reported by the Tahsildar, Rowthulapudi Mandal, Forest Range Officer, Yeleswaram vide references 1st & 3rd cited, the Applicants, Sri Guttamukkala Venugopalaraju, S/o Subrahmanyaraju and Smt.Guttamukkala Annapurna, W/o Venugopalaraju, Parupaka (V), Rowthulapudi (M) is hereby permitted to fell and convert the following Teak trees existing in the patta lands. The work should be completed within (30) days from the date of receipt of this order in Range Office. No further extension of time will be granted. Otherwise, user charges will be re-imposed towards further inspections and extension of time.

Name of the Village	Sy.Nos.	Species	No.of trees permitted for felling	Estimated Quantity	
				Timber in Cmt.	Fuel
Koduru (V), Rowthulapudi (M)	271 & 279	Teak	656	276.583	0
		Total:	656	276.583	0

The applicant has paid user charges for Rs.6560/- vide challan no.0000001342 dt.07.10.2015, of S.T.O., Addateegala.

The above permission is granted subject to the following conditions.

1. After felling and conversion of the above trees, the party is directed to prepare the list for the material obtained both for timber and fuel and furnish the same to the Range Officer in triplicate.
2. After felling the Range Officer will inspect the material at stump site and affix the hammer marks at stump site.
3. The material obtained should be kept at stump site only.
4. The party should not cause any damage to R.F. and other properties.
5. If any irregularities are noticed action will be taken against him as per rules besides canceling the permission granted.
6. The party should produce Security Deposit for Rs.56,000/- (Rupees Fifty six Thousands only) duly pledged in favour of the District Forest Officer, Kakinada, produce the same to the Range Officer, Kakinada.

AG Biotech Tissue culture Teak Plantation Transport permit of Logs by Govt. of AP



Government of Andhra Pradesh Forest Department

Rc.No.4340/2015-P2
Dated :12.08.2016.

Office of the Divisional Forest Officer,
Kakinada Division, Kakinada.

Proceedings of the Divisional Forest Officer, Kakinada Division, Kakinada.

Present: Sri M.Srinivasa Rao, S.F.S.,

Sub: Patta Lands – Transport of Teak produce from Patta lands Sy.Nos. 271 & 279 of Koduru (V) of Rowthulapudi (M) – Application of Sri Guttamukkala Venugopalaraju, S/o.Subrahmanyaraju and Smt.Guttamukkala Annapurna, W/o.Venugopalaraju, Parupaka (V), Rowthulapudi (M), East Godavari District – Revalidation of Form-II permits – Orders issued – Regarding

- Ref:
1. Tahsildar, Rowthulapudi Mandal, Ref.L.Dis.B/492/2015, dt.09.07.2015.
 2. D.F.O., Kakinada, Rc.no.4340/2015- M, Dt:24.07.2015.
 3. F.R.O., Yeleswaram, Rc.no.397/2015,dt.27.10.2015.
 4. D.F.O., Kakinada, Rc.no.4340/2015- P2, Dt:13.11.2015.
 5. F.R.O., Yeleswaram, Rc.no.397/2015,dt.19.12.2015.
 6. D.F.O., Kakinada, Rc.no.4340/2015- P2, Dt:28.03.2016.
 7. F.R.O., Yeleswaram, Rc.no.397/2015,dt.21.07.2016.

On request of the applicant and as recommended by the Forest Range Officer, Yeleswaram vide reference 7th cited, **(30) Thirty Form-II permits** (by way of Lorries) sanctioned vide reference 6th cited are hereby revalidated with a voidah of **(60) Sixty days** for transport of 2501 Teak logs = 221.564 cmt. of teak timber & 150.00 cmt. of teak fuel from the date of receipt of this order in Range Office. The other conditions as stipulated vide reference 6th cited will hold good.

Sd/-M.Srinivasa Rao.

Contact for further details

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Kukatpally, Medchal Dist.,
Hyderabad-500 090
Mobile:+919848025050
Email:agbioteck@gmail.com**

thank you