



ICAR-CAFRI Technologies



ICAR-Central Agroforestry Research Institute
ISO 9001:2015 Certified Constituent Lab of ICAR

The Institute Technology Management Unit (ITMU) of the ICAR-CAFRI compiles the Intellectual Properties (IPs) generated by the institute scientists since 1988. The proposals so received are considered by the Institute Technology Management Committee (ITMC) that recommends eligible intellectual properties for registration under five major categories:

- ❖ Category I: New Concept
- ❖ Category II: New Process/Methodology, and Unique germplasm
- ❖ Category III: Technologies and Products including Tools and Design
- ❖ Category IV: Package of Practice(s)
- ❖ Category V: Strategic Knowledge

Each IP is coded alphanumerically with the last two segments of the code representing the category and the registration number. A select list of IPs with commercialization potential have been listed in this document.

Germplasm

- Bundel-2 (PT-2) and Bundel-6 (PT-6) of *Dalbergia sissoo* ('Shisham') (CAFRI/IP/II/005)
- Unique neem germplasm with high oil content/yield (CAFRI/IP/II/012)

Bankable Agroforestry Models

- Aonla-based agroforestry land use for rainfed conditions (CAFRI/IP/IV/002)
- *Acacia senegal* based agroforestry (CAFRI/IP/IV/005)
- Bamboo-based agroforestry models for six agroclimatic zones (CAFRI/IP/III/010)
- Bamboo (*Dendrocalamus strictus*) + Sesame (*Sesamum indicum*) based agroforestry model (CAFRI/IP/IV/009)
- Eucalyptus-based agrisilviculture system (CAFRI/IP/IV/001)
- *Acacia senegal* based bio-fence model (CAFRI/IP/IV/006)
- Agave and 'henna' based live fencing systems for soil and water conservation (CAFRI/IP/IV/003)
- Strawberry production technology for Bundelkhand (CAFRI/IP/IV/008)

Technologies for Quality Planting Material

- Air layering of neem (CAFRI/IP/III/006)
- Bench grafting in 'aonla' (CAFRI/IP/III/004)
- Bench grafting in Ber (*Zizyphus* spp.) (CAFRI/IP/III/005)
- Farmer-friendly technique to multiply *Bambusa vulgaris* (CAFRI/IP/III/019)
- Nursery techniques for *Pongamia pinnata* (CAFRI/IP/IV/004)
- Stem cuttings and air layering of *Pongamia pinnata* (CAFRI/IP/III/007)
- Top Working of Carissa (wild karonda) (CAFRI/IP/III/001)

Improved Methodologies & Tools

- Remote sensing & GIS based agroforestry mapping through subpixel classifier (CAFRI/IP/II/003)
- Unique methodology to quantify fuelwood from agroforestry (CAFRI/IP/II/0015)
- Age-age correlation models for *Dalbergia sissoo* (CAFRI/IP/III/008)
- Algorithm for early selection of elite trees of *Acacia nilotica* (CAFRI/IP/III/002)
- Non-Linear statistical tool for *Acacia nilotica* growth study (CAFRI/IP/III/018)
- Redefined logarithmic spiral trenching to understand the root structure and distribution of trees (CAFRI/IP/II/011)
- Statistical tool for eucalyptus growth study (CAFRI/IP/III/017)
- Faster and efficient genomic DNA isolation protocol for agroforestry tree species (CAFRI/IP/II/010)
- Leucaena specific SSR marker (CAFRI/IP/III/016)
- Gum tapping technique in *Butea* (CAFRI/IP/II/008)
- Gum-butea based laddu recipe (CAFRI/IP/II/009)

Design

- Bill hook for tapping gum-butea (CAFRI/IP/III/014)
- Design of low-cost check dam using gabion in Bundelkhand region (CAFRI/IP/II/004)
- Unique design for rainwater harvesting in Bundelkhand (CAFRI/IP/III/003)

Product

- Plantation/Nursery Kit (CAFRI/IP/III/011)
- Plant Breeding Kit (CAFRI/IP/III/012)
- Tree foliage-based vermicompost (CAFRI/IP/III/013)

Mobile app

- FarmTree mobile app (CAFRI/IP/III/009)
- Learn Agroforestry mobile app for Capsule Course on Agroforestry (CAFRI/IP/III/015)

Knowledge Product

- Training manual and Workbook for agroforestry entrepreneurship building of rural youth (CAFRI/IP/II/006; CAFRI/IP/II/007)
- Agroforestry Extension Framework (CAFRI/IP/I/004)
- Ready reckoner on *Har Med Par Ped* (CAFRI/IP/IV/007)
- Ready reckoner for plant disease in agroforestry (CAFRI/IP/V/011)
- Ready reckoner for insect pest in agroforestry (CAFRI/IP/V/012)

CAFRI के बारे में अधिक
जानने के लिए
To Know More about CAFRI

बहुउद्देशीय वृक्ष के बारे में
अधिक जानने के लिए
To Know More about
Multipurpose Trees

सेवाओं के लिए भुगतान
करने के लिए
To Pay for Services



Agroforestry Business Incubation Centre

ABiC

Institute Technology Management Unit (ITMU) of CAFRI facilitates incubation of new startup/entrepreneurs and enterprises for innovation technologies by providing need based physical, technical, business and networking support, facilities and services to test and validate business ventures of the incubates in agroforestry-based enterprises. Also, the IP/deemed IP are commercialized for creating an ecosystem for entrepreneurship. ABiC activities includes thematic areas like are plant nursery; semi-processed items like juice, jam, pulp, gum & resin, etc.; tree seed marketing; timber and wood-based products; fibre and flosses; biofuels and briquettes; essential oils; mini-clonal technology and agroforestry models.

**Promoting Agroforestry based Business Opportunities and
Creating an Ecosystem for Entrepreneurship**

Director

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CENTRAL AGROFORESTRY RESEARCH INSTITUTE

TIMBER, FODDER, FRUIT AND GRAIN - AGROFORESTRY LIFE AGAIN