



Technical Bulletin
CAFRI/2024/03

Agroforestry Success Stories

(Transforming Livelihoods and Ecosystem Restoration)



ICAR-Central Agroforestry Research Institute

Krishivaniki Vihar, Jhansi 284003, Uttar Pradesh

Agroforestry Success Stories

(Transforming Livelihoods and Ecosystem Restoration)

Priyanka Singh
A Arunachalam
A K Handa
R P Dwivedi
Sushil Kumar
Suresh Ramanan S



ICAR-Central Agroforestry Research Institute

Krishivaniki Vihar, Jhansi 284003, Uttar Pradesh

Citation

Singh, P., Arunachalam, A., Handa, A.K., Dwivedi, R.P., Kumar, S. and Suresh Ramanan S (2023) Agroforestry Success Stories (Transforming Livelihoods and Ecosystem Restoration). Technical Bulletin CAFRI/2024/3. ICAR-Central Agroforestry Research Institute, Jhansi 284003, 80 p.

Technology Bulletin No. CAFRI/2024/3

Year of Publication: 2024

©ICAR-CAFRI

The users of this publication must ensure prop attribution to the publisher.

Acknowledgements

The authors thank the Indian Council of Agricultural Research, New Delhi for its support and guidance to benchmark agroforestry technology development and transfer for the benefit of the stakeholders. The Central Agroforestry Research Institute and the constituent AICRP on Agroforestry have contributed to the technology development and further extension activities. ICRISAT, Hyderabad partnered in the landscape level interventions in the documented stories. Thanks are due to SAFE, Kolkata for sharing unique story on mangrove agroforestry, and the state governments of Uttar Pradesh, Madhya Pradesh, Arunachal Pradesh and Assam, and the farmers/villagers for sharing a few success stories from ground zero. Special thanks to the AICRP Centres being hosted by State Agricultural Universities, in particular, ANDUAT, Ayodhya; BCKVV, HRS, Jhargram; CCSHAU Hisar; CSKHPKV, Palampur; GBPUA&T, Pantnagar; GKVK, UAS, Bengaluru; JNKVV, Jabalpur; KAU, Thrissur; OUAT, Bhubaneswar; PAU, Ludhiana; PDKV, Nagpur; PJTSAU, Hyderabad; SDAU, SK Nagar; SKNAU, ARS, Fatehpur Shekhawati; SKUAST-K, Srinagar; TANUVAS, IAN, Kattaupakkam; TNAU, FCRI, Mettupalaym and UAS, Dharwad for sharing the relevant information as inspiring stories. All photographs in the document have been shared duly by the information providers only.

Disclaimer

The document has been prepared in academic spirit to also inspire a few stakeholders for adopting agroforestry-based technologies for transforming livelihoods and ecosystem restoration at local and/or regional level.

Published by:

Director
ICAR-Central Agroforestry Research Institute
Jhansi 284003, Uttar Pradesh

Printed at :

Classic Enterprises, Jhansi 284003, Uttar Pradesh
7007122381, 9415113108



भारतीय कृषि अनुसंधान परिषद्

कक्ष क्र. 101, कृषि अनुसंधान भवन-II, नई दिल्ली-110 012, भारत

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Room No. 101, Krishi Anusandhan Bhavan-II, Pusa, New Delhi-110012, India

डॉ. सुरेश कुमार चौधरी

उप महानिदेशक (प्राकृतिक संसाधन प्रबंधन)

Dr. Suresh Kumar Chaudhari

Deputy Director General (Natural Resources Management)

01.05.2024



Foreword

Agroforestry has emerged as one of the sustainable land use systems and India is being described as the cradle of agroforestry due to its long history of the practice and array of systems under diverse agro-ecological conditions. The ICAR-Central Agroforestry Research Institute (CAFRI), Jhansi and All India Coordinated Research Project on Agroforestry (IACRP-AF) have developed multitude systems that have evolved based majorly on accrued wisdom and adaptation strategies of small holders to meet their basic needs for livelihood and cash income in the wake of increasing demographic pressure and decreasing land availability. These various agroforestry systems have been a way of life and closely linked with social, religious, traditional and cultural ethos. Today, we have a number of agroforestry technologies for different stakeholders across the agro-climatic regions of the country based on the local conditions and requirements. These technologies have gained popularity through adoption in farmers' field and have some significant impact on ground at landscape level. The current publication entitled "Agroforestry Success Stories (Transforming Livelihoods and Ecosystem Restoration)" documents success stories from different agro-climatic zones of the country based on field interventions and experiences. These success stories shall encourage other stakeholders to adopt agroforestry as a game changer in livelihood and environmental management in totality.

I congratulate the contributors and the editors for bringing out this useful publication and appreciate the efforts of ICAR-Central Agroforestry Research Institute and the All India Coordinated Research Project on Agroforestry in spearheading tree-based food production systems in an integrated manner.

(S.K. Chaudhari)

Preface

Climate change, along with widespread forest destruction, is posing a serious threat to humanity's survival by exacerbating land degradation. Despite the insufficient forests to support a healthy ecosystem, the increasing demands of a growing population limit the expansion of forested areas. This necessitates a widespread change in land use practices. One potential solution to this problem is the adoption of agroforestry, which has been proven to help mitigate the effects of climate change, prevent land degradation, and increase biomass production without requiring additional land. Therefore, agroforestry is the only viable option to prevent further degradation and to restore agricultural economies in harmony with nature. In India, research and development programmes promoting agroforestry have been implemented over the past five decades, but the rapid adoption of tree-based farming remains a challenge.

ICAR-Central Agroforestry Research Institute (ICAR-CAFRI), Jhansi has successfully served the country for 35 years achieving several milestones in integrating trees, crops and livestock on the same farmland. As part of its national agroforestry mandate, the institute has worked to systematize the science of agroforestry and has developed robust agroforestry models suitable for different agro-climatic regions across the country. Additionally, ICAR-CAFRI assists various states in the country in implementing the objectives of agroforestry policy through skilling and human resource development programs.

The purpose of this bulletin is to provide a comprehensive compilation of success stories from 19 states across all 15 agro-climatic regions of India. It includes the success stories of 70 individual farmers who have undergone agroforestry-led livelihood transformation, as well as three landscape-level interventions. These success stories are intended to inspire and encourage aspiring stakeholders to adopt agroforestry with the technological support of ICAR-CAFRI and its centres of AICRP on Agroforestry.

- Authors



Contents

Landscape Interventions: Success Stories		
Garkundar-Dabar Watershed Development		
Rejuvenating Parasai-Sindh Watershed		
Transforming Agricultural Landscape in Bundelkhand		
Inspiring Stories from Farmers' Field		
S.No.	Agro-climatic zone	Title/Name
1.	Western Himalayan Zone	Shri Jagdish Prasad
2.		Shri Jaideep Singh Barar
3.		Mr. Munir Ahmad Chouhan
4.	Eastern Himalayan Zone	Shri Dusila Mili
5.		Shri Popok Darin
6.	Lower Gangetic Plains	Shri Bipin Kumar Mandi
7.	Middle Gangetic Plains	Shri Satyam Singh
8.	Upper Gangetic Plains	Shri Jaipal Singh
9.	Trans Gangetic Plains	Shri Jagjit Singh
10.		Shri Munshi Ram
11.		Shri Pradeep Kumar
12.	Eastern Plateau & Hills	Shri Subodh Khattoi
13.	Central Plateau & Hills	Shri Anil Tiwari
14.		Shri Atmaram Rajpoot
15.		Shri Balakdas Rajpoot
16.		Shri Balram Rajpoot
17.		Shri Brijendra Kumar Patel
18.		Shri Brijendra Kumar Rajpoot
19.		Shri Brijesh Kumar Rai
20.		Shri Chhatarpal Pateria
21.		Shri Devendra Singh Rajpoot
22.		Shri Dhaniram Dhakad
23.		Shri Dhaniram Kushwaha
24.		Shri Dharendra Singh Yadav

25.		Shri Dilip Rajpoot
26.		Shri Hanumant Yadav
27.		Shri Har Govind
28.		Shri Harpal Singh
29.		Shri Harpal Singh
30.		Shri Harprakash Ahirwar
31.		Shri Himmat Ahirwar
32.		Shri Jitendra Kumar Sharma
33.		Shri Komal Singh Yadav
34.		Shri Lavpratap Pal
35.		Shri Mahendra Patel
36.		Shri Mahendra Singh Yadav
37.		Shri Naval
38.		Shri Prabhudayal Rajpoot
39.		Shri Pushpendra Yadav
40.		Shri Rajesh Dubey
41.		Shri Ramakant Ahirwar
42.		Mr. Salim Khan
43.		Shri Shagun Singh
44.		Shri Shantilal Kewat
45.		Shri Sohan Rajpoot
46.		Shri Surendra Singh Yadav
47.		Shri Tejram R Zode
48.		Shri Thakurdas Pal
49.		Shri Veer Singh Rajpoot
50.		Shri Vijay Kushwaha
51.		Shri Vrindavan Rajpoot
52.		Shri Yogendra Singh
53.	Western Plateau & Hills	Shri Vikas Kumar Soni
54.	Southern Plateau & Hills	Shri K Devarajan
55.		Shri P Srinu
56.		Shri Paramesh
57.		Shri Prabhakar

58.		Shri Ramchandrappa
59.		Shri R Narasimman
60.		Shri Ramesh
61.		Shri Ramesh B Khangoudar
62.		Shri Sadashivam
63.		Smt. Savithri
64.	East Coast Plains & Hills	Shri M Gunasekharan
65.		Shri P Gandhi
66.	West Coast Plains & Hills	Shri Praveen Panamukkath
67.	Gujarat Plains & Hills	Shri Karsanbhai Devabhai Menat
68.	Western Dry Region	Shri Shyam
69.		Padma Shri Sundaram Verma
70.	Islands	Smt. Deepali Sardar



Introduction

Planting trees in agricultural landscapes not only generates income in the form of timber and non-timber produce, but also augments valuable ecosystem services. Agroforestry has an important role in reducing vulnerability, increasing resilience of farming systems and buffering households against climate related risks. It can also maintain or increase the supply of ecosystem services – water, soil health and biodiversity – especially under changing climate that will continue to support social and industrial needs and sustainable functioning of ecosystem services. Improved agriculture and natural resource management have crucial roles to play with regard to other development goals, including to Sustainable Development Goals (SDGs). The achievement of environmental sustainability will impact the life of communities in several dimensions. The issue of sustainability has global dimensions because of the threat of climate change caused by the accumulation of carbon-dioxide and other Greenhouse Gases (GHGs) in the atmosphere due to human activity.

India has been at the forefront ever since organized research on agroforestry was started worldwide. The present day rapid economic growth, industrialization and demographic pressure have placed a considerable pressure on natural resources, creating opportunities for agroforestry to produce diversified range of products, support watershed protection, biodiversity conservation and now mitigation of climate change effects and global warming. The All India Coordinated Research Project on Agroforestry (AICRP on Agroforestry) initiated in 1983 covering all agro-climatic zones of the country became the preamble for furthering agroforestry R&D. The National Research Centre for Agroforestry (NRCAF) was established in Jhansi 1988, which was later renamed as Central Agroforestry Research Institute (CAFRI) in 2014.

In the initial phases of agroforestry research and development, the thrust was on basic and strategic research, demonstrating efficacy and motivating the people and other stakeholders for systematic integration of trees into conventional farming systems. Later, as agroforestry systems demonstrated their immense potential for industrialization, although to a limited scale in certain pockets of the country, the aspirations, and expectations of all the stakeholders got fortified into economic models. Over the period, successful agroforestry technologies and models have been developed by the Institute and the AICRP on Agroforestry such as agri-silviculture, agri-horticulture, silvipasture, multifunctional agroforestry systems etc. have been successfully transferred on to the agricultural landscape and at individual farmer's level.

The current publication includes CAFRI-enabled landscape level interventions (3 nos.) and agroforestry-led livelihood transformation of 70 individual farmers as success stories from 19 states covering all 15 agro-climatic regions of the country. It is believed that these success stories will encourage the aspirant stakeholders to promote and adopt agroforestry with technological support from ICAR-CAFRI and its centres of AICRP on Agroforestry.



Landscape Interventions (Success Stories)

1

Garhkundar-Dabar Watershed Development

Name of the watershed: Garhkundar-Dabar

Location: Niwari

GPS: 25° 26' and 25° 28" N, 78° 52" and 78° 54" E

State: Madhya Pradesh

Villages: Sakuli, Dabar, Shivrampur, Garhkundar, Rautiana, Ganj, Ubaura and Shyamsi

Area covered: 850 ha



CAFRI INTERVENTIONS

- ICAR-Central Agroforestry Research Institute (CAFRI) implemented a range of soil and water conservation (check dam, low-cost check dam, gabion, drainage structure, water spreader and contour / field bunding) and agroforestry (guava, citrus, aonla, teak, babool and bamboo-based) in the Garhkundar-Dabar Watershed located in Niwari, Madhya Pradesh during 2005 for holistic landscape development and rejuvenating water bodies.

ACHIEVEMENTS

- Runoff and soil loss were reduced by 34 to 46 per cent and 43 per cent, respectively in the treated watershed as compared to the untreated watershed.
- CAFRI interventions reduced the number of dry wells from 86 to 22 per cent between 2006 and 2011.
- Cropping intensity in treated watershed touched 161 per cent as compared to 104 per cent in the untreated watershed during 2010-11.
- Productivity of crops increased by 20 to 60% owing to the increase in gross cropped area (75%), cropping intensity (175) and crop rotation intensity (300%)
- The watershed area turned into a fodder surplus from a net fodder deficit due to plantations, conservation measures and enhanced water availability. These natural resource management interventions transformed rural households, ensured income and livelihood sustenance, besides environmental benefits.

RECOGNITION

ICAR's Vasant Rao Naik Award in 2010

2

Rejuvenating Parasai-Sindh Watershed

Name of the watershed : Parasai-Sindh

Location : Babina block, Jhansi

GPS : 24° 11' and 25° 57' N, 78° 10' and 79° 25' E

State : Uttar Pradesh

Villages: Parasai, Chhatpur, and Bachhauni

Area covered : 1250 ha



CAFRI INTERVENTIONS

- ICAR-Central Agroforestry Research Institute (CAFRI) in collaboration with the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) adopted a range of soil and water conservation measures in semi-arid tropical Bundelkhand region of central India between 2011 and 2016 to transform rural livelihood.
- Rejuvenation of a 300-year-old defunct haveli (a traditional rainwater harvesting structure) with 73,000 m³ storage capacity, construction of nine check dams, and 25,000 running-meters of field bunds and plantation of trees and perennial grasses in around 20 ha area.

ACHIEVEMENTS

- The decentralized rainwater harvesting interventions improved groundwater level even in the summer and supported agriculture in two consecutive dry years (2014 and 2015).
- Increased water availability improved net sown area by 10% and area under fallow land declined from 11% to 4% between 2011 and 2016.
- Milk productivity increased by 120% owing to 65% rise in enhanced forage production.
- With crop intensification and higher productivity, average annual household income increased by INR 89,926 compared to the pre-project period, of which 53% came from rabi season agriculture and 24% from milk production.
- The agroforestry-based natural resource management interventions were the key contributors to transform the region from fodder deficit to fodder surplus and water deficit to water surplus. The region got declared as drought-proof since 2015.

RECOGNITION:

- ICAR's Nanaji Deshmukh Award in 2019
- Rated as best water practices by NITI Aayog, Govt. of India

3

Transforming Agricultural Landscape in Bundelkhand

Name of the landscape : Bundelkhand

Location : Bundelkhand region of Uttar Pradesh

District : Lalitpur, Jhansi, Jalaun, Hamirpur, Mahoba, Banda and Chitrakoot

No. of villages : 22

No. of households : 24,000

Area covered : 40,000 ha

CAFRI INTERVENTIONS

- Various agroforestry based natural resource management practices were started by ICAR-Central Agroforestry Research Institute (CAFRI) in association with the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in the year 2017 in drought prone Bundelkhand region of Uttar Pradesh.
- Rejuvenation of 22 water harvesting structures (Haveli), construction of 7 farm ponds, 3 community / village ponds and 3 check dams, deepening of 8km drainage network, field bunding in 7000 acres area and around 3 lakh plantation of trees like teak, guava, aonla, lemon, moringa etc.

ACHIEVEMENTS

- The decentralized rainwater harvesting interventions enhanced water storage capacity of 2.45 MCM.
- Enhanced water availability increased the area under cultivation from 4 ha to 35 ha and therefore, annual gross revenue from 2.8 lakhs to 36.7 lakhs between 2017 and 2020.



Change in land use from degraded to productive landscape at Birdha village, Lalitpur

RECOGNITION

- Dr. Ramesh Singh Team Award for Excellence in Natural Resource Management (Biennium 2020-21) by Indian Society of Agroforestry.



Inspiring Stories from Farmers' Field

5

Shri Jagdish Prasad



9805272665

Name : Jagdish Prasad

Age : 64 years

Education : Secondary

Experience in farming : 10 years

Village : Thandol

Block : Palampur

District : Kangra

State : Himachal Pradesh

Land holding : 1.24 acres

Agro-climatic zone : Western Himalayan Zone

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with AICRP Centre on Agroforestry, CSKHPKV, Palampur from the year 2018.
- After closely evaluating the fodder requirements for Shri Prasad's cattle, the AICRP center recommended the adoption of the silvi-horti-pastoral agroforestry land use system. This approach was deemed as the most suitable option to meet the needs of his livestock while also ensuring the efficient use of available land resources.

FARMER CONTRIBUTION

- Shri Prasad opted to cultivate a block plantation of Kagzi lime fruit with a density of about 10 trees per acre, which recorded an annual income of approximately Rs. 5000. Additionally, he strategically planted *Morus alba* (Mulberry) saplings along the field boundaries. By pollarding these trees three times a year at a height of 5 feet, the farmer obtained high-quality tree fodder, while the bole of the trees served as sturdy poles for fencing.
- In addition, Shri Prasad planted *Setaria anceps*, a fast-growing grass with high-quality yields, in between the rows of his fruit trees and along the boundary adjacent to the mulberry trees. The prudent move ensured year-round availability of green fodder for his livestock and effectively reduced his dependence on dry fodder.
- Shri Prasad attests that through the implementation of the silvi-horti-pastoral agroforestry system on a small patch of land, he has been able to generate an additional income of Rs. 20,000 per year.

**FARMER TO FARMER TECHNOLOGY DIFFUSION**

- As a strong advocate for sustainable farming practices, Shri Jagdish Prasad is actively encouraging other marginal farmers to adopt the silvi-horti-pastoral agroforestry system. This innovative approach allows for the efficient utilization of all available resources on the farm, while simultaneously generating additional income.



Name : Jaideep Singh Barar Age : 80 years
Education : Graduation Experience in farming : 58 years
Village : Swalepur Block : Bilaspur
District : Rampur State : Uttarakhand
Land holding : 23 acres



Agro-climatic zone : Western Himalayan Zone

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, GBPUAT, Pantnagar from the year 2006.
- Shri Barar took technical knowledge on Bamboo, Poplar and Eucalyptus based agroforestry system from AICRP centre. The centre also provided him planting material of bamboo and time-to-time technical inputs.

FARMER CONTRIBUTION

- Mr. Barar is currently practicing block and boundary plantation of bamboo, poplar and eucalyptus in 12 acres of his land. Last year, by selling quality timber to wood-based industries in the nearby areas he reaped annual profit of 6-7 lakh rupees.
- Apart from timber trees, Mr. Barar is also managing the orchard of guava, mango and ber and getting returns of Rs. 1-2 lakh per annum.
- Enticing with the benefits of timber trees, Mr. Barar is replanting his guava orchard with bamboo culms.



FARMER TO FARMER TECHNOLOGY DIFFUSION

- Inspired by Shri Barar, many farmers in the region have started planting trees on the boundaries of their field.
- Currently, the farmer is running an NGO named '*Kisan Kalyan Samiti, Kichha*' for promotion of agroforestry on larger scale as well as facilitating tree plantation at farmer's field.

3

Shri Munir Ahmad Chouhan

6006841144

Name : Munir Ahmad Chouhan Age : 40 years
 Education : Secondary Experience in farming : 20 years
 Village : Chountwaliwar C Block : Lar
 District : Ganderbal State : Kashmir
 Land holding : 05 acres
 Agro-climatic zone : Western Himalayan Zone

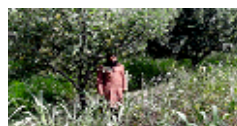


ICAR-CAFRI/AICRP on AGROFORESTRY REGISTRY

- Registered farmer of AICRP-Agroforestry unit at SKAUST, Srinagar from 2018.
- Mr. Munir was able to successfully adopt the horti-silvi pasture system with the guidance of the AICRP center, which provided him with essential resources such as seeds of perennial fodder grasses like dactylis and red clover, improved saplings of poplar, training in tree species management practices, and regular technical support.

FARMER CONTRIBUTION

- In 2018, Shri Munir opted to implement bund plantation on his farm by planting poplar and salix trees at a spacing of 2.5m x 2.5m with an estimated return of about 5-6 lakh rupees from sale of timber in 8-10 years.
- Following AICRP recommendation, Shri Munir made a successful transition from fodder maize to dactylis and red clover, resulting in a significant boost in cattle milk productivity. By selling the surplus milk and green fodder, he could generate a profit of Rs. 40,000 to 50,000 per year.
- In addition, he adopted an agroforestry system based on apple and cherry cultivation, which has proven to be lucrative for him. Through the sale of the fruits, he generated an annual profit of 1 to 1.5 lakh rupees.



Intercropping with
maize



Maize replaced by
fodder grasses

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Munir's impressive farm productivity and returns got the attention of other farmers and eventually he advocates agroforestry and promotes adoption of agroforestry systems.
- To encourage the adoption of perennial grasses, he also generously distributes seeds at no cost basis to nearby villages and even to local schools.



Name : Dusila Mili

Age : 44 Years

Education : Intermediate

Experience In Farming : 27 Years

Village : Baligaon

Block : Balipara

District : Sonitpur

State : Assam

Land Holding : 06 acres

Agro-climatic zone : Eastern Himalayan Zone



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2014.
- ICAR-CAFRI guided Mr. Dusila in diversification of his farm through adoption of different agroforestry systems.

FARMER CONTRIBUTION

- Shri Dusila established mushroom incubation units along with perennial horticultural crops and bamboo integration in farms.
- In his words, integration of trees provided him guaranteed income and livelihood sustenance.
- Further, he is also exporting the farm produce to neighbouring communities and generating good returns.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Mr. Dusila Mili motivating the local people to plant tree saplings in their home as well as in the fields and harvests them organically which enable them to create self-sustaining system.
- Being a master trainer, he also imparts training on mushroom cultivation to youths and rural women.

5

Shri Popok Darin



Name : Popok Darin

Age : 54 years

Education : Senior Secondary

Experience in farming : 35 years

Village : Kiyit

Block : Monggu-banggo

District : East Siang

State : Arunachal Pradesh

Land holding : 12 acres

Agro-climatic zone : Eastern Himalayan Zone



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2012.
- ICAR-CAFRI along with the local agriculture field officers helped the farmer to avail farm training at regular intervals and also suggested new ideas on multi-tier cropping.

FARMER CONTRIBUTION

- Mr. Darin adopted boundary plantation of bamboo along with the cultivation of field crops like paddy, cereals, pulses, oil seeds in the barren lands on the left bank of the Siang river in Mebo.
- He produces around 3 tonnes of bamboo, 200 quintals of oil seeds per annum with an annual turnover of Rs 10 lakhs. Apart from this, he is also getting additional income of around Rs 2 lakhs from paddy, pulses and other cereals.
- Mr. Darin has also started fish farming in the natural ponds of his lands.

FARMER TO FARMER TECHNOLOGY DIFFUSION

Inspiring from Mr. Darin, several farmers and unemployed youths of Mebo area are engaging themselves in agriculture and allied activities to enhance their income and livelihood.



Name : Bipin Kumar Mandi Age : 55 years
 Education : Nil Experience in farming : 40 years
 Village : Gaighata Block : Salbani
 District : Paschim Medinipore State : West Bengal
 Land holding : 2.5 acres



Agro-climatic zone : Lower Gangetic Plains

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered farmer beneficiary with AICRP-Agroforestry, BCKV, Kalyani from 2018.
- Mr. Mandi contacted AIRCRP centre for adoption of agroforestry based farming on his farm. Observing the field conditions, centre suggested him for cashew nut cultivation and provided him improved saplings of Cashewnut and *Gmelina sp.*, hands-on-training in top working of cashewnut and time-to-time technical inputs and guidance.

FARMER CONTRIBUTION

- With the support of AICRP centre, Shri Mandi has been practicing boundary plantation of cashewnut at 6mx6m spacing since 2018. Tree start bearing nuts after 3 years of planting and during 2022-23, he harvested the nuts and received annual return of around Rs. 40,000. Since, the nut bearing capacity of cashew tree is 20-30 years and with the application of improved production techniques there is chance of yield improvement so he is expecting higher returns in the coming future.
- He also planted *Gmelina* trees on the boundaries of his farm and presently, trees attained an average basal girth of 10 to 13cm and height 5-7m with average crown spread of 1.5m. By selling good quality timber after 10-12 years of plantation, Shri Mandi is expected to get benefit of 3 lakh rupees based on the current market price in the nearby areas.
- He also growing seasonal crops like pigeon pea, ground nut, okra, bottle gourd, brinjal and pumpkin and last year fetched annual profit of Rs. 70,000.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Taking inspiration from Mr. Mandi, many small and marginal farmers in the village and in nearby areas have started growing cashewnut on the farm boundaries.

7

Shri Satyam Singh



8400120089

Name : Satyam Singh

Age : 34 years

Education : Graduation

Experience in farming : 14 years

Village : Gaura Parani

Block : Umra

District : Sultanpur

State : Uttar Pradesh

Land holding : 3.7 acres

Agro-climatic zone : Middle Gangetic Plains

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered farmer beneficiary with AICRP **centreatANDUAT, Ayodhya** from 2008.
- The AICRP centre guided Shri Singh for boundary plantation with teak and provided him quality saplings of teak.

FARMER CONTRIBUTION

- Shri Singh planted teak on the boundary side of his farm in 2008 and presently earning an annual profit of around 1.5 lakh rupees from selling of timber.
- According to him, adoption of agri-silviculture (Teak + Paddy-Wheat) increases his income by 25 per cent in comparison to mono-cropping.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Singh is persuading young and fellow farmers to practice tree-based farming system for guaranteed income and livelihood security.





Name : Jaipal Singh

Age : 70 years

Education : Post Graduation

Experience in farming : 20 years

Village : Karnawal

Block : Sardhana

District : Meerut

State : Uttar Pradesh

Land holding : 10 acres

Agro-climatic zone : Upper Gangetic Plains



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, GBPUAT, Pantnagar from the year 2019.
- AICRP centre provided technical guidance and helped Shri Singh in adopting bamboo-based agroforestry system.

FARMER CONTRIBUTION

- Shri Singh planted bamboo culms in 3 acres area of his farm in block plantation mode from which he could generate an annual return of Rs. 60,000.
- He is also practicing natural farming on his farm.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Singh is inspiring the youths and fellow farmers in the region to adopt tree-based farming practices.

9

Shri Jagjit Singh



9914488690

Name : Jagjit Singh

Age : 45 years

Education : Graduation

Experience in farming : 23 years

Village : Sangatpura

Block : Rupnagar

District : Rupnagar

State : Punjab

Land holding : 21 acres

Agro-climatic zone : Trans Gangetic Plains

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, PAU, Ludhiana from the year 2018.
- AICRP centre in collaboration with KVK Ropar provided him technical guidance and knowhow in the management of poplar plantation and its nursery.
- The centre also supplied him the improved clones (L-47 & L-48) of poplar tree.

FARMER CONTRIBUTION

- Shri Singh is practicing a poplar-based agroforestry system on his 9-acre farm area and harvesting 550 quintal timber per acre. This gives him an annual revenue of more than Rs. 5,00,000.
- He also started the business of poplar nursery from the year 2022. Presently, he is selling the poplar ETPs @ Rs. 20-30 and reaping annual benefit of Rs. 1,00,000 from this nursery.
- According to Mr. Singh, Poplar based agroforestry system is the most successful land use intervention for maintaining soil health and ensuring income security.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Singh is motivating other fellow farmers in the region to practice Poplar based agroforestry system.
- He is a master trainer for the young agriprenuers who are looking for business ideas in agroforestry.



10

Shri Munshi Ram



9813768387

Name : Munshi Ram
 Education : Graduation
 Village : Ranila
 District : Bhiwani
 Land holding : 16 acres

Age : 50 years
 Experience in farming : 30 years
 Block : Dadri
 State : Haryana



Agro-climatic zone : Trans Gangetic Plains

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, CCSHAU, Hisar, Haryana from the year 2017.
- Shri Munshi Ram approached AICRP, Hisar centre for taking technical guidance on practicing Eucalyptus based agroforestry system. The centre also provided him the improved clones of eucalyptus.

FARMER CONTRIBUTION

- Shri Munshi Ram planted 200 seedlings of clonal eucalyptus on the boundary of his farm at a spacing of 5.5 feet in 2017. After four years in 2021-22, he reaped an annual remuneration of around Rs. 2,40,000 from sale of timber.
- Further, he harvested the trees 15 cm above ground level for taking ratoon crop of eucalyptus.
- Under eucalyptus boundary plantation, he is also growing agricultural crops like wheat, mustard, berseem, sugarcane, cotton, cluster bean and pearl millet as intercrop.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Boundary plantation of eucalyptus by Shri Munshi Ram is inspiring other farmers to practice tree-based farming system in their farm area.



11

Shri Pradeep Kumar



9416593705

Name : Pradeep Kumar

Age : 58 years

Education : Graduation

Experience in farming : 30 years

Village : Kaleser

Block : Chhachhrauli

District : Yamunanagar

State : Haryana

Land holding : 10 acres

Agro-climatic zone : Trans Gangetic Plains

**ICAR-CAFRI/AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with AICRP **centre** on Agroforestry, CCSHAU, **Hisar, Haryana** from the year 2007.
- AICRP centre, Hisar helped the farmer in adopting Poplar based agroforestry system and supplied him the improved clones of poplar tree namely WSL-109 and WSL-110.

FARMER CONTRIBUTION

- Shri Kumar is practicing block plantation of poplar tree from the last 20 years and in the interspaces cultivate crops like sugarcane, fodder sorghum, wheat.
- Every year, he harvests 2 acres of poplar plantation and on the same land plant new tree saplings of poplar. He stated that last year, he reaped profit of around Rs. 70,000 to 1 lakh per acre by selling the timber to plywood and plyboard manufacturing units (@ Rs. 800/ quintal) from the six year old plantation.
- During 2021-22, he also grew sugarcane as an intercrop in *kharif* in a 1-year-old plantation and harvested 250-300 quintal of sugarcane per acre while wheat yield was 20-22 quintal per acre in the rabi season.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Successful adoption of poplar tree-based farming and its marketing by Shri Kumar is motivating other farmers to this practice on large scale along with different crops.





Name : Subodh Khattoi Age : 43 years
 Education : Senior Secondary Experience in farming : 10 years
 Village : Godimala Block : Nimapada
 District : Puri State : Odisha
 Land holding : 6.80 acres
 Agro-climatic zone : Eastern Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, OUAT, Bhubaneswar from the year 2018.
- AICRP centre guided Shri Khattoi in adoption of Coconut palm + Paddy agroforestry system and ensured the supply of one year old high yielding coconut seedling variety (*Sakhigoapal Local*).

FARMER CONTRIBUTION

- Shri Khattoi planted 78 coconut seedlings on the paddy field bund at a spacing of 5 metre in 2018 under the technical support of AICRP centre. Presently each coconut plant gives 70 green nuts in one picking and in Coastal Odisha generally two pickings are done. Therefore, Shri Khattoi fetched annual profit of Rs. 1,60,000 to 1,70,000 from sale of tender coconut during 2021-22.
- Further, he also harvested 52 quintal/ha of paddy in his rainfed medium land ecosystem.
- Overall, Coconut + Rice agroforestry system gave him annual benefit of more than 3 lakh rupees.



FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Khattoi is inspiring many young farmers in his locality for adoption of bund plantation of coconut on large scale for ensured income.

13

Shri Anil Tiwari



7017287735

Name : Anil Tiwari

Age : 37 years

Education : Senior Secondary

Experience in farming : 14 years

Village : Sindoor Sagar

Block : Niwari

District : Niwari

State : Madhya Pradesh

Land holding : 06 acres

Agro-climatic zone : Central Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2007.
- ICAR-CAFRI provided him quality planting material of guava and *Prosopis juliflora*, hands-on training in “top working of ber” and time-to-time technical inputs.

FARMER CONTRIBUTION

- Shri Tiwari is earning annual profit of around Rs. 25,000 from guava-based agroforestry practices. With the technological backstopping of ICAR-CAFRI, Shri Anil Tiwari and his father Late Shri Siya Tiwari top-worked their 14 *desi* 'ber' plants on his field bund with an improved variety “Banarasi karaka” and getting an annual monetary return of Rs. 7,000 from selling of quality ber fruits.
- Live fencing of farm with *Prosopis juliflora* helped in protection of crops against stray cattle.
- Assured monetary benefit from agroforestry enticed for his family to continue tree-based farming on a large scale. It was heartening to observe that such motivation increased the area under agroforestry from 0.5 acre to 3 acres as suggested by ICAR-CAFRI, Jhansi.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Anil Tiwari is now master trainer for fellow farmers in promoting guava-based agroforestry system in the neighbourhood.

14

Shri Atmaram Rajpoot



9936677859

Name : Atmaram Rajpoot Age : 65 years
 Education : Senior Secondary Experience in farming : 48 years
 Village : Badaura Block : Babina
 District : Jhansi State : Uttar Pradesh
 Land holding : 14 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2018.
- ICAR-CAFRI provided him:
 - Improved cultivar of lemon, guava, kinnow, aonla, mango and saplings of teak.
 - Training and technical guidance on strawberry cultivation and ensured improved high yielding variety of strawberry
 - Time-to-time technical inputs

FARMER CONTRIBUTION

- Shri Atmaram earned annual profit of Rs. 70,000 from lemon-based agroforestry practices during 2022-23. He also planted 65 teak trees along the boundary of his farm and expecting handsome returns from sale of timber in the coming future.
- Under the technological backstopping of ICAR-CAFRI, he adopted strawberry farming in the year 2021 in 1 acre area and reaped annual profit of around 1.5 lakh rupees.
- According to Shri Atmaram, tree-based farming provided him assured income in case of crop failure and he is planning to increase the tree coverage area in his farm.



FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Atmaram is inspiring fellow farmers in his locality for adoption of fruit trees-based agroforestry system for ensured income and livelihood.

15

Shri Balakdas Rajpoot



6307532463

Name : Balakdas Rajpoot

Age : 66 years

Education : Secondary

Experience in farming : 40 year

Village : Ganeshgarh

Block : Babina

District : Jhansi

State : Uttar Pradesh

Land holding : 04 acres

Agro-climatic zone : Central Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2003.
- ICAR-CAFRI provided him:
 - Quality planting material of sandalwood and bamboo
 - Hands-on training in Ber grafting and pruning
 - Hands-on training in top working of karonda
 - Time-to-time technical inputs

FARMER CONTRIBUTION

- With the technical support of ICAR-Central Agroforestry Research Institute (CAFRI), Jhansi and his own efforts, Shri Balakdas has successfully introduced over 200 tree species and herbs in his farm, earning an average annual benefit of more than 1 lakh rupees from tree component only during the financial year 2021-22.
- He uses the green leaves of trees (*Melia dubia*, *Leucaena leucocephala*, *Ailanthus excelsa*) as fodder for cattle; bamboo, karonda also known as bio-fencing material to protect the farm from cattle and other wild animals especially *Nilgai* (Blue buck).
- For his contributions to tree based farming practices, Shri Balakdas has been recognized as “Agroforestry Ambassador” in the year 2023.

**FARMER TO FARMER TECHNOLOGY DIFFUSION**

- Shri Balakdas distributes tree saplings free of cost to other farmers in nearby villages of Jhansi and also a few villages (Hirapur and Baroda) in Madhya Pradesh.
- Being master trainer, Shri Balakdas imparts training on ber grafting and pruning, top working of karonda to other fellow farmers.
- As a whole, around 300 fellow farmers benefitted through Shri Balakdas.

16

Shri Balram Rajpoot



8009455569

Name : Balram Rajpoot

Age : 48 years

Education : Senior Secondary

Experience in farming : 15 years

Village : Hastinapur

Block : Badagaon

District : Jhansi

State : Uttar Pradesh

Land holding : 04 acres

Agro-climatic zone : Central Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2014.
- ICAR-CAFRI provided him:
 - Planting material of teak and bamboo
 - Hands-on-training in top working of ber

FARMER CONTRIBUTION

- Shri Rajpoot planted around 75 teak trees in block plantation mode and bamboo on the boundaries of farm in 2016. The annual return from the bamboo plantation is Rs. 20,000 during the period 2021-22.
- Boundary plantation of bamboo helped him preventing crop damage from stray and wild animals.
- Shri Rajpoot also top worked 10 pre-established 'ber' trees on boundary side of his farm with improved variety "Banarasi Karaka". The top working enhanced the fruit yield and quality of 'ber', and helped in earning an additional income of Rs. 5,000/year from the sale of fruits.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Bamboo plantation on farm boundary of Shri Rajpoot is encouraging the fellow farmers in the village to adopt this system.

17

Shri Brijendra Kumar Patel

6386794266

Name : Brijendra Kumar Patel Age : 50 years
 Education : Intermediate Experience in farming : 35 years
 Village : Veerpura Block : Bamour
 District : Jhansi State : Uttar Pradesh
 Land holding : 10 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2014.
- ICAR-CAFRI provided him practical knowledge and guidance on farm diversification by integrating different tree species on his farm.
- The institute provided him:
 - Quality planting material of bamboo
 - Training on "ber budding and pruning"
 - Time-to-time technical inputs

FARMER CONTRIBUTION

- Shri Patel adopted aonla and lemon-based agroforestry system under the technological backstopping of ICAR-CAFRI. Currently, he is earning annual profit of Rs. 30,000 exclusively from the sale of aonla and lemon fruits.
- He adopted boundary plantation of teak and bamboo. Bamboo plantation gives additional benefit of around 5-7 thousand rupees to Shri Patel and also acts as live-fencing material thus protects the crop against stray animals.
- He had 25 pre-established 'ber' trees on boundary side of his farm, which he got top worked with improved variety "Banarasi Karaka". The top working enhanced the fruit yield and quality of 'ber', and helped in earning an income of Rs. 15,000/year from the sale of fruits.
- Apart from this, he also planted ashoka, guava, dragon fruit and jamun trees on his farm.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Patel is persuading other rural households to adopt agroforestry systems on larger scale for livelihood sustenance.
- He is also imparting training on "top working of ber" to his fellow farmers.

18

Shri Brijendra Singh Rajpoot



9532822611

Name : Brijendra Singh Rajpoot Age : 44 years
Education : Senior Secondary Experience in farming : 18 years
Village : Baral Block : Chirgaon
District : Jhansi State : Uttar Pradesh
Land holding : 24 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2001.
- ICAR-CAFRI helped the farmer in adopting and practicing aonla, mango, guava, lemon, sapota and litchi based agroforestry.
- The institute also provided him
 - Quality planting materials
 - Training on agroforestry and related aspects
 - Technical support in managing and maintaining established woody components

FARMER CONTRIBUTION

- Shri Rajpoot is earning annual profit of around Rs. 12 lakh by selling different farm products in nearby markets.
- Agroforestry system is helping him to earn additional and assured income throughout the year.
- He is also a facilitator in promoting agroforestry in nearby areas and among his known contacts.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Rajpoot is a very dynamic and agile farmer and motivates others by giving example of his own work/success to adopt tree-based farming for better and regular income.

19

Shri Brijesh Kumar Rai

8400982260

Name : Brijesh Kumar Rai

Age : 52 years

Education : Graduation

Experience in farming : 35 years

Village : Badaura

Block : Babina

District : Jhansi

State : Uttar Pradesh

Land holding : 12 acres

Agro-climatic zone : Central Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2017.
- ICAR-CAFRI provided him practical knowhow and guidance on farm diversification by integration of woody perennials along with crop component.
- The institute also provided him training on strawberry cultivation and supplied him the runners of strawberry plant.

FARMER CONTRIBUTION

- Mr. Brijesh with his untiring efforts adopted agri-horti-silviculture system and has successfully introduced more than 100 trees (fruit and timber) in his farm.
- Overall, he earned average annual profit of around 1 lakh rupees exclusively from the sale of fruits only.
- He also planted strawberry in 0.5 acre area year 2021 and reaped annual profit of around 50-60 thousand rupees.
- He uses the leaves of moringa as feed for his cattle.

**FARMER TO FARMER TECHNOLOGY DIFFUSION**

- Taking inspiration from Mr. Brijesh, many farmers in the region have started adopting agri-horti-silviculture system for higher returns and livelihood sustenance.



Name : Chhatrapal Pateria
Education : Senior Secondary
Village : Sanora
District : Datia

Age : 65 years
Experience in farming : 48 years
Block : Datia
State : Madhya Pradesh



Land holding : 20 acres

Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 1995.
- ICAR-CAFRI provided practical knowledge and guidance to Mr. Pateria in diversifying his farm by integrating various tree species.
- The institute also provided him planting material of bamboo, casuarina, sandal, subabul, lemon, dragon fruit, and strawberry as well as root slips of perennial grasses.

FARMER CONTRIBUTION

- With the technical backstopping of ICAR-CAFRI and his motivation, Mr. Pateria has successfully planted more than 30 tree species (timber and fruit trees) and earning average annual profit of more than 1 lakh rupees from tree component only. Shri Pateria planted 100 sandal tree saplings in the year 2021 and after 20-25 years of plantation, he is expecting higher returns of around 10 lakh rupees (based on current market price) from sale of good quality timber.
- Strategic plantation of bamboo and subabul on the boundaries prevents crop damage by around 10-15% from wild animals (Blue buck).
- Perennial grasses on farm ensured year-round availability of green fodder for his cattle.
- Recognizing the contributions of Shri Pateria in adoption and promotion of agroforestry, Indian Society of agroforestry conferred him "ISAF Krishivaniki Kisan Award 2021" and ICAR-CAFRI declared him "Agroforestry Ambassador" in the year 2023.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- The farm field of Mr. Pateria is a demonstration plot to other farmers in the nearby areas and he is persuading the fellow farmers about benefits of integrating trees on farm.
- He distributes root slips of perennial grass and culms of bamboo free of cost to other farmers in nearby villages.



21

Shri Devendra Singh Rajpoot

9453338580

Name: Devendra Singh Rajpoot Age : 50 years
 Education : Graduation Experience in farming : 30 years
 Village : Nayakhhera Block : Babina
 District : Jhansi State : Uttar Pradesh
 Land holding : 20 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 1996.
- ICAR-CAFRI provided him:
 - Planting material of aonla, guava, jackfruit, ber and neem
 - Hands-on-training in “top working of ber”
 - Time to time technical support and guidance

FARMER CONTRIBUTION

- Shri Rajpoot has been able to introduce aonla, guava, jackfruit, ber and neem tree species at his farm with support of ICAR-CAFRI.
- Shri Rajpoot is earning about Rs. 3-4 lakh annually from his well-established farm and related enterprises such as livestock.
- He purposefully uses 'ber' leaves as fodder for livestock and small ruminants and ber and karonda plants as bio-fence to protect the farm from cattle and wild animals.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Rajpoot promotes tree based farming systems to the fellow farmers by narrating his own success and also imparts training to them on ber grafting and pruning.

22

Shri Dhaniram Dhakad



9755012308

Name : Dhaniram Dhakad

Age : 35 years

Education : Intermediate

Experience in farming : 10 years

Village : Pathkheda

Block : Shivpuri

District : Shivpuri

State : Madhya Pradesh

Land holding : 04 acres

Agro-climatic zone : Central Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2012.
- ICAR-CAFRI provided him practical knowledge for cultivation of sandal and bamboo based agroforestry system and its management practices.

FARMER CONTRIBUTION

- Mr. Dhaniram planted 550 sandal tree saplings in the year 2023 in 2 acres area of his farm using pigeon pea as host plant. After 20-25 years of plantation, he is expecting handsome return of 10-15 lakhs from sale of sandal heartwood and roots based on the current market price.
- He also adopted boundary plantation of bamboo and karonda which helps in protection of crops against stray cattle.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Mr. Dhaniram motivates the rural youths to practice tree-based farming for livelihood sustenance and sustainability.



Name : Dhaniram Kushwaha Age : 57 years
 Education : Nil Experience in farming : 25 years
 Village : Ubaro Block : Niwari
 District : Niwari State : Madhya Pradesh
 Land holding : 03 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2007.
- ICAR-CAFRI in collaboration with ICRISAT installed two gabion structures in the *nallah* passing through his field.
- ICAR-CAFRI provided him:
 - Technical guidance and training on agroforestry practices.
 - Improved cultivar of guava, citrus, anola, karonda and saplings of teak and *lasoda*.
 - ICAR-CAFRI also provided him improved variety of groundnut (*kaushal*) and trained him on application of balanced dose of fertilizer in crop farming. This technical support helped him in reducing cost of production by around 20 % and harvesting 1.5 times higher yield during kharif season.

FARMER CONTRIBUTION

- Shri Dhaniram is currently practicing guava, anola and citrus based agroforestry system in his 3 acre land in block plantation mode and earning Rs. 50,000 per annum from tree based farming. Plantation of *lasoda* on the roadside of his field, Karonda as live fence along one side of field boundary and teak on the boundary side bordering forest minimized crop losses of his farm as well as of neighboring farms from stray and wild animals.
- The construction of gabion structure led to recharge of well in the farm the level of 2 metre which is now being used as a source of supplemental irrigation and he encourages other fellow farmers on this practice.
- For his efforts in adopting different agroforestry systems in his farm, Shri Dhaniram has been recognized as “Agroforestry Ambassador” in the year 2023.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Dhaniram is a source of inspiration for fellow farmers particularly resource deprived marginal landholders facing livelihood challenges in a typical semi-arid climate of Bundelkhand region. He is educating other rural households in the region to follow tree-based farming practices vis-à-vis soil and water conservation measures for guaranteed income and sustainable livelihood.



Name : Dharendra Singh Yadav Age : 72 years
Education : Post Graduation Experience in farming : 08 years
Village : Ludhiyayi Block : Chirgaon
District : Jhansi State : Uttar Pradesh
Land holding : 27 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2015.
- ICAR-CAFRI provided him:
 - Quality planting material of different plants
 - Technical support and guidance on management and maintenance of agroforestry systems
 - Technical support and guidance on organic farming and related aspects

FARMER CONTRIBUTION

- With technical guidance and support of ICAR-CAFRI, Shri Yadav established apple, ber, guava, pomegranate, teak, *Melia dubia*, papaya and moringa based agroforestry system.
- He has also begun organic farming at his own farm, which is giving him quality farm produce for his own consumption.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Yadav is actively pushing farmers in his own and nearby villages to get engaged in agroforestry and organic farming to raise income and living standards.



Name : Dilip Rajpoot Age : 41 years
 Education : Post Graduation Experience in farming : 06 years
 Village : Jauhari Bujurg Block : Badagaon
 District : Jhansi State : Uttar Pradesh
 Land holding : 05 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2019.
- ICAR-CAFRI provided him:
 - Planting material of strawberry, guava, apple ber and papaya
 - Hands-on-training in strawberry, turmeric and mushroom cultivation
 - Need based technical support and guidance

FARMER CONTRIBUTION

- Shri Rajpoot successfully cultivated strawberry in 1 acre area of his farm and earned handsome income of around 2-2.5 lakh rupees per annum. This all has been possible with an active support of ICAR-CAFRI.
- He established myriad of agroforestry systems such as guava, apple ber and papaya based and become happy farmer by earning regular and assured income from all these.
- He has also established a Farmers Producer Organization (FPO) named Jhansi-Badagaon Spices and Oil Producer Organization which has become a center of attraction for the fellow farmers and agripreneurs.
- With technical support and guidance of ICAR-CAFRI, he has also started mushroom cultivation at his own farm which is giving him additional income.
- In addition to the above, he has also established a small agro processing unit.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- He actively motivates other farmers to adopt different agri-based enterprises for assured and regular income. He also uses to share his own experience and story with rural youth to encourage them to become agripreneur.

26

Shri Hanumant Yadav



7697552063

Name : Hanumant Yadav Age : 70 years
 Education : Senior Secondary Experience in farming : 50 years
 Village : Dabar Block : Niwari
 District : Niwari State : Madhya Pradesh
 Land holding : 18 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2008.
- ICAR-CAFRI provided him:
 - Quality planting material of bamboo and teak
 - Time-to-time technical guidance and inputs

FARMER CONTRIBUTION

- With the technical support of ICAR-CAFRI, Shri Yadav adopted boundary plantation of teak and bamboo in 2010. Bamboo plantation gives him an annual return of 10-15 rupees and also protects the crop damage from wild and stray animals *Nilgai* (Blue buck).
- Plantation of mango, lemon, ber and jackfruit yields him yearly return of 25-30 thousand rupees.
- Apart from bamboo and teak, he has also planted the *babul* tree saplings on the farm boundary from which he is meeting the fuel wood requirements of his family.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- The farm field of Shri Hanumant is a model for demonstration to other farmers in the village who are facing the same challenges of rainfed agriculture. He is educating fellow farmers to adopt boundary plantation of bamboo.

27

Shri Hargovind Rajpoot

9198931233

Name : Hargovind Rajpoot

Age : 48 years

Education : Secondary

Experience in farming : 25 years

Village : Nahaura

Block : Babina

District : Jhansi

State : Uttar Pradesh

Land holding : 04 acres

Agro-climatic zone : Central Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2018.
- ICAR-CAFRI provided him:
 - Technical guidance on lemon and guava-based agroforestry system
 - Training and technical guidance on strawberry cultivation and supplied improved high yielding variety of strawberry
 - Time-to-time technical inputs

FARMER CONTRIBUTION

- Shri Hargovind planted mango, lemon and guava trees in block plantation mode in 1 acre area of his farm in 2018. Currently, he is getting around 5-7 thousand rupees from sale of lemon fruit and is expecting higher returns in future.
- He also adopted strawberry farming in the year 2021 in 1 acre area under the guidance of ICAR-CAFRI and generated annual return of around 3.5 lakh rupees.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Hargovind is motivating fellow farmers to adopt strawberry cultivation for higher returns.



Name : Harpal Singh Rajpoot Age : 60 years
 Education : Primary Experience in farming : 40 years
 Village : Hastinapur Block : Ambawai
 District : Jhansi State : Uttar Pradesh
 Land holding : 17 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2008.
- ICAR-CAFRI provided him:
 - Quality planting material of bamboo (*B. vulgaris*)
 - Time-to-time technical guidance and inputs

FARMER CONTRIBUTION

- Shri Harpal Singh and his father Late Shri Ram Singh planted 85 bamboo plants on field boundary in the year 2008 under the technical support of ICAR-CAFRI. The annual average returns (in real terms) from the plantation during the period 2012-2022 are around Rs. 45,000.
- Shri Singh is now supplying culms of the tree to state forest department of Uttar Pradesh and Madhya Pradesh.
- Boundary plantation of bamboo is like green gold for him as it helped his family to sustain their livelihood during different drought years and compensated the economic loss from crop damages.



FARMER TO FARMER TECHNOLOGY DIFFUSION

- Bamboo plantation on farm boundary of Shri Harpal Singh is encouraging the fellow farmers from different villages and blocks (Babina, Niwari) to adopt this system. To date, he has distributed hundreds of culms of bamboo plant to 30 farmers.

29

Shri Harpal Singh



9506956501

Name : Harpal Singh

Age : 65 years

Education : Senior Secondary

Experience in farming : 45 years

Village : Sakin

Block : Moth

District : Jhansi

State : Uttar Pradesh

Land holding : 16 acres

Agro-climatic zone : Central Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2018.
- ICAR-CAFRI provided him:
 - Training and technical guidance on strawberry cultivation and supplied improved variety of strawberry.
 - Practical knowledge on various agroforestry practices

FARMER CONTRIBUTION

- Shri Harpal planted strawberry in the year 2021 in 1 acre area under the guidance of ICAR-CAFRI and earned return of around 4 lakh rupees.
- He also planted guava and mango saplings in his farm in 2019 and expecting returns soon.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Harpal is motivating the farmers of nearby villages and blocks to adopt strawberry cultivation for generating higher returns.





Name : Harprakash Ahirwar Age : 42 years
 Education : Senior Secondary Experience in farming : 17 years
 Village : Shivrampur Block : Niwari
 District : Niwari State : Madhya Pradesh
 Land holding : 07 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as farmer beneficiary with ICAR-CAFRI from the year 2006.
- ICAR-CAFRI provided him:
 - Technical knowledge and training on agroforestry practices.
 - Improved cultivar of guava, lemon; saplings of teak and *bamboo culms*
 - *Hands-on-training on "Top working of ber"*
 - Technical guidance in adopting natural resource conservation practices

FARMER CONTRIBUTION

- Shri Harprakash is currently practicing guava and lemon-based agroforestry system in his farm and generating annual return of Rs. 15,000 from sale of fruits. He has around 15 desi ber trees on the farm boundary, which he got top worked with improved cultivar. The top working enhanced the fruit yield and quality of 'ber', and helped in earning income of Rs. 5,000/year.
- Plantation of teak and bamboo on the boundary side of farm enabled additional income of Rs. 10,000 per year as well as compensated the economic loss from crop damages during different drought years.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Harprakash is educating other rural households in the region to follow tree-based farming practices vis-à-vis natural resource management practices for assured income and sustainable livelihood.

31

Shri Himmat Ahirwar



8103355194

Name : Himmat Ahirwar

Age : 70 years

Education : Nil

Experience in farming : 50 years

Village : Shivrampur

Block : Niwari

District : Niwari

State : Madhya Pradesh

Land holding : 16 acres

Agro-climatic zone : Central Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as farmer beneficiary with ICAR-CAFRI from the year 2007.
- Shri Ahirwar took technical guidance on Aonla and *Acacia senegal* based agroforestry system from ICAR-CAFRI. The institute also provided quality planting material of Aonla (NA-7) and *Acacia senegal*.

FARMER CONTRIBUTION

- Shri Himmat Ahirwar planted 56 aonla tree saplings in 1 acre farm area (spacing 8m x 8m) and presently reaping an annual benefit of around Rs. 20,000 from selling of fruits in the local market.
- He has also planted the *Acacia senegal* tree saplings on the farm boundary from which he is meeting the fuel wood requirements of his family. This tree also acts as live fencing material on the farm against various stray animals.
- Adoption of agroforestry system serves as the source of assured income for him in case of crop failure.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- The farm field of Shri Himmat Ahirwar is a model for demonstration to other farmers in the village who are facing the same challenges of rainfed agriculture.



Name : Jitendra Kumar Sharma Age : 30 years
 Education : Graduation Experience in farming : 5 years
 Village : Lakhawati Block : Gursarai
 District : Jhansi State : Uttar Pradesh
 Land holding : 50 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as farmer beneficiary with ICAR-CAFRI from the year 2018.
- Mr. Jitendra took technical guidance from ICAR-CAFRI for integration of trees on his farm area. The institute provided him:
 - Quality planting material of sandalwood, aonla, lemon, karonda, guava
 - Hands-on-training in "top working of ber"
 - Time-to-time technical inputs

FARMER CONTRIBUTION

- Shri Jitendra is currently practicing lemon, aonla, karonda and guava based agroforestry systems in 5 acres area in block plantation mode. During the year 2022-23, he reaped an annual return of around Rs. 70,000.
- Mr. Jitendra had pre-established 'ber' trees on the bunds of his farm which he got top worked with improved variety "Banarasi Karaka". The top working enhanced the fruit yield and quality of 'ber', and helped in earning an additional annual income from the sale of fruits to the tune of Rs. 10,000.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Mr. Jitendra is motivating other young farmers in the village to integrate woody perennials along with crop component for guaranteed income and livelihood sustenance.

33

Shri Komal Singh Yadav



6392882513

Name : Komal Singh Yadav Age : 34 years
 Education : Higher Secondary Experience in farming : 16 years
 Village : Parasai Block : Babina
 District : Jhansi State : Uttar Pradesh
 Land holding : 10 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as farmer beneficiary with ICAR-CAFRI from the year 2012.
- ICAR-CAFRI helped the farmer in adopting and practicing bamboo, guava, lemon, and teak based agroforestry.
- The institute also provided him
 - Quality planting materials
 - Training on 'ber' budding and pruning
 - Training on organic farming and goat farming
 - Technical support in adopting soil and water conservation measures

FARMER CONTRIBUTION

- Shri Yadav is earning annual profit of around Rs. 25,000 by selling guava and lemon in nearby markets.
- Bamboo and teak plantation has not only helped him in utilizing degraded land but also enabled additional income.
- He is a facilitator in promoting agroforestry-based watershed development in Parasai-Sindh watershed area.
- Appreciating the contributions of Shri Komal Singh Yadav, ICAR-CAFRI has acknowledged him with “*Agroforestry Ambassador*” certificate in the year 2023.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Komal Singh Yadav is a young and active rural farmer who has been motivating others and promotes sequestering of various tangible and intangible benefits by tree-based farming.



Name : Lavpratap Pal

Age : 52 years

Education : Secondary

Experience in farming : 35 years

Village : Devnagar

Block : Lavkush Nagar

District : Chhatarpur

State : Madhya Pradesh

Land holding : 2.5 acres

Agro-climatic zone : Central Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as farmer beneficiary with ICAR-CAFRI from the year 2018.
- ICAR-CAFRI provided him:
 - Quality planting material of guava and bamboo
 - Hands-on-training in “top working of ber”
 - Training on organic farming and agroforestry practices

FARMER CONTRIBUTION

- Shri Lavpratap planted guava tree saplings in 1 acre area of his farm in block plantation mode in 2019 and expecting good returns from next year onwards.
- He also adopted boundary plantation of bamboo and presently earning Rs. 10,000 per year from sale of bamboo poles. Bamboo plantation also acts as bio-fencing material and protects field crops against wild and stray animals.
- For his endeavor towards adoption of agroforestry system, ICAR-CAFRI declared him “*Agroforestry Ambassador*” in the year 2023.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Successful adoption of boundary plantation of bamboo and fruit trees based farming is inspiring for fellow farmers particularly marginal landholders facing livelihood challenges in the village. He is educating them to start integrating trees along the boundaries of the farm for food and income security.

35

Shri Mahendra Patel

9219059731

Name : Mahendra Patel

Age : 32 years

Education : Post Graduation

Experience in farming : 10 years

Village : Tilaira

Block : Mauranipur

District : Jhansi

State : Uttar Pradesh

Land holding : 04 acres

Agro-climatic zone : Central Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as farmer beneficiary with ICAR-CAFRI from the year 2017.
- Mr. Mahendra took technical guidance on Aonla and Guava based agroforestry system from ICAR-CAFRI and the institute ensured supply of quality planting material.

FARMER CONTRIBUTION

- Mr. Mahendra planted aonla, guava and lemon saplings in his farm in 2018. Currently, he is reaping annual profit of Rs. 15,000 per annum from sale of guava and lemon fruits and expecting higher returns in subsequent years.
- He also planted babool and eucalyptus on the farm boundary from which he is meeting the fuel wood requirements of his family. The tree also acts as live fencing material on the farm against various stray animals.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Mr. Mahendra is motivating the youths and fellow farmers in the village to adopt tree-based farming practices for ensured income and livelihood.



Name : Mahendra Singh Yadav Age : 42 years
 Education : Primary Experience in farming : 28 years
 Village : Parasai Block : Babina
 District : Jhansi State : Uttar Pradesh
 Land holding : 06 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as farmer beneficiary with ICAR-CAFRI from the year 2012.
- ICAR-CAFRI provided him practical knowledge and support in farm diversification by integrating different tree species on his farm.
- The institute also provided him quality planting materials of tree species like bamboo, guava, lemon, teak and *Acacia senegal*.

FARMER CONTRIBUTION

- Under the technical guidance of ICAR-CAFRI, Shri Yadav has developed fruit tree garden on his farm and earning around Rs. 20,000 per annum.
- He is also practicing silvi-pasture mode of farming (teak+ napier grass) on his undulated farmland that helps in earning income from timber and meeting the fodder requirements of his livestock.
- Adopting gum arabic (kher) – “gum” yielding tree as boundary plantation has become centre of attraction among fellow farmers and agripreneurs of Budelkhand region.
- Appreciating the efforts of Shri Mahendra, PEARL Foundation conferred him the “Innovative Farmer Award” for the 2021 during national conference on “SMART SUMMIT-2021”.



FARMER TO FARMER TECHNOLOGY DIFFUSION

- Many fellow farmers and youth visit his farm regularly to take a glimpse of success of Shri Yadav and many have followed his footsteps particularly adopting gum arabic (*Acacia senegal*) based agroforestry on their farm boundary.

37

Shri Naval



8009432424

Name : Naval

Age : 40 years

Education : Senior Secondary

Experience in farming : 20 years

Village : Badaura

Block : Babina

District : Jhansi

State : Uttar Pradesh

Land holding : 04 acres

Agro-climatic zone : Central Plateau
& Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as farmer beneficiary with ICAR-CAFRI from the year 2018.
- ICAR-CAFRI provided him:
 - Training and technical guidance on strawberry cultivation and supplied improved variety of strawberry.
 - Practical knowledge on lemon and bamboo-based agroforestry system

FARMER CONTRIBUTION

- With the technological backstopping of ICAR-CAFRI, Shri Naval planted strawberry in the year 2021 in 1 acre area. He earned annual benefit of 2 lakh rupees from sale of strawberry fruits.
- Boundary plantation of bamboo helped him in earning additional income of Rs. 5,000 per year from sale of bamboo poles and also acts as live-fence against wild and stray animals.



FARMER TO FARMER TECHNOLOGY DIFFUSION

- Mr. Naval is persuading the youths in the village to practice tree-based farming for ensured income and livelihood.



Name : Prabhudayal Rajpoot Age : 80 years
Education : Primary Experience in farming : 60 years
Village : Ramgarh Block : Babina
District : Jhansi State : Uttar Pradesh
Land holding : 2.5 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 1995.
- ICAR-CAFRI provided him:
 - Planting material of custard apple, jackfruit, karonda, ber, bamboo and chandan
 - Hands-on-training in “top working of ber and karonda
 - Time to time technical support and guidance

FARMER CONTRIBUTION

- Shri Rajpoot planted custard apple, jackfruit, karonda, ber, bamboo and chandan on his farm.
- He established live fence by planting bamboo on the field boundary which is keeping stray and wild animals away.
- Shri Rajpoot also top worked existing desi ber trees with improved variety "Banarasi Karaka" which has enhanced the fruit yield and quality of 'ber.
- Besides crops, he is also earning handsome income from the tree components throughout year.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- He is motivating and encouraging fellow farmers to plant bamboo on the field boundary to protect crop from wild and stray animals.

39

Shri Pushpendra Yadav

9936010022

Name : Pushpendra Yadav

Age : 44 years

Education : Post Graduation

Experience in farming : 16 years

Village : Todifatehpur

Block : Gursarai

District : Jhansi

State : Uttar Pradesh

Land holding : 07 acres

Agro-climatic zone : Central Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 1999.
- ICAR-CAFRI provided him:
 - Technical guidance and training on agroforestry practices
 - Improved cultivar of aonla, guava and saplings of neem, teak, sisham

FARMER CONTRIBUTION

- Mr. Yadav has successfully developed an orchard of aonla and guava in a 2-acre area of his farm, generating an average annual income of around 1.5 lakh rupees from the plantation between 2017 and 2022.
- Boundary plantation of teak, mahua, neem and sisham yields him an average annual benefit of Rs. 40-50 thousand.
- Mr. Yadav is actively involved in cultivating and raising tulsi seedlings in his nursery. His exceptional contribution towards the cultivation of tulsi, a medicinal plant, was recognized and appreciated by the Governor of Uttar Pradesh, Smt. Anandiben Patel, and the Chief Minister, Shri. Adityanath, who awarded him with an appreciation letter.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Mr. Yadav's success has inspired many fellow farmers and youth to visit his farm and learn from his achievements. In fact, many have even followed in his footsteps.
- He is actively educating fellow farmers on various management techniques for trees, and encourages them to integrate trees into their farms for increased productivity and sustainability.



Name : Rajesh Dubey Age : 48 years
Education : Senior Secondary Experience in farming : 22 years
Village : Dikauli Block : Babina
District : Jhansi State : Uttar Pradesh
Land holding : 09 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2015.
- ICAR-CAFRI helped the farmer in practicing ber, lemon, aonla, mosambi, jackfruit, moringa and teak based agroforestry.
- The institute also provided him
 - Quality planting materials
 - Training on 'ber' budding and pruning
 - Training on organic farming and other aspects
 - Need based technical support and guidance for management and maintenance of agroforestry systems

FARMER CONTRIBUTION

- He established ber, lemon, aonla, mosambi, jackfruit, moringa and teak based agroforestry systems with the technical guidance and support of ICAR-CAFRI
- He is earning annual income of around 1-1.5 lakhs from the tree components only
- He uses leaves of the moringa as fodder for cattle and small ruminants.
- The introduction of tree components at the farm has diversified his income sources and has improved his income many folds.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- He is actively involved in diffusing his own experience and knowledge of agroforestry and hence Shri Dubey is known for agroforestry advocacy in the area.



Name : Ramakant Ahirwar Age : 35 years
 Education : Senior Secondary Experience in farming : 15 years
 Village : Shivrampur Block : Niwari
 District : Niwari State : Madhya Pradesh
 Land holding : 01 acre



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2008.
- ICAR-CAFRI provided him:
 - Planting material of guava, lemon, aonla, teak, babul, moringa
 - Training on different agroforestry practices
 - Training on “ber budding and pruning”
 - Technical support in adopting soil and water conservation measures

FARMER CONTRIBUTION

- Shri Ahirwar is generating annual return of around 20-25 thousand rupees from guava, aonla and mango-based agroforestry system. With the learnt technique of ber budding, he propagated his 10 *desi 'ber'* plants on his field bund with improved cultivar “Banarasi karaka” and getting an annual monetary return of Rs. 5,000 from selling of quality ber fruits.
- Boundary plantation of teak, babul, sheesham yields him an additional annual income of Rs. 10,000. Additionally, babul tree being the bio-fencing material minimized crop losses from stray and wild animals.
- In his words, Shri Ahirwar owes his livelihood sustenance to tree-based farming practices.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Ahirwar is source of inspiration for the resource poor marginal farmers and he is teaching them to integrate trees into their farms for guaranteed income.



Name : Salim Khan

Age : 65 years

Education : Primary

Experience in farming : 35 years

Village : Shyamasi

Block : Niwari

District : Niwari

State : Madhya Pradesh

Land holding : 03 acres

Agro-climatic zone : Central Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2007.
- ICAR-CAFRI imparted training and technical guidance on guava and bamboo-based agroforestry system and ensured quality planting material of guava (L-49 variety) and bamboo species (*Bambusa vulgaris*)
- He also got hands-on training on "Top working of ber" from the institute.

FARMER CONTRIBUTION

- With the technology backstopping from CAFRI, Shri Salim Khan planted more than 150 tree saplings of guava in the year 2008. Presently he is earning Rs. 30,000 per year exclusively from sale of guava fruits.
- Mr. Khan had 15 pre-established 'ber' trees on boundary side of his farm, which he got top worked with improved variety "Banarasi Karaka". The top working enhanced the fruit yield and quality of 'ber', and helped in earning an additional income of Rs. 5,000/year from the sale of fruits.
- In his words, boundary plantation of *Bambusa vulgaris* helped him preventing crop loss from stray and wild animals and he owes his livelihood sustenance to tree-based farming practices.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Successful adoption of guava-based agroforestry system by Shri Salim Khan is motivating other marginal farmers in the village to integrate woody perennials along with the crop component in their farm.

43

Shri Shagun Singh



8009455569

Name : Shagun Singh Age : 48 years
 Education : Senior Secondary Experience in farming : 20 years
 Village : Hastinapur Block : Badagaon
 District : Jhansi State : Uttar Pradesh
 Land holding : 2.5 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2006.
- ICAR-CAFRI provided him:
 - Planting material of teak and bamboo
 - Hands-on-training in "top working of ber"

FARMER CONTRIBUTION

- Shri Rajpoot planted teak trees in block plantation mode and bamboo on the field boundaries with the technical support and guidance of ICAR-CAFRI. This gives him annual benefit of 30-35 thousand rupees.
- Boundary plantation of bamboo being the bio-fence prevents crop damage from stray and wild animals.
- Shri Rajpoot also top worked 15 pre-established 'ber' trees on boundary side of his farm with improved variety "Banarasi Karaka". The top working enhanced the fruit yield and quality of 'ber' which helped him to earn an additional income of Rs. 5,000 per year.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Rajpoot motivates fellow farmers in the village and nearby area to create a bio-fence by planting bamboo on the farm boundaries to avoid crop damages from stray and wild animals.



Name : Shantilal Kewat

Education : Primary

Village : Badaura

District : Jhansi

Land holding : 1.5 acres

Agro-climatic zone : Central Plateau & Hills

Age : 62 years

Experience in farming : 40 years

Block : Babina

State : Uttar Pradesh



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2016.
- ICAR-CAFRI provided him:
 - Quality planting material of eucalyptus and bamboo
 - Training and technical guidance on strawberry cultivation and ensured improved high yielding variety of strawberry

FARMER CONTRIBUTION

- Shri Kewat adopted strawberry farming in the year 2021 in 1 acre area and reaped annual profit of around 2 lakh rupees.
- He planted bamboo and babul along the boundaries of his farm to protect the crops from stray and wild animals.
- Shri Kewat is also practicing fruit trees (lemon, guava, mango and ber) based agroforestry system on his farm since 2018. By selling the fruits he is getting annual benefit of Rs. 5,000 and expecting higher returns in coming time.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Kewat is persuading the farmers and youths for strawberry cultivation to earn higher returns in short span of time.



45

Shri Sohan Rajpoot

9569822761

Name : Sohan Rajpoot

Age : 30 years

Education : Senior Secondary

Experience in farming : 10 years

Village : Hastinapur

Block : Badagaon

District : Jhansi

State : Uttar Pradesh

Land holding : 04 acres

Agro-climatic zone : Central Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2016.
- ICAR-CAFRI provided him:
 - Planting material of teak, chandan and bamboo
 - Hands-on-training in top working of ber and karonda

FARMER CONTRIBUTION

- With the assistance of ICAR-CAFRI, Shri Rajpoot planted teak trees in block plantations and bamboo along the edges of the fields. He is earning 10-15 thousand rupees per annum by selling the bamboo poles in nearby markets.
- He opined that bamboo plantation prevents crop loss from stray animals by 10-15%.
- On the border side of his land, Shri Rajpoot propagated 15 pre-existing ber trees with the variety "Banarasi Karaka." The top work increased the ber fruit yield and quality, which allowed him to supplement his income by Rs. 7000 annually.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- To prevent crop damage from stray and wild animals, Shri Rajpoot encourages his fellow farmers in the village and the surrounding area to plant bamboo along the farm boundaries to form a bio-fence.

46

Shri Surendra Singh Yadav



9415507202

Name : Surendra Singh Yadav Age : 66 years
 Education : Post Graduation Experience in farming : 06 years
 Village : Ludhiyayi Block : Chirgaon
 District : Jhansi State : Uttar Pradesh
 Land holding : 17 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2017.
- ICAR-CAFRI provided him:
 - Quality planting material of moringa, guava, kinnow, pomegranate, fig and chikoo
 - Technical support and guidance on management and maintenance of plantation
 - Technical support and guidance on organic farming

FARMER CONTRIBUTION

- Under the technical guidance of ICAR-CAFRI, Shri Yadav planted Thai apple ber under agroforestry system besides guava var. Sweta/Lalit and pomegranate var. Ganesh/ Bhagwa. He also planted teak and *Melia dubia* on boundary, papaya and moringa on bund.
- He is also practicing agroforestry based organic farming on his land and earning annually handsome income of 1-1.5 lakh from tree component.
- Appreciating the efforts of Shri Yadav, PEARL Foundation conferred him with the “*Innovative Farmer Award*” for the year 2021 during a national conference on “SMARTSUMMIT-2021”.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Yadav is encouraging fellow farmers to practice agroforestry and organic farming for guaranteed returns and livelihood sustenance.

47

Shri Tejram R. Zode



9623249374

Name : Tejram R Zode

Age : 48 years

Education : Graduation

Experience in farming : 25 years

Village : Umred

Block : Umred

District : Nagpur

State : Maharashtra

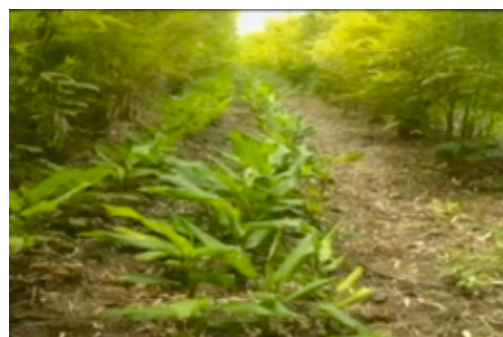
Land holding : 10 acres Agro-climatic zone : Central Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with AICRP on Agroforestry centre at Nagpur of PDKV, Akola from the year 2016.
- AICRP centre guided Shri Zade in adoption of Bamboo based agroforestry system (Bamboo block plantation & Bamboo + Turmeric agroforestry system).
- The centre provided him:
 - Planting materials of bamboo (*Bambusa tulda*, *Bambusa polymorpha*) and turmeric
 - Time-to-time technical guidance

FARMER CONTRIBUTION

- Under the technical guidance of AICRP centre, Nagpur, Shri Zade is currently practicing bamboo plantation in block plantation mode (3.6m x 2.5m) having density of 1111 plants per hectare. This block plantation is fetching him annual return of Rs. 90,000 from selling of bamboo poles to essence stick making industries.
- He is also practicing bamboo + turmeric agroforestry system at spacing of 5.0m x 2.50m and 6.0m x 2.50m on another piece of land and earning net annual return of more than Rs. 3 lakh.
- Shri Zade has signed an agreement with local essence stick making industry to establish "Agro Producer Company" for supply of Bamboo poles to the industry.

**FARMER TO FARMER TECHNOLOGY DIFFUSION**

- Shri Zade is motivating other farmers to cultivate more area under bamboo + turmeric based agroforestry system.
- He is also in the process of forming FPO of bamboo cultivators involving fellow farmers.



Name : Thakurdas Pal

Age : 63 years

Education : Primary

Experience in farming : 45 years

Village : Dabar

Block : Niwari

District : Niwari

State : Madhya Pradesh

Land holding : 05 acres

Agro-climatic zone : Central Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2008.
- Shri Thakurdas took technical guidance from ICAR-CAFRI for integration of trees on his farm area and institute also supplied him planting material of teak, guava and aonla.

FARMER CONTRIBUTION

- Shri Thakurdas is earning annual profit of around Rs. 25,000 by selling lemon, guava, aonla and jackfruit in nearby markets.
- Babul and teak plantation on the boundaries of farm has not only helped him in utilizing degraded land but also enabled additional income.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Thakurdas is encouraging the fellow farmers to integrate fruit trees along with the field crops for sustainability of livelihood.



Name : Veer Singh Rajpoot

Age : 50 years

Education : Graduation

Experience in farming : 20 years

Village : Ganeshgarh

Block : Babina

District : Jhansi

State : Uttar Pradesh

Land holding : 25 acres

Agro-climatic zone : Central Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2002.
- ICAR-CAFRI provided him:
 - Quality planting material of citrus, bamboo, teak, fig, aonla and karonda
 - Hands-on training in “ber grafting and pruning”
 - Hands-on training in “top working of karonda”
 - Time-to-time technical support and guidance in managing agroforestry systems
 - Hands-on training in vermicomposting

FARMER CONTRIBUTION

- Shri Rajpoot top worked karonda plants on boundary side of his farm that enhanced the fruit yield and quality of karonda. He is generating annual return of 15 thousand rupees by selling the quality fruits.
- He established numerous agroforestry systems, including those based on citrus, bamboo, teak, fig, aonla and karonda and has become a happy farmer as a result of generating reliable income from each of them.
- He also established a vermicompost unit at his own farm, which is providing him with additional revenue about 4-5 lakh per year, with the technical assistance and direction of ICAR-CAFRI.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Rajpoot aggressively encourages other farmers to use agri-based businesses, like a vermicompost unit, for a guaranteed and consistent income. He inspires young people in the remote areas to start their own businesses by sharing his own experiences and tale on perennial grasses.



Name : Vijay Singh Kushwaha Age : 45 years
 Education : Nil Experience in farming : 20 years
 Village : Parasai Block : Babina
 District : Jhansi State : Uttar Pradesh
 Land holding : 1.25 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2011.
- ICAR-CAFRI guided Mr. Vijay in adopting teak, guava and lemon based agroforestry system.
- ICAR-CAFRI provided him:
 - Quality planting material
 - Root slips of Bajra-Napier hybrid grass
 - Technical knowhow in adopting soil and water conservation measures
 - Time-to-time technical inputs

FARMER CONTRIBUTION

- Shri Vijay planted around 70 guava and 40 lemon saplings on his farm. The average annual returns (in real terms) from the plantation during 2016-2022 are around 1 to 1.5 lakh rupees.
- With the technological support of ICAR-CAFRI, Shri Vijay adopted boundary plantation of teak in 2010 and expecting net returns of 5-7 lakhs after 20-25 years of plantation by selling good quality timber in the nearby market.
- He also planted Bajra-Napier hybrid grass on the bunds of the field which ensured year-round supply of quality fodder for his livestock.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Vijay is inspiring fellow farmers to practice tree-based farming for sustenance of their future generation.
- He has also distributed root slips of BN hybrid to the nearby farmers free of cost.

51

Shri Vrindavan Rajpoot



9721152801

Name : Vrindavan Rajpoot

Age : 63 years

Education : Secondary

Experience in farming : 45 years

Village : Rehaliya

Block : Kabrai

District : Mahoba

State : Uttar Pradesh

Land holding : 03 acres

Agro-climatic zone : Central Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2018.
- ICAR-CAFRI guided Shri Vrindavan in practicing lemon and aonla based agroforestry system on his farm and ensured supply of quality planting material.
- The institute also provided him training on organic farming, integrated farming system and agroforestry practices.

FARMER CONTRIBUTION

- With the technical support of ICAR-CAFRI and his own efforts, Shri Vrindavan planted lemon and aonla in his farm. Presently he is reaping annual profit of Rs. 25-30,000 exclusively from sale of lemon.
- According to him, trees acts as insurance in case of crop failure and sustains livelihood.
- For his dedication towards adopting and promoting tree-based farming practices ICAR-CAFRI declared him as an “*Agroforestry Ambassador*” in the year 2023.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Successful adoption of lemon-based agroforestry system by Shri Vrindavan is motivating other farmers to incorporate woody perennials in their farm along with crop component.





Name : Yogendra Singh Yadav Age : 50 years
 Education : Graduation Experience in farming : 04 years
 Village : Ludhiyayi Block : Chirgaon
 District : Jhansi State : Uttar Pradesh
 Land holding : 26 acres



Agro-climatic zone : Central Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with ICAR-CAFRI from the year 2019.
- ICAR-CAFRI provided him:
 - Quality planting material of tree and fruit plants
 - Technical support and guidance on management and maintenance of agroforestry systems
 - Technical support and guidance on organic farming

FARMER CONTRIBUTION

- Shri Yadav built an agroforestry system based on Thai apple ber, guava, pomegranate, teak, *Melia dubia*, papaya, and moringa with the technical assistance and support of ICAR-CAFRI.
- Additionally, he started practicing organic farming on his own farm, providing him with high-quality farm products for his personal consumption.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Agroforestry and organic farming are being promoted by Shri Yadav to other farmers in his community and adjacent areas in order to increase and improve production and land productivity.

53

Shri Vikas Kumar Soni



7566332717

Name : Vikas Kumar Soni

Age : 55 years

Education : Senior Secondary

Experience in farming : 32 years

Village : Hudki

Block : Katangi

District : Jabalpur

State : Madhya Pradesh

Land holding : 05 acres

Agro-climatic zone : Western Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, JNKVV, Jabalpur from the year 2016.
- AICRP centre helped the farmer in adopting silvi-horticulture agroforestry system (Gmelina + ginger) and provided him:
 - Quality planting material of *Gmelina arborea*
 - Rhizomes of ginger
 - Time-to-time technical inputs

FARMER CONTRIBUTION

- Shri Soni has been practicing alley cropping of Gmelina species since 2016. He harvested Gmelina tree after five years for pulp and fire wood and earned amount of two lakh rupees during 2022-23.
- He also started cultivating ginger during *rabi* season in between the rows of tree from 2016 and in every cropping season he is getting net return of 2.5 to 3 lakh rupees.
- Shri Soni stated that by adopting silvi-horticulture agroforestry system he has been able to utilize his slopy degraded land that has been left uncultivated from past 5 years.

**FARMER TO FARMER TECHNOLOGY DIFFUSION**

- Farm field of Shri Soni is an ideal example of efficient utilization of resources (land) undulated topography in semi-arid tropics.



Name : K. Devarajan Age : 65 years
 Education : Graduation Experience in farming : 48 years
 Village : Kanurpudur Block : Avinashi
 District : Tirupur State : Tamil Nadu
 Land holding : 09 acres



Agro-climatic zone : Southern Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as farmer beneficiary with AICRP centre, TNAU-FC&RI, Mettupalayam from the year 2012.
- The AICRP centre provided him practical knowledge and guidance in adopting different agroforestry system in his farm.

FARMER CONTRIBUTION

- With the technological assistance of the AICRP center, Mr. Devarajan succeeded in establishing agroforestry as a lucrative business enterprise through various models, including *industrial agroforestry*, *multifunctional agroforestry*, *silvi-horticulture*, *silvi-mediculture*, and *integrated farming systems*. His efforts resulted in increased productivity and profitability of the land use system.
- In addition, Shri Devarajan initiated a pilot nursery, which propagates high-quality planting materials of various tree species and distributes them to farmers and other stakeholders at reasonable prices. This agroforestry start-up generates an annual return of approximately 25-30 lakh rupees, which equates to Rs. 750-1000 per acre per day.
- The Indian Society of Agroforestry recognized the remarkable contributions of Shri Devarajan in the adoption and promotion of agroforestry by presenting him with the "ISAF Krishivaniki Kisan Award 2021".

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Devarajan serves as an exemplary figure, imparting his vast knowledge and experience to fellow farmers, forest officials, school children, NGOs, and other stakeholders involved in forestry and agroforestry activities. To date, he has shared his technology-based agroforestry experiences with over 10,000 farmers across more than 5,000 hectares of land.
- Shri Devarajan also assists researchers in generating impact studies on agroforestry-based ecosystem services.

55

Shri P Srinu



9866232467

Name : P Srinu

Age : 53 years

Education : Secondary

Experience in farming : 37 years

Village : Lemamidi

Block : Kesampet

District : Ranga Reddy

State : Telangana

Land holding : 07 acres

Agro-climatic zone : Southern Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as farmer beneficiary with AICRP on Agroforestry, PJTSAU, Rajendranagar centre from the year 2017.
- AICRP centre helped Mr. Srinu in adopting silvicultural farming practices and ensured him technical guidance and inputs on regular basis.

FARMER CONTRIBUTION

- Mr. Shrinu adopted boundary and block plantation of *Melia dubia* on his farm in 2017 and planted the saplings at a spacing of 3m x 3m. In the fifth year of plantation, he harvested 231 tons of timber from the plantation and received profit of around Rs.10,40,000.
- He is cultivating vegetables and aloe vera as intercrop. He is also growing guinea grass and using it as feed for his own livestock.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Inspired by Mr. Srinu, his relatives and fellow farmers in nearby areas have started taking up *Melia* cultivation to get a higher income in a short period as it is a fast-growing woody species.

Intercrops in *Melia dubia*Harvested 5-year-old *Melia dubia* in 2022

56

Shri Paramesh



9731756476

Name : Paramesh

Age : 24 years

Education : Graduation

Experience in farming : 06 years

Village : Bagaluru

Block : Bangalore North

District : Bangalore

State : Karnataka

Land holding : 11 acres

Agro-climatic zone : Southern Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, UAS, Bengaluru from the year 2016.
- With the technical support of AICRP centre, Shri Paramesh adopted bund and boundary plantations of Silver oak, *Melia dubia*, Subabul.

FARMER CONTRIBUTION

- Shri Paramesh planted 500 silver oak trees spaced three meters apart, 200 *Melia Dubia* trees at a spacing of 3-3.5 meters, and 20 subabul trees on the bunds and boundaries of his farm in 2008. By selling the timber from these trees, he expects a turnover of around Rs. 24,60,000 based on the current market price in the nearby area.
- He uses the green leaves of *Melia dubia* and Subabul as fodder for cattle and small ruminants on his farm.
- Bund and boundary plantation of trees also acts as shelter belt, providing shelter to his farm animals and also enriching soil health.



FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Paramesh is inspiring youth in the village to practice tree-based farming practices for guaranteed returns.
- He is also guiding his fellow farmers about fodder trees suitable for sheep and goat rearing.

57

Shri Prabhakar



9448924846

Name : Prabhakar Age : 53 years
 Education : Post Graduation Experience in farming : 28 years
 Village : Silvepura Block : Bangalore North
 District : Bangalore State : Karnataka
 Land holding : 25 acres



Agro-climatic zone : Southern Plateau & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, UAS, Bengaluru from the year 2015.
- Shri Prabhakar approached the AICRP center to learn about the scientific management practices of teak-based agroforestry systems, and the center provided him with timely guidance and support.

FARMER CONTRIBUTION

- Shri Prabhakar practices boundary plantation of teak with 1000 trees at a spacing of three meters. He regularly prunes the side branches of the teak plants to ensure better growth and improved quality of timber. Based on the current market price of teak timber in the nearby area, the projected earnings from the sale of good-quality timber from his plantation will be around Rs. 70 lakhs.
- He experienced that boundary plantation have an added advantage of acting as wind-break and strengthen the resource base of agriculture (crops, livestock, soil and water).

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Prabhakar is motivating other farmers about the various benefits of growing trees on the boundaries of their farms, such as year-round availability of green fodder, conservation of soil, and guaranteed income. Taking inspiration from him, his relatives and other farmers have started adopting tree planting on their farms.



Boundary Plantation of Teak



Name : Ramchandruppa

Age : 78 years

Education : Secondary

Experience in farming : 48 years

Village : Shivakote

Block : Bangalore North

District : Bangalore

State : Karnataka

Land holding : 08 acres

Agro-climatic zone : Southern Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, UAS, Bengaluru from the year 2014.
- AICRP centre provided him practical knowledge for cultivation of Sandal based agroforestry system and its management practices. He also contacted the centre for maintenance of other timber trees on his farm.

FARMER CONTRIBUTION

- Shri Ramchandruppa planted 2,500 three-year-old sandalwood saplings spaced three meters apart, using *Sesbania grandiflora* and Drumstick trees as host plants. After 20 years of growth, the timber from these sandalwood trees is projected to provide him with a net benefit of approximately Rs. 60 lakhs.
- In addition, he has adopted block plantation of Mahogany and boundary plantation of Silver Oak and *Melia Dubia*. Currently, he sells the pruned branches of *Melia Dubia* for fodder and other local uses, generating an annual return of Rs. 25,000. The timber from this block and boundary plantation is expected to yield a return of around Rs. 35 lakhs.
- He opined that boundary plantation of trees is an efficient technique for soil and water conservation.



FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Ramchandruppa is educating fellow farmers on the scientific cultivation practices of sandalwood, and his farm serves as a demonstration plot for others. Many farmers in nearby villages and blocks have started adopting the sandalwood-based agroforestry system after following his lead and seeing his successful plantation.

59

Shri R. Narasimman

9443875461

Name : R. Narasimman

Age : 70 years

Education : Post Graduation

Experience in farming : 25 years

Village : Punalkulam

Block : Tanjore

District : Trichy

State : Tamil Nadu

Land holding : 158 acres

Agro-climatic zone : Southern Plateau & Hills

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with AICRP centre, TNAU-FC&RI, Mettupalayam from the year 2012.
- AICRP centre provided him practical knowledge and guidance in adopting different agroforestry system in his farm.

FARMER CONTRIBUTION

- Shri Narasimman is practicing tree-based farming from the last two decades and has successfully established agroforestry as profitable business venture through various models namely industrial agroforestry, multifunctional agroforestry, silvi-horticulture, silvi-mediculture, and integrated farming systems. Plantation of trees enhances the productivity of land use system and generates annual return of 10-15 lakh rupees.
- Shri Narasimman received more than 40 awards from central and state government and other institutes for his commendable efforts towards promotion of agroforestry and is holding several positions in various scientific bodies and provides various consultancy services in forestry and agroforestry sector.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Being the renowned agroforestry practitioner, Shri Narasimman is sharing his rich knowledge and experience to school children's, farmers, forest officials, NGO's, foundations and other stakeholders involved in forestry and agroforestry activities.
- Till date, Shri Narasimman has extended his technology-based agroforestry experiences to more than 5,000 farmers across more than 3000 ha of land.



Name : Ramesh

Age : 59 years

Education : Intermediate

Experience in farming : 34 years

Village : Doddabelekere

Block : Bangalore North

District : Bangalore

State : Karnataka

Land holding : 10 acres

Agro-climatic zone : Southern Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, UAS, Bengaluru from the year 2012.
- Shri Ramesh approached AICRP centre for growing and management of trees on his farm and centre provided him technical guidance and inputs on regular basis.

FARMER CONTRIBUTION

- Shri Ramesh practices bund and block plantation of teak, with a total of 2,000 trees, as well as boundary plantation of silver oak (300 trees) and Matti plants (60) on his 10-acre land. He also cultivates coconut, papaya, banana, guava, and ornamental flowers as intercrop. His total earnings from the sale of good-quality timber are projected to be above Rs. 1.75 crores based on the existing market price in the nearby areas.
- He is also growing fodder with the support of AICRP centre for his cattle.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Ramesh is a source of inspiration for many rural households in the region, and following in his footsteps, they have started planting trees on the bunds of their farms.



Boundary plantation of Teak



Block plantation of Teak

61

Shri Ramesh B Khangoudar

8880849242

Name : Ramesh B Khangoudar Age : 30 years
 Education : Graduation Experience in farming : 10 years
 Village : Kallolli Block : Mudalagi
 District : Belagavi State : Karnataka
 Land holding : 10 acres
 Agro-climatic zone : Southern Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, UAS, Dharwad from the year 2015.
- AICRP centre guided Mr. Ramesh in adopting agri-silvi-horti-pasture system for judicious utilization of land and provided him training on “Silvicultural management practices”.

FARMER CONTRIBUTION

- With the practical knowledge of AICRP centre and his efforts, Shri Ramesh planted timber tree species viz., neem, teak, *Melia dubia*, *Pongamia pinnata* & gliricidia and fruit trees namely tamarind, jamun, jack fruit, mango, guava, sapota, dragon fruit, papaya and drumstick on the bunds of his farm and unutilized marginal land.
- He earned annual benefit of more than 5 lakh rupees from tree component only during the financial year 2022-23.
- He uses the leaves of trees (*Melia dubia*, gliricidia) as fodder for cattle and small ruminants. In addition to this, Mr. Ramesh is also using the leaves of tree species (neem, gliricidia, *Pongamia pinnata*) for FYM and compost making.
- For his contributions towards adoption and promotion of tree-based farming practices, University of Horticultural Sciences, Bagalkot awarded him “*Shreshtha Totagarike Raith*” award and University of Agricultural Sciences, Dharwad conferred him “*Avishkargala Agar*”

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Mr. Ramesh is source of inspiration for youths and other farmers; he is teaching them to adopt agri-silvi-horti-pasture system for improving field productivity and enhancing income. Motivated from Mr. Ramesh, more than 20 farmers have started adopting tree-based farming practices.
- The farm field of Mr. Ramesh is also a model of demonstration and many students from different colleges and universities visit his farm to enrich their knowledge in the field of agriculture and allied activities.





Name : Sadasivam

Age : 64 years

Education : Graduation

Experience in farming : 40 years

Village : Vellipalayam

Block : Mettupalayam

District : Coimbatore

State : Tamil Nadu

Land holding : 01 acre

Agro-climatic zone : Southern Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, TNAU-FC&RI, Mettupalayam from the year 2012.
- AICRP centre imparted training and technical guidance in adopting Melia-based agroforestry system and provided him quality saplings of *Melia dubia* and *Swietenia macrophylla* (Mahogany).

FARMER CONTRIBUTION

- Mr. Sadasivam planted melia and mahogany on the boundary/bund of banana crop field at 3m x 3m spacing in 2012. After 10 years of establishment, he earned annual return of around Rs. 2.5 lakhs from melia plantation.
- Anticipating the potential for selling high-quality timber from boundary plantation of mahogany after 20-25 years of growth, Shri Sadasivam expects to reap significant benefits, estimated to be around 5-6 lakh rupees, based on the current market price in the nearby areas.
- He uses the green leaves of melia as feed for ruminants.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Shri Sadasivam is source of inspiration for marginal farmers and he is persuading them for practicing tree-based farming as it will not only enhance their income but also ensures livelihood. Following him more than 25 farmers have started planting melia on the boundaries of their field.



63

Smt. Savithri



9578845673

Name : Savithri

Age : 58 years

Education : Senior Secondary

Experience in farming : 30 years

Village : Therampalayam

Block : Karamadai

District : Coimbatore

State : Tamil Nadu

Land holding : 01 acre

Agro-climatic zone : Southern Plateau & Hills



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, TNAU-FC&RI, Mettupalayam from the year 2020.
- Smt. Savithri is motivated by the experimental trial on the "Assemblage of Germplasm of *Melia dubia* conducted by the All India Coordinated Research Project (AICRP) on Agroforestry at farmers' fields in her village. This trial has inspired her to implement a *Melia*-based agroforestry system on her own farm with the technical support and guidance of AICRP centre.

FARMER CONTRIBUTION

- Smt. Savithri has been practicing curry leaf farming for the last 20 years and during 2022-23, she reaped annual return of 1.5 lakh rupees by selling the curry leaves.
- However, with the technological backstopping of AICRP, Smt. Savithri utilized the spaces in between curry leaf and planted *Melia* at a spacing of 3.6 m x 3.6 m as intercrop in 2020. After 5-6 years, this *Melia* plantation is expected to give benefit of 2-2.5 lakh rupees based on the current market price in the local market.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Smt. Savithri is a source of inspiration for other farmers particularly for the female households who are involved in farming, and many have followed her footsteps in practicing *Melia*-based agroforestry system.



**Melia dubia + Curry leaf
(Silvi-horticulture model)**



Name : M. Gunasekaran Age : 59 years
 Education : Higher Secondary Experience in farming : 38 years
 Village : Chinnamanur Block : Dharapuram
 District : Tiruppur State : Tamil Nadu
 Land holding : 130 acres



Agro-climatic zone : East Coast Plains & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, TANUVAS, Kattupakkam from the year 2016.
- Recognizing his dependence on animal production system (200 sheep & 200 poultry), AICRP centre advised the farmer to introduce *Stylosanthus sp.* in the existing silvi-pasture system (*Acacia leucophloea* + *Cenchrus ciliaris* + *Commiphora caudate*) for meeting the nutritional requirements of their farm animals and getting better returns.
- Centre also provided technical input and guidance to Shri Gunasekaran for cultivation of *Stylosanthus sp.*

FARMER CONTRIBUTION

- Shri Gunasekaran successfully introduced *Stylosanthus sp.* as under storey crop in seven-year-old *Acacia leucophloea* trees. Grazing on *Stylosanthus* pasture increases the body weight of lamb and Shri Gunasekaran earned Rs. 5-6 lakh / annum; Rs. 1 lakh additional profit in comparison to the last year (before introduction of *Stylosanthus* pasture).
- He also allows chicken to graze in the pasture land, resulting in more dark yellow color of the egg yolk. Due to preference of darker yellow egg yolk in the market, he is selling the eggs at higher rate (Rs. 2 extra) and getting additional revenue of Rs. 20,000.



FARMER TO FARMER TECHNOLOGY DIFFUSION

- Following his footsteps, many fellow farmers have started cultivating *Stylosanthus* pasture in their farm for getting higher returns from animal production system.

65

Shri P. Gandhi



9047579393

Name : P. Gandhi

Age : 54 years

Education : Intermediate

Experience in farming : 38 years

Village : Ozhugur kuppam

Block : Walajah

District : Vellore

State : Tamil Nadu

Land holding : 05 acres

Agro-climatic zone : East Coast Plains & Hills

**ICAR-CAFRI/AICRP on AGROFORESTRY REGISTRY**

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, TANUVAS, Kattupakkam from the year 2016.
- AICRP centre guided Mr. Gandhi in adopting various silvi-pasture models after looking into his dependence on animal production system having 18 cows, 6 buffalo, 40 goat and 40 poultry. Centre also provided him time-to-time technical inputs and knowledge.

FARMER CONTRIBUTION

- Mr. Gandhi has successfully established silvi-pasture systems namely *Sesbania grandiflora* + Bajra napier hybrid grass, *Sesbania grandiflora* + *Desmanthus virgatus*, *Leucaena leucocephala* + Bajra napier hybrid grass, *Sesbania grandiflora* + *Stylosanthes sp.*, *Desmanthus virgatus* + Fodder maize under the technological backstopping of centre. Cultivation of Bajra napier hybrid grass ensures availability of green fodder for cattle and increases their milk productivity. He is also following fodder conservation strategy for preserving the feed during lean season.
- Shri Gandhi uses *Desmanthus virgatus* for feeding goats that in increased body weight of kids and he sells them at Rs. 650/ kg live body weight.
- Apart from feeding his animals, Mr. Gandhi is reaping benefits through sale of seeds of *Desmanthus virgatus* (@ Rs.550/kg), *Stylosanthes sp.* (@ Rs.300/kg) and *Sesbania grandiflora* (@ Rs.1000/ kg.)
- Overall, with the integration of different fodder species he is getting an annual profit of Rs. 2 lakhs per annum.
- Acknowledging the contributions of Shri Gandhi, PEARL foundation bestowed him with "Innovative Farmer Award for Diversified Agriculture" for the 2021 during national conference on "SMART SUMMIT-2021" and TANUVAS conferred him "Appreciation Certificate" for successful adoption and dissemination of silvi-pasture technologies.

**FARMER TO FARMER TECHNOLOGY DIFFUSION**

- Shri Gandhi's farm is demonstration plot for other rural households in the village and 20-25 farmers per month made visits to his field. Further, he is imparting training on fodder cultivation and livestock rearing free of cost to his fellow farmers.



Name : Praveen Panamukkath Age : 52 years
 Education : Secondary Experience in farming : 22 years
 Village : Arimpur Block : Puzhakkal
 District : Thrissur State : Kerala
 Land holding : 0.65 acres



Agro-climatic zone : West Coast Plains & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, KAU, Kerala from the year 2017.
- Mr. Panamukkath approached AICRP centre for production of quality forage, centre advised him to integrate fodder tree species in the vacant understorey of homestead and provided him technical inputs on regular basis.

FARMER CONTRIBUTION

- Shri Panamukkath developed fodder bank in 2018 for his livestock (3 cows) in the vacant understorey of homesteads by planting fast growing fodder tree sp. like calliandra, mulberry, gliricidia, sesbania and moringa at spacing of 45cmx45cm. After one year, he started lopping trees at 1m height at interval of 2 months during rainy season and 3 months during summer. This ensured year round supply of protein rich fodder to his livestock and curtailed the cost of purchased feed concentrate by 30 per cent.
- Apart from reduction in feed cost, he also earned net returns of 1 lakh rupees over three-year period from tree fodder banks of mulberry and calliandra.



FARMER TO FARMER TECHNOLOGY DIFFUSION

- Fodder bank developed by Shri Panamukkath is inspiring other farmers in the region, as livestock is an important component of homegardens in Kerala. Following him many youths and fellow farmers from other villages (Madakkathara, Adimali and Pananchery) have started practicing fodder tree-based farming practice in their homestead.

67

Shri Karshanbhai Devabhai Menat



9898769817

Name: Karshanbhai Devabhai Menat Age: 58 years
 Education: Graduation Experience in farming: 30 years
 Village: Salempura Block: Palanpur
 District: Banaskantha State: Gujarat
 Land holding: 04 acres



Agro-climatic zone: Gujarat Plains & Hills

ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, SDAU, Sardarkrushinagar from the year 2007.
- AICRP centre helped him in adopting and practicing Ardusa (*Ailanthus excelsa*) based agroforestry system and provided him quality saplings of ardusa tree.

FARMER CONTRIBUTION

- Shri Menat planted 165 tree saplings of Ardusa (3mx3m spacing) on boundary side of his farm with the technical support of AICRP centre in 2007 and after 14 years in 2020-21, earned profit of Rs. 2,47,500.
- He is meeting the green fodder requirement of his livestock (50 kg green leaves per tree) and fuelwood requirement of his family from this boundary plantation.
- Shri Menat also started selling the tree saplings which fetches him an additional annual income of around 1.5 lakh rupees.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- The farm field of Shri Menat is a source of inspiration to other farmers and he is persuading other rural households in the region to practice tree-based farming system for assured income and livelihood security.





Name : Shayam

Age : 50 years

Education : Graduation

Experience in farming : 32 years

Village : Rehnawa

Block : Lachhmangarh

District : Sikar

State : Rajasthan

Land holding : 9.5 acres

Agro-climatic zone : Western Dry Region



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered as a farmer beneficiary with AICRP centre on Agroforestry, SKNAU, Rajasthan from the year 2000.
- AICRP centre helped Mr. Shayam in adopting and practicing *Ailanthus excelsa* (Mahaneem or Ardu) based, *Prosopis cineraria* (Khejri) based and *Embllica officinalis* (Aonla) based agroforestry system.
- Centre also supplied him the improved saplings of ardu.

FARMER CONTRIBUTION

- With the technological backstopping of centre, Shri Shayam planted aonla (NA-7 and Chakaiya) at 6m x 6 m spacing in 3.5 acres of his land and getting annual benefit of around 3-3.5 lakh rupees by sale of aonla in nearby market. He is also taking seasonal crops in between the aonla tree from which he is earning 1-1.5 lakh rupees every year.
- Shri Shayam adopted boundary plantation of ardu and last year in 2021-22 earned additional revenue Rs. 70,000 by selling the timber.
- He uses the leaves of ardu tree as fodder for animals and aonla tree as mulch for organic manure.
- According to Shri Shayam, with the adoption of tree-based farming his income gets doubled.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Inspired by Shri Shayam farmers in the nearby villages have started planting trees on the boundaries of the farm.
- He influenced around 1000 farmers in the region for practicing aonla-based agroforestry system.

69

Padma Shri Sundaram Verma

9414901764

Name : Padma Shri Sundaram Verma Age : 72 years
 Education : Graduation Experience in farming : 51 years
 Village : Dantaramgarh Block : Ramgarh
 District : Sikar State : Rajasthan
 Land holding : 12.5 acres
 Agro-climatic zone : Western Dry Region

**ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY**

- Shri Verma has been registered as a farmer beneficiary with the AICRP centre on Agroforestry, SKNAU, Rajasthan since the year 2000.
- He sought the assistance of the AICRP center to implement a dryland-based agroforestry system. The center advised him to plant Mahaneem, Khejri, and Pomegranate on his farm, and endowed him with high-quality Ardu planting material.

FARMER CONTRIBUTION

- Padma Shri Sundaram Verma, a renowned environmentalist, demonstrated his perseverance and enthusiasm by planting over 5000 tree species on his farm. With technical assistance from the AICRP center, he has been engaging in boundary plantation of Ardu and Khejri species, which are suitable for drylands, for the past 20 years. In 2021-22, he earned an annual profit of Rs. 2 lakh by selling timber from Ardu trees. Additionally, he utilizes the trees' green leaves to feed small ruminants and as a source of fuelwood for his family's consumption.
- Padma Shri Verma has established a pomegranate orchard spanning 2.5 acres and earned an annual income of Rs. 3 lakh from it in the previous year. In addition, he produces high-quality planting materials of trees suitable for drylands, earning an annual profit of Rs. 3 lakh.
- In recognition of his contribution to the environment and dryland agroforestry, he was awarded the *Padma Shri* in 2021. He has also received several other awards, including the *National Award for Conservation of Biodiversity* in 2007, *Chaudhary Charan Singh Krishak Shiromani National Award* in 2003, *Van Pandit Award* by the Government of Rajasthan, *Best Farmer State Award* by Agriculture University in 1998, and *Jagjeewan Ram Farmer Award* by ICAR, New Delhi in 1997.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Padma Shri Verma has become a role model for farmers across the state, inspiring them to adopt tree-farming practices that are suitable for dryland regions to secure their income and livelihoods and has benefited approximately 20,000 fellow farmers.

70

Smt. Deepali Sardar



8250490584

Name : Deepali Sardar

Age : 32 years

Education : Primary

Experience in farming : 17 years

Village : Tipligheri

Block : Gosaba

District : South 24 Parganas

State : West Bengal

Land holding : 3.7 acres

Agro-climatic zone : Islands



ICAR-CAFRI/ AICRP on AGROFORESTRY REGISTRY

- Registered with South Asian Forum for Environment (SAFE), civil society organization of Kolkata, West Bengal from the year 2017; SAFE has an MoU with ICAR-CAFRI.
- Organization provided her training in community led mangrove agroforestry for sustaining biodiversity habitat and livelihood as well as augmenting community resilience and women empowerment.



FARMER CONTRIBUTION

- She has led several technology innovations for the agroforestry intervention in Sundarban islands of which the most important is hydroponic float farming that sustains agriculture and horticulture in mangrove habitat wherein the farmlands are mostly inundated with saline seawater.
- Along with this she has been actively engaged in technology improvisation like integrated aqua farming, solar run micro irrigation system, no tillage regenerative farming for climate adaptive practice etc.

FARMER TO FARMER TECHNOLOGY DIFFUSION

- Smt. Deepali is motivating the farmers to conserve mangrove habitat of Sundarbans Islands through tree plantation.

Swachh Bharat Abhiyan



Agri#search with a human touch

CENTRAL AGROFORESTRY RESEARCH INSTITUTE

"AGROFORESTRY PATHWAY FOR RESTORATION OF DEGRADED LANDS"



Published by

Director

ICAR-Central Agroforestry Research Institute
Jhansi 284003, Uttar Pradesh



+91-510-2730214



director.cafri@icar.gov.in



<https://cafri.icar.gov.in>



@ICarCafri



@ICAR-CAFRI JHANSI



icar.cafri



icarcafri.jhansi



icar.cafrijhansi2384