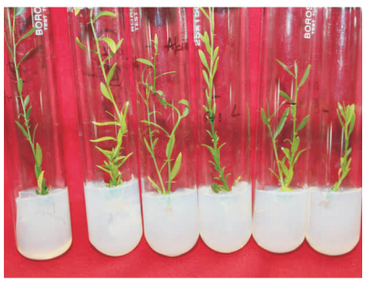
INFORMATION BOOKLET









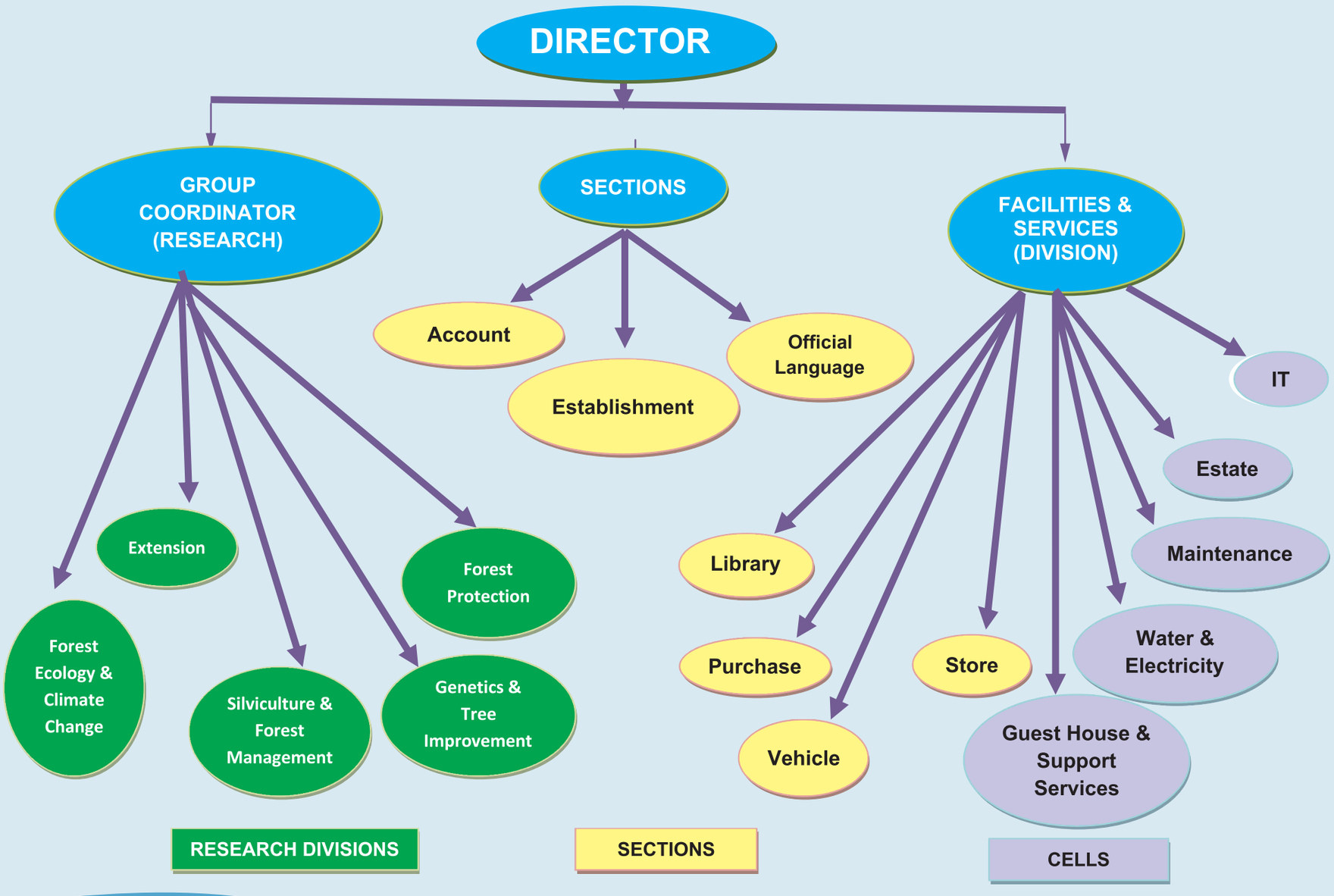

ARID FOREST RESEARCH INSTITUTE, JODHPUR

(Indian Council of Forestry Research & Education, Dehradun)

An autonomous body of Ministry of Environment, Forest and Climate Change, Govt. of India

P.O. Krishi Mandi, New Pali Road, Jodhpur-342 005 (Rajasthan)

AFRI's ORGANISATIONAL STRUCTURE



ICFRE MISSION

To generate, advance and disseminate scientific knowledge and technologies for ecological security, improved productivity, livelihoods enhancement and sustainable use of forest resources through forestry research and education.

AFRI Mandate

- To undertake and promote forestry research, education and extension, leading to scientific and sustainable management of forests, with a special focus on arid and semi-arid regions.
- To provide scientific advice to the central and state governments aiding informed decision making in matters of national and regional importance and international commitments and to address forestry research needs.
- To carry out research in forestry with focus on biodiversity conservation, silvicultural and biotechnological techniques to maximize productivity of arid and semi-arid vegetation.
- To provide technical assistance and material support to states forest department, communities, forest based industries, tree & NTFP growers and other stakeholders in their forestry based programmes for conservation and sustainable use of forest resources.
- To develop technologies for combating desertification and eco-restoration of degraded ecosystems.
- To undertake research in sustainable resource utilization of non-timber forest produce through value addition.
- To develop, upscale, disseminate and share appropriate technologies to end-users through innovative extension strategies and capacity building programmes.
- To act as repository of knowledge related to forestry, environment and climate change, especially with respect to arid and semi-arid regions.
- To undertake all such activities as necessary, incidental and conducive to attainment of the objectives of the Council.

THRUST AREAS

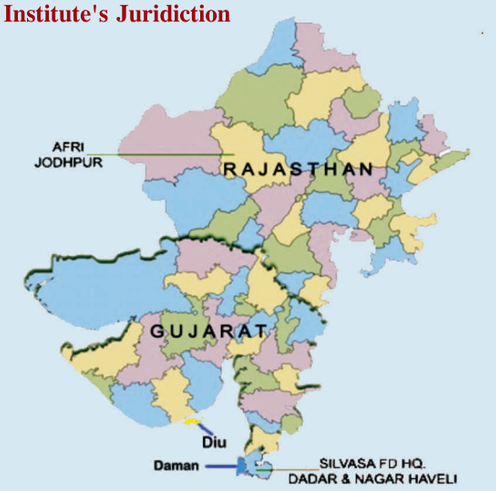
The main thrust areas of the Institute include: Soil, Water and Nutrient Management; Technologies for Afforestation of Stress Sites; Management of Plantations; Planting Stock Improvement; Nursery and Plantation Techniques; Seed Technology, Biofuels, Biofertilizers and Biopesticides; Agroforestry, JFM & Extension; Phytochemistry; Non-Timber Forest Products; Integrated Pest & Disease Management, Biodiversity and Climate Change, and Forestry Education and Training.

RAJASTHAN
Geographical area = 3,42,239 sq km
Forest area = 32,737 sq km (9.6%)
Forest cover= 16,629 sq km (4.8%)

GUJARAT
Geographical area = 1,96,022 sq km
Forest area = 18,999 sq km (9.7%)
Forest cover= 15,152 sq km (7.7%)

DADRA & NAGAR HAVELI AND DAMAN & DIU
Geographical area = 981 sq km
Forest area = 212 sq km (21.6%)
Forest cover= 228 sq km (23.19 %)

Institute's Juridiction



Establishment of Institute	1988	Named as Institute of Arid Zone Forestry Research (IAZFR) and ran in a rented building of Chopasani Housing Board, Jodhpur
Shifted to present campus	1995	AFRI main campus on New Pali Road, Near Jhalamand Circle, Jodhpur
Total Area (ha)	65.15	Main campus(20.82 ha), Plot 729 (9.92 ha), Experimental fields and Model Nursery (34.41 ha)
Sanctioned strength	150	Director, Group Co-ordinator (R), CFs, DCFs, Scientists, Under Secretary, Assistant Director (Official Language), Account Officer, Section Officer, Technical Service Officers, Private Secretary, Librarian, Library Information Assistants, Assistants, Stenographer, Junior Hindi Translator, UDCs, LDCs, Drivers, Deputy Range Officer, Forester, Forest Guards and MTS.
Divisions	6	Silviculture and Forest Management, Genetics and Tree Improvement, Forest Ecology and Climate Change, Forest Protection, Extension and Facility & Services.
FRI University Centre	1988	There is a centre of FRI (Deemed) University at AFRI for conducting Ph.D. research & education in different fields of forestry.
Laboratories	9	ICP-MS Lab, Molecular Biology Lab, Reproductive Biology & Genetics Transformation Lab, Bio Control Lab, Soil Salinity Lab, Plant Sample Processing Lab, Central Facility Lab, Seed Technology Lab & Forest Genetic and Resource Conservation Lab.
Library	1	Total collection of 56,000 Indian & Foreign Books including Proceedings, Forestry Research, Indian and Foreign Journals/Magazines, Bulletins, Reports, Newsletters, News Clippings, Pamphlets and AFRI/ICFRE Publications.
Information Technology Cell	1	The IT Cell of the Institute facilitates different research divisions with the latest facilities in the field of IT. It is looking after the operation and the maintenance of the bilingual website of the Institute, computer terminals of users, Local Area Network, Anti-virus Server, and Video Conferencing Facilities through National Knowledge Network (NKN). IT cell also looks after the functioning of IFRIS modules, organizing webinars, Aadhaar Enabled Biometric Attendance System and network of CCTV Security Cameras etc.After Covid-19 pandemic the role of IT Cell has increased manifold.

PROJECTS AND PROGRAMMES

The institute undertakes ICFRE-Plan (in-house), CAMPA as well as externally aided projects funded by various agencies like DST, DBT, NMPB, etc. and also taken consultation; and conducts trainings under Green Skill Development Programme (GSDP), Umbrella Scheme, VVK/DV and ICFRE plan projects for farmers, VFPMC members, field functionaries of Forest Departments and Panchayati Raj Institutions (PRI). Under CAMPA 22 AICRP & FGR projects have been taken up.

Traditional Agroforestry Models

RESEARCH HIGHLIGHTS/ MAJOR RESEARCH AREAS IN FOCUS

Traditional Agroforestry Models

Different agroforestry models have been developed involving various tree species of arid region. Optimum tree density for *Prosopis cineraria* and *Tecomella undulata* was 833 at 2-3 year, 417 at 4-6 year, 278 at 7-8 years and 208 tree ha-1 at 9-11 year.

In Rajasthan all agroforestry systems reduces crop yield (20% in *P. cineraria* to 57% in *S. oleoides* system), but improved SOC by 12.8%, total nitrogen by 12.6% and available potassium by 9.5% were benefits of this system.

A. senegal based agroforestry reduced crop by 58.1% at 30-40 trees/ha. Agroforestry trials of sandalwood with horticulture plant have also been established at different location in Gujarat and Rajasthan.

Sand Dune stabilization

Sand dune stabilization

In stabilizing sand dune in Shekhala area of Jodhpur district, best performing species were *Acacia planifrons* and *Prosopis juliflora*.

Use of *Cassia angustifolia* (Sonamukhi) as live micro-wind break was very effective in sand drift control. Combination of *Calligonum polygonoides* and *Cassia angustifolia* gave maximum yield and controlled sand drift most efficiently.

Soil and water Conservation

In situ rain water harvesting structures enhanced survival and growth of the tree plants, where plant biomass increased by 4-5 times over the control with normal pitting. Ring pit, trench and mound structures were found to be superior.

Rainwater harvesting and afforestation techniques were adopted in restoring a degraded hills. It enhanced soil fraction by 3-4 fold and SOC by 12.20 to 28.16%, herbaceous biomass by 34.9% and herbaceous diversity from 39 to 92 species during 2005- 2009, and controlled run-off, soil and nutrient losses. Enhanced plant growth increased the canopy density up to 30%. Soil and water conservation measures have improved the availability of water, fuel wood and fodder for people living around.

Eco restoration of Aravali Hills

Carbon Sequestration and Storage

Inventorization of soil carbon in 18 sub groups of forests in Rajasthan and Gujarat showed soil carbon density of 1.46 to 38.92 tonnes ha^{-1} depending upon forest types and climatic conditions.

In Rajasthan average density of soil organic and inorganic carbon was 35.61 tonnes ha^{-1} and 43.26 tonnes ha^{-1} in top 100 cm soil depth after gravel correction. Total soil organic and inorganic carbons stored in top 100 cm soil layer were 121.61 and 142.62 million tonnes respectively.

Water Management, Bio drainage and Water Utilization

Spot method of irrigation was best for growth of *Dalbergia sissoo* with water use efficiency of 12.2 kg biomass production per mm of water use.

Quantity of water added per irrigation was better than frequency of irrigation. *Eucalyptus camaldulensis* was efficient water user even at severe water stress. *Dalbergia sissoo* showed highest water use efficiency at mild stress, but efficiency reduced to lowest at severe water stress.

Among *Eucalyptus camaldulensis, E. fastigata, E. rudis,* and *Corymbia tessellaris, E. rudis* found the best with highest growth, biomass (302 kg/tree), transpiration rate, and reducing water level by 145 cm. *A. nilotica* and *T. aphylla* showed higher tolerance towards salinity compared to *E. Camaldulensis*.

Water Management

Sewage is an alternate resource for producing biomass in this region. *E. camaldulensis, Azadirachta indica, P. juliflora*, *Salvadora persica* and *Acacia nilotica* found best in treated waste utilization of Jodhpur city.

Biological Diversity

Waste Water Utilization

Carbon dynamics in forests and tree outside forest (TOF) was assessed in various districts of Rajasthan. Twenty one trees and 11 shrub species were identified. The highest number of species was in Jaipur followed by Hanumangarh forest division.

Sacred groves of Rajasthan were found dominated by 26 tree species.

Most traded species in the region are A*loe barbadensis, Ricinus communis, Plantago ovata, Lawsonia inermis, Cassia angustifolia, Withania somnifera*, and *Cymopsis tetragonoloba*.

Fringe forest areas are dominated by *Prosopis julifora*. Least dominant is *Zizyphus zylopyrus*.

Management plan has been developed by assessing biological diversity and recording people perception in 55 villages in Jodhpur district for wildlife outside protected areas.

Biological Invasions

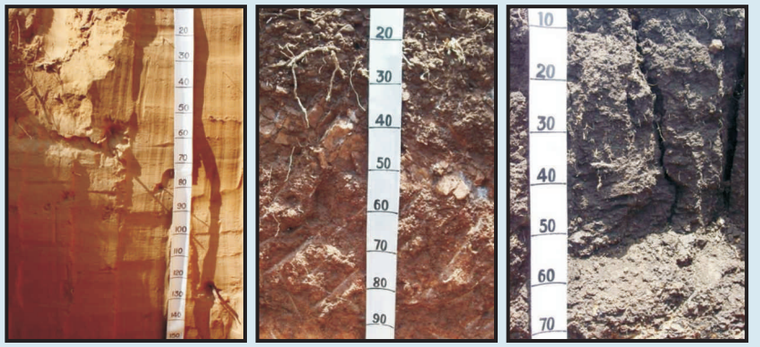
P. juliflora and L. camara are dominant invasive species covering > 30% sites of forests, sacred groves and pasture lands in Rajasthan.

Forest Soils

Forest soils of Rajasthan are skeletal, low to medium in PO_4-P content, low in available nitrogen and variable in available K. Functional aspect of species are related to type of soils and rocks from which soil derived and hence can ben used accordingly in restoring degraded forest lands.

Biomass Equation and Growth and Yield

Biomass equations have been developed for estimating above ground, below ground and total biomass of tree, shrub and under shrub species of Rajasthan. Volume tables, site index equations, mortility models (potential density, generalized height-dbh and basal area prediction models) developed for various species. Anamorphic height growth models for *Prosopis cineraria* and *Ailanthus excelsa*, volume functions for *A. tortilis* and biomass equations for *A. indica* have also been constructed for their use in estimation of stand volume and biomass.



Observation on Soil-Vegetation Relation

Tree Improvement Works

Among 367 CPTs of *Azadirachta indica* selected, oil content varied from 28%-56% and *Azadirachtin* content varied from 1000 ppm to 10,000 ppm. A progeny trial of 17 CPTs having high oil and *Azadirachtin* contents was established at Govindpura, Jaipur. Progeny trials at Deesa in Gujarat have been selected for evaluation and collection of seeds.

New grafting techniques have been developed for *Ailanthus excelsa* with enhanced success rate. In a trial, female plants performed better and produced 60% more fodder and 30% more wood over male plants of *A. excelsa*.

41 CPTs of *T. undulata* were identified based on different growth parameters in various districts of Rajasthan. Two progeny trials of 36 CPTs have been established in 2013-14 at Jodhpur and Jhunjhunu districts. Four diverse population have been idenfied using ISSR marker for future tree improvement work.

A total 101 CPTs of Khejri were selected from Rajasthan. RAPD and ISSR DNA Markers were used for analysis of genetic diversity. Heterozygosity was highest in Jaisalmer population and least in Sikar population.

Vegetative Propagation Protocols

Vegetative propagation protocols have been developed for *Azadirachta indica, Ailanthus excela, Salvadora persica, Dalbergia sissoo, Eucalyptus camaldulensis*, *Capparis decidua, Commiphora wightii, Balanites aegyptiaca, Jatropha curcas* and *Terminalia arjuna*.

RAPD analysis indicated 0.9 to 0.7 variability in *C. wightii* during successive cycle of embryogenesis.

Gene Expression Analysis

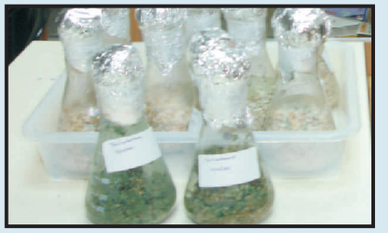
Functional Enrichment Analysis identified *Arabidopsis* genes and *Populus orthologus* genes for osmotic stress response (34), cold response (8 each), drought response (9 and 8) and *Populous* for salinity response (4 each).

Expression under salt stress indicated high gene expression levels (nhk-1, sos-1 and clc-c) in *Lepidium sativum* even under normal conditions. The expression levels of hkt-1 gene did not undergo a remarkable change even at highest salinity levels of 200 mM NaCl treatment.

Isolation of Important Micro-organism

Macrophomina phaseolina, Phytophthora species, *Rhizoctonia solani* and *Fusarium solani* caused charcoal root rot, damping off and wilting of Neem at nursery stage and *Ganoderm lucidum* caused white rot in plantations.

Beneficial rhizospheric micro-organism and *Trichoderma* and *Pseudomonas,* Azotobacter spp and Rhizobium spp. have been identified and are in use.



Mass Multiplication of *Trichoderma* on Sorghum

Biofertilizers

Application of *Azospirillum brasilense, Azotobacter beijerinckii, Bacillus thurengiensis, Trichoderma harzianum,* consortia of AMF either individually or in different combinations to neem seedlings promoted seedlings growth.

Maximum collar growth was with combination of *Azotobacter+Azospirillum+Trichoderma*. *Pyriformospora indica* increases biomass in Khejri and Neem and yield in senna and Isabgol crops.

Quality planting material using consorita of bio-ferliizers

Rhizosphere soils of *Dendrocalamus strictus* and *Bambusa bambos* are dominated by *Glomus, Acaulospora, Gigaspora, Sclerocystis* and *Scutellospora* species. *Glomus* species dominated in nurseries and plantations. Root colonization varied from 76 to 87 per cent.

Managemnet of Khejri Mortality

Acanthophorus serraticornis and *Ganoderma lucidum* are main biotic factors causing khejri mortality.

Root treatment using Bavistin 50% WP + Chloropyriphos 20% EC+ Agromin, shoot treatment with AFRI paste (lopped exposed area) and 2/3rd tree lopped was found effective in minimizing the tree loss.

Use of Propiconazole, leaf extract of *Prosopis juliflora* and *Trichoderma harzianum* have been able to manage *Ganoderma* root rot pathogen *in vitro* as well as *in vivo*.

Insect Pollinators and Pod Production

Number of insect species visiting different tree species and favouring pod production were 50 on *Acacia senegal*, 44 on *C. decidua* and 41 on *P. cineraria*.

Shoot Treatment with AFRI paste

Demonstration of Pickle Preparation SHG members

Value Addition to NTFPs

Different underutilized NTFP species of Rajasthan have been value added and tested for their nutritional values. Pickle, murabba, squash, dehydrated fruits, candy, etc., were prepared and products were demonstrated to VFPC/tribal SHG members.

Nutritional values of Kair fruits was maximum when soaked in 100% butter milk for 8-10 days. Pillow packaging through nitrogen flushing found better for long time preservation of dried fruits.

Enhancement of Kair Fruit Production

Application of organic and inorganic fertilizers along with *in situ* moisture conservation helped in enhancing number of fruiting shrubs and fruit yield. Application of LCM in combination with P, K and Zn was the best with 100% fruiting (796.3 g).

Enhancement of Kair Fruit Production

Improved of Durability of Lesser Utilized Timbers

Treatment of *Azadirachta indica* and *Acacia senegal* wood using 'Biflex Tc' and complex mixture of Copper sulphate, Potassium dichromate and Prosopis juliflora bark extract enhanced duration of furniture made out of it.

Casuarina Improvement Work

AFRI has undertaken *C*asuarina improvement work in Gujarat region by introducing high yielding clones. Thirty clones of *Casuarina equisetifolia, C. junghuhniana* and their hybrids have been procured from various agencies in South India and put under field performance trials at Rajkot and Bhavnagar.

Salt land Rehabilitation

For saline-alkali soil *Salvadora persica* is best with for maximum survival. Combination of gypsum + 9gN was found best for rehabilitation growth and biomass yield. *Atriplex letiformis* grow in sandy soil with addition of nitrogen and FYM. *Acacia ampliceps* is suitable for gypsum treated deep alkali soils with better survival and biomass. *Sueada nudiflora* is best suited for sandy saline soil. Double Ridge and Circular Dished Mound enhanced survival of plants by providing protection from water-logging and less salty environment. Crescent shaped drainage trenches are helpful in salts leaching.

Environmental Impact Assessment

Evaluation and impact assessment works carried out by AFRI includes: Combating desertification programme of SFD, Rajasthan, silvopastoral work in Bhilwara, roadside plantation of JDA, Jodhpur, reclamation of water-logged area in Srianganagar/Hanumangarh, Sunel Watershed in Jhalawar, etc.

Compensatory Afforestation and Management Authority (CAMPA)

Randomly selected 156 assets and 86 plantation sites throughout Rajasthan were evaluated based on the works carried by the SFD, Rajasthan at 1079 sites covering afforestation and refforestation under non-forest lands, degraded forest lands and Assisted Natural Regeneration Models, and asset developments.

Luni River DPR

In 2019-20 a detailed project report for rejuvenation of the Luni River and its tributaries has been prepared through proper identification of the gaps and by providing specific solutions depending on the severity of the problems in this dry region. A total number of 2042 sites have been selected for forestry and conservation interventions covering an area of 70224.6 ha costing over Rs. 500 Crores for a period of 5 years.

Extension Activities

To disseminate forestry research findings to the end users/stakeholders and to motivate, mobilize and involve local public in forestry activities three Van Vigyan Kendras (VVKs) have been established in Rajasthan, Gujarat and Dadra & Nagar Haveli & Daman and Diu. One more VVK under Udaipur Circle is Proposed.

At tail end of IGNP Mohangarh, Jaisalmer a Demo Village is being established where all technologies developed by AFRI will be show cased.

Improvement in Seed Germination in *Anogeissus pendula*

28 seed lots of *Anogeissus pendula* collected from various places in Rajasthan showed wide variation in seed size, 1000 seed weight and germination parameters. In laboratory, highest germination (10.79%) was recorded in seeds from Desuri in Pali district. In nursery, highest germination (5.73%) was observed in seed lot collected from Parasram Mahadev, in Rajasthan.

Model Nursery/Arboretum/Cactus Garden

A Model Nursery of covering 6.4 ha is located at New Pali Road, Jodhpur where in more than 50,000 arid & semi arid plant species, ornamentals, avenue trees and about 10,000 medicinal plants are being produced annually.

An arboretum of around 85 indigenous species of have been established in 2.5 ha area near Model nursery. This serves as ex-situ conservation of main species of dry areas of Rajasthan.

A unique garden of Cactus and Succulent Plants has been established in 2019-20. It has been enriched with more than 200 species collected from various parts of the Rajasthan and Gujarat.

Medicinal Plants in Model Nursery

Neem Leaves Compost Preparation

Sh. M.R. Baloch, IFS, Director AFRI took initiatives to utilize the huge nos. of neem leaves by converting into compost other wise litter were either burnt or disposed off. In 2019-20 total 12 nos. of pits (24'x8'x5') were dug which could produce around 4000 cu ft pure neem leaves organic compost which has been branded & is being sold at Nursery and also being used for various purpose by AFRI.

Neem Patti Composting

Tree Shifting/Translocation Initiatives

At AFRI campus total 9 nos. of arid zone tree species (2 Khejri, 2 Neem, 2 Rohida, 1 Israili babul and 1 Peepal) have been shifted within AFRI main campus through SFM Division as pilot experiment during Oct. 2020. 6 nos. of iron sheets made Tree Lifting Device (TLD) was conceptualized & designed by Sh. M.R. Baloch, IFS, Director AFRI. This is first effort in Rajasthan for scientifically translocation of local tree species (5-35 years old). Its results will help in future plannings in Rajasthan.TLD's iron plates can be wrapped & tied around the soil ball of tree to be shifted and then tree could be lifted with Hydro for transplanting at new place successfully.

Tree lifting with TLD

Transportation of Tree by Hydro.

OTHER INFORMATION WORTH HIGHLIGHTING

- MOU between ICFRE & Kendriya Vidhyalaya and Navodaya Vidhyalaya Sangathan (under 'Prakriti' program of ICFRE) to create awareness among students for sustainable use of natural resources.
- Organization of visit of AFRI Extension and Interpretation Centre and Model Nursery and lectures on plantation techniques and environmental awareness.
- Organized Tree Grower Mela in 2017 for tree growers, progressive farmers, NGO's and other stakeholders.
- Organized training for farmers, VFPMC members, Field functionaries of Forest Department and PRI functionaries under Umbrella Scheme and ICFRE plan projects.
- Under Green Skill Development Programmes: Organized 5 training programmes on value addition & marketing of non timber forest products, waste management and management of botanical gardens.
- Demonstration cum training programmes on Value Addition of underutilized NTFPs in tribal area of Sirohi District from 2016-March-2021. Documentation of roles of neem leaves, sonamukhi and isabgol in rural livelihood.
- Two trainings were organized on cultivation of Sandal for farmers and forest officials in 2017.
- Extensive survey of 3,287 Community Forests and preparation of Micro-Plan of 15 villages for rehabilitation of pasture lands.
- Establishment of model roadside plantation, i.e. urban afforestation model for greening Jodhpur city.
- AFRI has participated in COP-14 of UNCCD held at Noida in Sept. 2020 and also participated in CMS COP-13 at Gandhinagar, Gujarat in Feb, 2020.
- To make their optimum use, fallen neem and other leaves are being collected and compost is prepared by anaerobic method. This compost is packed in consumer's pack and is being sold at AFRI Model Nursery.
- Compulsory Training Program of IFS Officers is regularly conducted every year for last 20 years.
- 200.85 KWP solar panels have been installed in AFRI main campus that generates 25394 KWH electricity per month.

Prakriti program at Kendriya Vidhyalaya

Training under VVK Gujarat

Visitors at Interpretation Centre

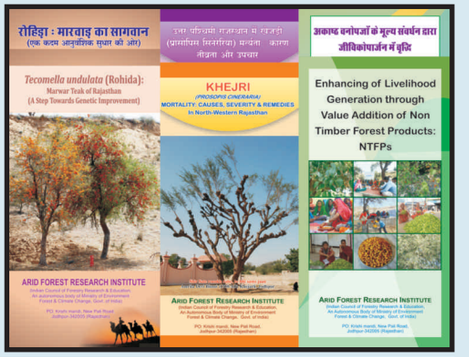
EXPERTISE AND TECHNICAL SERVICES AVAILABLE

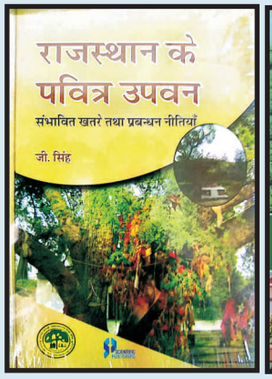
1. Cultivation of Sandalwood.
2. Nursery technology for important arid zone species.
3. Value addition of lesser known NTFPs.
4. Insect pest and disease management of important forestry species
5. Mass multiplication of biofertilizers for tree species.
6. Natural resource conservation and management.
7. Beekeeping for productivity enhancement of fruits/pods of Trees/shrubs
8. Tree species characterization using DNA finger printing.
9. Tissue culture techniques for mass multiplication of tree species.
10. Bioinformatics for gene mining.
11. Biological diversity assessment and development of management plan.
12. Carbon accounting and budgeting for forest and other ecosystems.
13. Reclamation of salt affected soil in arid zone.

AFRI PUBLICATION

Books

i. Forestry Research Extension: Challenges & Strategies
ii. A Manual for Dryland Afforestation & Management
iii. Sacred grooves of Rajasthan: Threat & management strategies
iv. Babool (Acacia nilotica)
v. Compensatory Afforestation in Rajasthan: An Evaluation
vi. Advance in Bamboo Plantation Management & Utilization
vii. Monograph on Marwar Teak Tecomella Undulata Sm.) Seem
viii. शुष्क क्षेत्र वनीकरण एवं वन प्रबंधन: तकनीकी एवं कार्य विधियाँ
ix. राजस्थान के पवित्र उपवन : संभावित खतरे तथा प्रबंधन नीतियाँ





42 pamphlets, brochures and leaflets in Hindi and English on important arid zone species and on important research findings of AFRI were published.

Magazine: Quarterly magazine AFRI Darpan publishing regularly since 2003.

Bilingual Pamphlets/booklet/brochure published in 2020 are :

i. Model Nursery AFRI (आदर्श पौधशाला: आफरी)
ii. Khejri *(Prosopis cineraria)* Mortality : Causes, Severity and Remedies in North-Western Rajasthan (उत्तर पश्चिमी राजस्थान में खेजड़ी (प्रोसोपिस सिनेरेरिया) मृत्यता: कारण, तीव्रता और उपचार)
iii. *Tecomella undulata* (Rohida) : Marwar Teak of Rajasthan (A step Towards Genetic Improvement) (रोहिड़ा: मारवाड़ का सागवान)
iv. Red Sanders (Lal Chandan): A Green Gold (लाल चन्दन: रक्तचंदन) हरा सोना
v. Farmer's Guide for White Sandalwood Cultivation (किसानों के लिए सफेद चन्दन की खेती हेतु मार्गदर्शिका)
vi. Enhancing of Livelihood Generation through Value Addition on Non Timber Forest Products: NTFPs (अकाष्ठ वनोपजों के मूल्य संवर्धन द्वारा जीविकोपार्जन में वृद्धि)
vii. Casuarinas : multipurpose Nitrogen Fixing Plants
viii. Information Booklet
ix. AFRI Pamphlet

Facilities and Amenities

Guest House

Scientist Hostel and Transit Accommodation

Community Hall

VC Hall

Extension & Interpretation Centre

Kishan Mela Sthal

Library cum Information Centre

Play Ground

Conference Hall

Seminar Hall

Auditorium

729 Campus