



कृषिवानिकी समाचार पत्र Agroforestry Newsletter

राष्ट्रीय कृषिवानिकी अनुसंधान केन्द्र, झाँसी -284 003 (उ.प्र.)
National Research Centre for Agroforestry, Jhansi-284 003 (U.P.)



Web site : <http://www.nrcaf.ernet.in>

अक्टूबर-दिसम्बर 2013, अंक 25, संख्या 4

October-December, 2013, Vol. 25, No. 4

National Consultation Meet on Agroforestry

Natural Resource Management Division, ICAR and National Research Centre for Agroforestry (NRCAF), Jhansi organized one day National Consultation Meet on "Agroforestry Research and Development in India" on 19th November, 2013 at NASC Complex, New Delhi.

Dr. S. Ayyappan, Secretary, DARE & DG, ICAR in his opening remarks emphasized upon the importance of agroforestry. He said that agroforestry is the key path to prosperity for millions of farm families, leading to extra income, employment generation, greater food and nutritional security and meeting other basic human needs in a sustainable manner.

Dr. D.N. Tewari, Former Member, Planning Commission stressed that agroforestry will play an important role in eliminating poverty and in meeting energy requirements of the country through cultivation of biofuels and simultaneously effective utilization of biomass based gassifiers besides ensuring healthy ecosystem services. He reiterated need to assign monetary value for intangible benefits accruing from agroforestry landuse for governing policy support. A publication on Profile of AICRP on Agroforestry was also released by the dignitaries on the occasion.



Dr. A.K. Sikka, DDG (NRM), ICAR briefed the delegates about the objectives of this meet. Dr. S.K. Dhyani, Director, NRCAF welcomed the delegates and also made a presentation on 'Agroforestry Research in India: ICAR Perspective'.

The meeting was organized in two sessions. Session-I was chaired by Dr. D. N. Tewari and Dr. B. Mohan Kumar, ADG (Agronomy and Agroforestry) was the Co-Chairman, while

Happy New Year 2014

From Director & Editorial Board

Issue's Highlights

- National Consultation Meet on Agroforestry
- ISO 9001:2008 Certification
- Farm Innovator's Day -16th November, 2013
- हिन्दी कार्यशाला. 30 दिसम्बर, 2013

Forthcoming Events

- World Agroforestry Congress-2014 (10-14 Feb.2014)
- ICAR-Industry Day & Agricultural Education Day on "28th February"
- Institute Joint Staff Council/Women Cell / PME/ RFD Cell meetings

Session-II was Chaired By Dr. Gurbachan Singh, Chairman, ASRB and Dr. K. B. Thampi, Technical Expert (F), NRAA was the Co-Chairman. During the session, Dr. Gurbachan Singh also highlighted the role of agroforestry in providing environmental services and urged researchers to make available technology packages for different situation to the stakeholders.

Senior officials from National Advisory Council (NAC), Planning Commission, National Rainfed Area Authority, Ministry of Agriculture, Ministry of Environment and Forests, Ministry of Rural Development (Land Use and Planning), World Agroforestry Centre, BAIF, ICFRE, ICAR Institutes, representatives from WIMCO, ITC, NABARD, Tree Grower's Association and progressive farmers participated in the meet.

The Meet was organized as precursor for showcasing Indian perspective on Agroforestry R & D and development at global level during forthcoming WCA2014. The outcome of the meeting was identification of critical gaps and constraints in implementing Agroforestry Development and viable alternatives to overcome them. This was a part of initiatives for evolving a framework for a National Agroforestry Policy.

Shade modifies root nodule formation depending on incident light intensity and biochemical status of leaves in pea (*Pisum sativum* L.)

Land productivity per unit area is nowadays one of the major prioritized issue for researchers and policy makers. In the context of climate change agroforestry is one of the major options for its recognized potential for enhancing land productivity. Trees being integral component of agroforestry systems, tree canopy imparts limitation for light interception to the under story crops. Due to low incident light under the canopy, the resultant shade poses a major constraint for optimal crop productivity in comparison to the sole crop being grown without trees. Intensity of shade varies from partial to deep through moderate intensity depending upon the tree canopy, its growing pattern and the microclimate. About 78% of the atmosphere is nitrogen gas (N_2) and despite its abundance in atmosphere, it cannot be used directly by higher organisms including plants, animals and human in cellular metabolism. Low light or shade is a crucial factor to decide the intercellular mechanisms of plants including root nodules formation. Thus how low light has affected the nodules formation, which in turn affected the nitrogen metabolism in pea plants under varying regimes of shade in simulated shade net house conditions with three different categories of shade or without shade in open field have been examined.

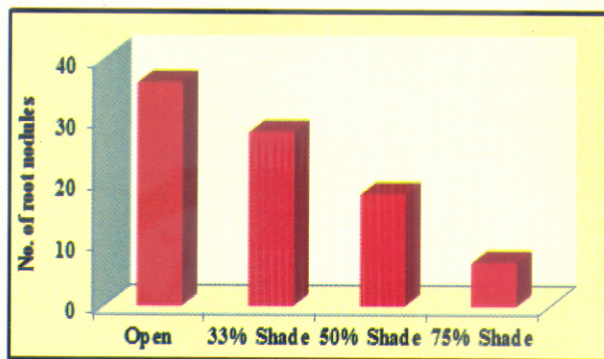
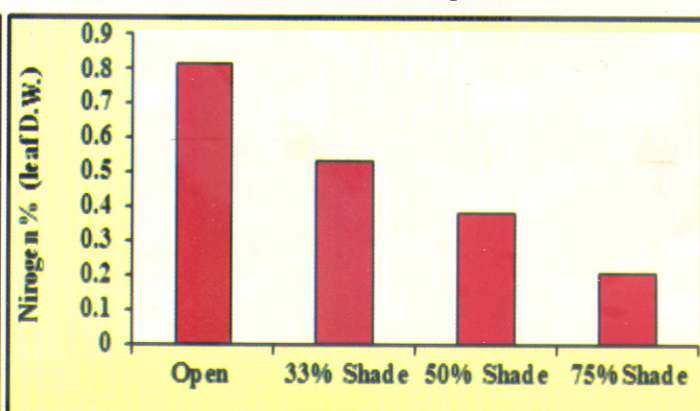
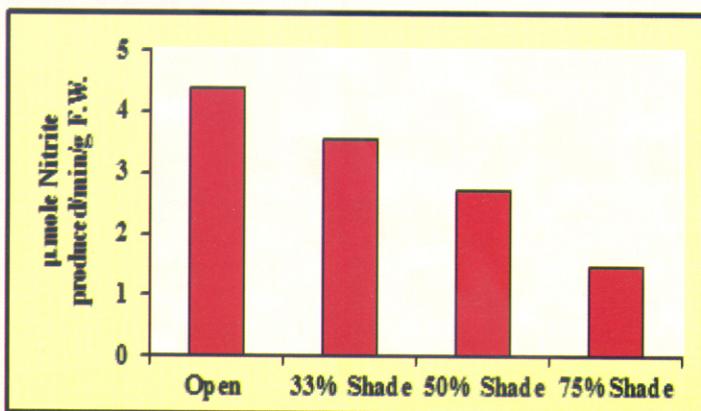


Fig.-1. Effects of varying shade on root nodules (per plant) in pea (*Pisum sativum*).

The number of root nodules in open grown pea plants was much more than shade grown plants (Fig.1 and plate-1). It was observed that the activity of nitrate reductase enzyme in leaves was decreasing with the increase in



Effect of varying shade on leaf nitrate reductase enzyme activity (Fig. 2) and leaf nitrogen % (Fig. 3) in pea plants.

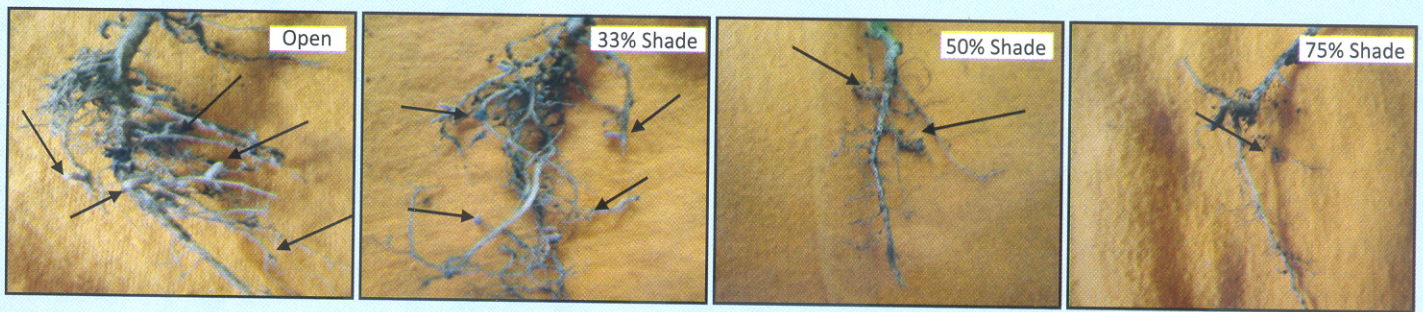


Plate-1 Effects of varying shade on root nodules in pea (*Pisum sativum*).
 (—————→ Indicating root nodules).

the intensity of shade (Fig.2). This fact has been supported by the decreasing trend of nitrogen percentage in leaf with increase in shade intensity (Fig.3). Results indicated that availability of light and intrinsic activity of nitrate reductase enzyme are some of the major regulatory factors controlling nitrogen fixing ability and root nodules formation in pea plants, which holds much significance for controlling crop productivity under low light environment.

Badre Alam, Mayank Chaturvedi, Anil Kumar Singh, Ram Newaj and S.K. Dhyani
 National Research Centre for Agroforestry, Jhansi (Uttar Pradesh)

ISO 9001:2008 Certification

Department of Agricultural Research and Education (DARE) under the Ministry of Agriculture have been assessed in the category of Very Good to Excellent for last three years by PMD. Therefore, Government of India desired that all the institutes working under DARE may be encouraged to obtain ISO 9001-2008 certification so as to enable the organizations for global participation. In turn, DARE instructed ICAR and its institutes to expedite accreditation by international certifying agencies. In this context, NRCAF has been accredited ISO 9001:2008 certificate for its management standards on 18th December, 2013.



Research Advisory Committee

16th RAC meeting of NRCAF was held on 18th & 19th October, 2013 under the chairmanship of Dr. V.P. Singh, Regional Representative for South Asia, WAC, New Delhi. Dr. S. D. Kashyap, Former Dean, Dr. Y.S. Parmar Univ. of Horti. & Forestry, Solan; Dr. D. K. Das, Former Head, IARI, New Delhi; Dr. Brahma Singh, New Delhi and Dr. V. K. Gupta, Ex-Principal Scientist, NRCAF and Dr. S. K. Dhyani, Director, NRCAF, Jhansi including scientists and CTO participated in the meeting. The chairman and members of RAC committee also visited the Parasai- Sindh watershed and had discussions with farmers and watershed committee and watershed team.



Impact of Rainwater Harvesting Structures on Groundwater Recharge in Parasai-Sindh watershed of Central India

The study was carried out at Parasai - Sindh watershed located in Babina block of Jhansi (Bundelkhand region) Uttar Pradesh. This watershed was selected in 2011 to enhance water availability, water use efficiency and agricultural productivity through agroforestry and improved management of land and water resources. The open shallow dug wells, situated in unconfined aquifer, are the major source of irrigation throughout Bundelkhand region of Central India. These wells due to dependence on perched water are characterized by very low specific yield and do not support continuous operation of pumps to irrigate the agricultural fields in a single stretch. This warrants immediate need of water harvesting to ensure quick recharge in wells and thereby facilitate irrigation and in turn crop productivity.

Total area of the watershed is 1246 hectares comprising three villages namely Parasai, Chhatpur and Bachhauni. It is located between $25^{\circ} 23' 47.6''$ - $25^{\circ} 27' 05.1''$ latitude and $78^{\circ} 20' 06.5''$ - $78^{\circ} 22' 33.0''$ longitude. The watershed has a semi-arid sub-tropical climate and is characterized by dry and hot summer, warm and moist rainy season and cool winter with occasional rain showers. Mean annual temperature ranges from 24 to 25 $^{\circ}\text{C}$. The mean summer (April-May-June) temperature is 34 $^{\circ}\text{C}$, which may rise to a maximum of 46 to 49 $^{\circ}\text{C}$ during May and June. Majority of the area is under agriculture (88.7%) followed scrub land (5.7%). However, about 200 ha of agricultural land are generally kept fallow during *rabi* due to lack of irrigation water. Majority of agricultural land in the watershed comprises shallow gravelly red soil (82%) with patches of light black soil. Red soil has very low water holding capacity (7 to 16%) and poor in organic carbon (0.2 to 0.4%). As such, they suffer badly on account of water scarcity, hence, less productive. To improve the water resources in the watershed about 1,00,000 cum. rainwater harvesting facility was created through 10 cost-effective structures during 2012 and 2013. The open wells were monitored for water level once in a month since May, 2011 to capture the trend of water level as influenced by rainwater harvesting structures. Depth of wells varies from 2.95 to 17.8 m with average of 9.7 m.

The Water Table Fluctuation (WTF) method was applied in Parasai-Sindh watershed during pre (2011, 1289.2 mm rainfall) and post (2013, 1396 mm rainfall) intervention phase to quantify groundwater recharge. Specific yield was estimated in the range between 0.5 and 1.5 % with average value of 1.0 % for Bundelkhand hard rock region. Underlying deep percolation is assumed negligible due to presence of impervious granite layers. Evaporation losses from the groundwater aquifer were calculated as 5-10 mm year⁻¹ for the study area using Coudrain-Ribstein's depth-evaporation relationship. The average difference in hydraulic head of 200 open wells for the months of May and October during pre and post interventions was 3.54 and 5.01 m, respectively (Fig. 1). Net groundwater recharge during monsoon season of pre and post interventions was estimated at 53.7 and 82.6 mm, respectively, which is 53.7% higher than pre intervention phase. The significant increase in groundwater recharge is attributed to rainwater harvesting through cost-effective structures. Improved yield of open wells reduced *rabi* fallow by about 70 ha besides, ensuring irrigation water through dug wells to *rabi* crops predominantly wheat in entire treated area of the watershed. The study has proved beyond doubts the efficacy of rainwater harvesting for groundwater recharge in Bundelkhand region of Central India. The findings of Parasai- Sindh watershed are in conformity with that of Garh Kunder -Dabar watershed. This has established replicability of watershed management programmes in Bundelkhand region for resolving the issue of ground water recharge and availability for irrigation and drinking as well.

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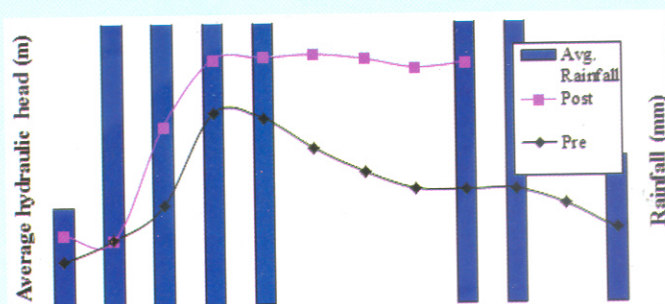


Fig. 1. Fluctuation of hydraulic head during pre and post watershed intervention

Farm Innovators Day

NRCFAF organized Farm Innovators Day on 16th November, 2013 in Parasai- Sindh Watershed. Two farmers Shri Lakhan Singh Yadav, vill. Kharak, Datia and Shri Bala Ram Yadav, vill. Chhatpur, Jhansi were felicitated on the occasion for adopting *Tectona grandis* based agroforestry system on large scale. On the eve health camp was also organized for watershed dwellers to provide overall integrated development in watershed development projects. A team of doctors from different specialization viz. Paediatrics, surgery, gynaecology and pathology from different reputed hospitals of the



country examined about 400 farmers, farmwomen and children from all three villages of watershed. The medical unit of IGfRI was also a part of the health camp. Medicines worth ₹ Ten thousand were also distributed especially to the malnourished women and children. The people suffering from chronic diseases were advised to visit specialized government hospitals including Dr. Ram Manohar Lohia Hospital New Delhi. It was observed by the doctors that most of the children were suffering from deficiency of different kinds of vitamins.



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Human Resource Development

- Dr. Rajendra Prasad, Pr. Scientist & PI, Sh. Rajendra Singh, ACTO and Dr. V D Tripathi R. A. attended 5th Coordination Committee Meeting of the Network Project on “Harvesting, Processing and Value Addition of Natural Resins and Gums” during 8th to 9th October, 2013 held at JNKVV, Jabalpur.
- Dr. K. B. Sridhar, Scientist participated in International Short Course on “Ecosystem Services and Integrated Watershed Management” during 6th to 15th November, 2013 held at ICRISAT, Hyderabad. He also participated in National Seminar on Recent Advances in Research on Beneficial Insects: Honey bee, Lac culture, Tusser and Sericulture held at IINRG, Ranchi during 27th to 30th November, 2013 and presented paper.
- Dr. R. K. Tewari, Pr. Scientist & Nodal Officer (RFD) and Dr. Rajeev Tiwari, Chief Tech. Officer participated in the RFD Meeting of NRM Division on 18th November, 2013 held at NASC, New Delhi.
- Dr. S.K. Dhyani, Director; Dr. R. K. Tewari, Dr. A. K. Handa, Dr. Inder Dev, Pr. Scientists and Dr. Rajeev Tiwari, Chief Tech. Officer participated in the “National Consultation Meet on Agroforestry” organized by NRM Division and NRCFAF on 19th November, 2013 held at NASC, New Delhi.
- Dr. Mahendra Singh, Sr. Scientist participated in the MDP Workshop on PME on Agricultural Research during 19th - 23rd November, 2013 held at NAARM, Hyderabad.
- Dr. Ramesh Singh, Sr. Scientist (Soil & Water Conservation Engg.) delivered lecture on “Impact of Integrated Watershed Development Interventions on Hydrology and Eco-system services in drought prone Bundelkhand region of Central India” at Deptt. of Civil Engineering, Indian Institute of Technology, Banaras Hindu University, Varanasi on 30th December, 2013.
- Sh. Asha Ram, Scientist attended Winter School on “Quality seed production and seed standards in forage crops and range grasses: Challenges, advances and Innovation” during 11th September to 1st October, 2013 held at IGfRI Jhansi.
- Sh. Birendra Singh Tomar, Assistant attended Central Joint Staff Council Meeting during 15th & 16th December, 2013 held at NASC, Complex, New Delhi. The meeting was chaired by DG, ICAR & Secretary, DARE, New Delhi.

Communal Harmony Campaign

Communal Harmony Campaign and Fund Raising Week "19th to 25th November, 2013" was observed at the Centre. A sum of ₹ 12,720 was collected by Sh. Veer Singh Pal, Sr. Clerk from the staff members during the week.

Promotion

Sh. R.K. Singh, Tech. Officer was promoted to Sr. Tech. Officer w.e.f. 19th June, 2013.

Exhibition Stall

An exhibition stall was displayed on the occasion of *Kharif Kisan Mela* organized collaboratively by ATMA, Jhansi and U.P. State Agricultural Department, on 3rd October, 2013 at Company Bag, Baruasagar of Jhansi district. A number of visitors viz., D.M., C.D.O., Joint Director (Agriculture), Dy. Director (Agriculture), Jhansi; Line department officials, Bankers, NGOs, VOs, including farmers, nursery growers visited the exhibition stall of NRCAF, Jhansi.

हिन्दी कार्यशाला एवं राजभाषा कार्यान्वयन समिति

केन्द्र में दिसम्बर, 2013 को समाप्त तिमाही कार्यशाला दिनांक 30.12.2013 को केन्द्र निदेशक डा. एस. के. ध्यानी की अध्यक्षता में सम्पन्न हुई। कार्यशाला के मुख्य वक्ता श्री श्याम बाबू शर्मा, सहायक वित्त एवं लेखाधिकारी ने अपना व्याख्यान "वित्तीय प्रबन्धन एवं लेखा पद्धति" पर दिया। श्री शर्मा ने व्याख्यान देते हुए वार्षिक बजट अनुमान योजना तैयार करना, राजस्व प्रावधान, प्रारम्भिक शेष, स्थायी सम्पत्ति प्रबन्धन, देनदारी एवं लेनदारी प्रबन्धन, वित्त वर्ष के अन्त में अवशेष वस्तुओं का मूल्यांकन, उपार्जन (Accrual) तथा लेखा पद्धति पर विस्तार से जानकारी दी। इसके साथ ही साथ "वित्तीय प्रबन्धन" पर राष्ट्रीय वित्त प्रबन्धन, फरीदाबाद द्वारा आयोजित प्रशिक्षण के सन्दर्भ में भी श्री शर्मा द्वारा आख्या प्रस्तुत की गई। कार्यक्रम का संचालन डा. सी. के. बाजपेयी, मुख्य तकनीकी अधिकारी एवं प्रभारी अधिकारी राजभाषा तथा धन्यवाद ज्ञापन श्री हूबलाल, वैयक्तिक सहायक द्वारा किया गया। दिनांक 30.12.2013 को ही राजभाषा कार्यान्वयन समिति की बैठक डा. एस.के. ध्यानी, निदेशक की अध्यक्षता में सम्पन्न हुई।



Pre Congress (WCA-2014) Activities

Report on Painting and Essay Competition for School Children

One of the key pre congress activity related to 3rd World Congress on Agroforestry to be held in Delhi (10th – 14th February, 2014) was the Painting and Essay writing competition for school children. The objective of the event was to imbibe responsibility in the young generation towards the Mother Nature and their duties to save the environment. The theme of this competition was "Trees for Life". The event helped in creating awareness amongst school children about present scenario of climate change and role of trees in mitigating its impact, biodiversity conservation and values of trees in human life.

The competition was organized in two groups viz., painting



for 6-12 years old and essay for 13-18 years old children and well publicized through announcements on official web pages of Indian Council of Agricultural Research (ICAR), New Delhi and National Research Centre for Agroforestry (NRCAF), Jhansi. In addition to this information was also displayed on Facebook pages, through e-mail to Pan-India Data base of more than 264 schools all over country, to 25 State Agricultural Universities in different parts of the country through Officer in Charges of Coordinating centres of All India Coordinated Research Project on Agroforestry and publication in NRCAF, Newsletter.

The competition received overwhelming response from throughout the country with participation of children from 18 states of the country namely Assam, Andhra Pradesh, Andaman & Nicobar Island, Chhattisgarh, Gujarat, Haryana, Karnataka, Maharashtra, Manipur, Meghalaya, New Delhi, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal. It is heartening to note that about 56% of the participants in the competition were girl children. It is very significant that girls were encouraged by their parents and teachers and provided desired exposure for participating in competitive events. The entries were judged by the independent Jury. The President of the Indian Society of Agroforestry, Dr Shiv Kumar Dhyani, while announcing the results of the competition on 15th January, 2014 congratulated the winners, their parents and teachers and also thanked all those children who participated in the competition.



The winners of Essay competition are:

- | | |
|---|------------------|
| 1. Km. Nisitha Pattanaik D/O Shri Kshitish Chandra Pattanaik -
Bhubaneswar, Odisha | I Prize |
| 2. Mr. V.S. Naveen Kumar S/O Shri R. Saravanan-
Karamadai, Dist.- Coimbatore, Tamil Nadu | II Prize |
| 3. Mr. Prashant Kaushik S/O Shri J.L. Sharma –
Mathura, Uttar Pradesh | III Prize |

Km. Nisitha Pattanaik from Bhubaneswar, winner of the first prize in essay competition elaborated in a very interesting and emphatic way about the role of trees in our lives and the need to conserve our environment and biodiversity by saving trees and forests for the future human and animal life on earth. Similarly, Km. V. Niharika, winner of First prize in painting competition belonging to Tamil Nadu depicted the role of trees in our lives in a very beautiful way as shown here.

The winners of the competition will receive their prizes including a certificate at Vigyan Bhawan, New Delhi from the Hon'ble President of India during the opening ceremony of the Congress on 10th February 2014. The organizers of the World Congress on Agroforestry once again congratulate all the winners and looking forward to receive them in New Delhi to be a part in their proudest moment.

The winners of painting competition are:

- | | |
|--|------------------|
| 1. Km. V. Niharika D/O Shri S. Varada Rajan-
K.K. Pudur, Coimbatore, Tamil Nadu | I Prize |
| 2. Km. Bidyasha Harichandan D/O Shri Benudhar Harichandan-
IRC Village, Bhubaneswar, Odisha | II Prize |
| 3. Km. Vaishvi Shah D/O Dr. Sarvesh Kumar Shah-
SDAU, Sardarkrushinagar, Gujarat | III Prize |

Dear Children, It is proud moment to all of you, your teachers, parents and to all of us as well. It is even more so as the President of India will give the award, said Dr. Shiv Kumar Dhyani, the president of the Indian Society of Agroforestry, while announcing the winners on 15th January, 2014.

रा०कृ०वा०अनु० केन्द्र, झाँसी द्वारा विकसित लागत प्रभावी चैकडेम एवं रिसाव रोधी तकनीकों का सम्बन्धित विभागों द्वारा अंगीकरण

पत्रिका
संस्कृत कृषिविज्ञान अनुसंधान संस्थान
राजशिव रोड,
झाँसी-284003 (उ.प्र.)

दिनांक: 15 September 2013

विषय: कृषि, कृषिविज्ञान (प्रत्यक्ष अनुसंधान एवं कृषि प्रसारण तकनीकों) से संबंधित कृषि के विकास को सुचारु रूप से लागू करने के लिए

कवरेज: कृषि के विकास को सुचारु रूप से लागू करने के लिए

क्र.सं.	पंचायत	संवर्धन का प्रकार	प्रकार	क्षेत्रफल (वर्ग मी.)	जमीन/कृषि	विवरण	
1	Datia	TWMP 1	Noner	Noner	25.56991, 78.34228	-do-	Cost-effective design of rain-water harvesting structures demonstrated by NRCAF, Jhansi in Damages-Pahuj watershed
2	Datia	TWMP 1	Noner	Noner	25.56332, 78.34525	-do-	
3	Datia	TWMP 1	Noner	Noner	25.56183, 78.34318	-do-	
4	Datia	TWMP 1	Noner	Noner	25.56414, 78.33112	-do-	
5	Datia	TWMP 1	Noner	Noner	25.58046, 78.32718	-do-	
6	Datia	TWMP 1	Noner	Noner	25.57532, 78.30582	-do-	
7	Datia	TWMP 1	Noner	Noner	25.57571, 78.30251	-do-	
8	Datia	TWMP 1	Pathari	Kambhar	25.5879, 78.34836	-do-	
9	Datia	TWMP 1	Pathari	Kambhar	25.59169, 78.34613	-do-	
10	Datia	TWMP 1	Pathari	Kambhar	25.59343, 78.34486	-do-	
11	Datia	TWMP 1	Pathari	Kambhar	25.59306, 78.33566	-do-	
12	Datia	TWMP 1	Pathari	Kambhar	Ar Arvind single land	-do-	
13	Datia	TWMP 1	Pathari	Pathari	25.59416, 78.3422	-do-	
14	Datia	TWMP 1	Pathari	Pathari	25.5951, 78.34097	-do-	
15	Datia	TWMP 1	Pathari	Pathari	25.60044, 78.33638	-do-	
16	Datia	TWMP 1	Pathari	Pathari	25.60678, 78.3379	-do-	
17	Datia	TWMP 1	Hajni	Chopra	25.60787, 78.40993	-do-	
18	Datia	TWMP 1	Hajni	Chopra	25.61009, 78.41499	-do-	
19	Datia	TWMP 1	Hajni	Chopra	25.60966, 78.41481	-do-	
20	Datia	TWMP 1	Hajni	Chopra	25.60936, 78.41846	-do-	
21	Datia	TWMP 1	Hajni	Chopra	25.6096, 78.42158	-do-	
22	Datia	TWMP 1	Hajni	Chopra	25.60936, 78.42317	-do-	
23	Datia	TWMP 1	Hajni	Govind Nagar	25.65299, 78.41966	-do-	
24	Datia	TWMP 1	Hajni	Govind Nagar	25.65126, 78.41816	-do-	
25	Datia	TWMP 1	Hajni	Govind Nagar	25.65081, 78.41776	-do-	
26	Datia	TWMP 1	Hajni	Govind Nagar	25.65017, 78.41597	-do-	
27	Datia	TWMP 1	Hajni	Govind Nagar	25.65174, 78.41515	-do-	
28	Datia	TWMP 1	Hajni	Govind Nagar	25.65218, 78.41358	-do-	
29	Datia	TWMP 1	Hajni	Govind Nagar	25.65208, 78.41292	-do-	
30	Datia	TWMP 1	Hajni	Govind Nagar	25.65299, 78.40871	-do-	
31	Datia	TWMP 1	Chikram Sagar	Chikram Sagar	25.65928, 78.40439	-do-	
32	Datia	TWMP 1	Chikram Sagar	Chikram Sagar	25.66215, 78.40739	-do-	
33	Datia	TWMP 1	Chikram Sagar	Chikram Sagar	25.66467, 78.40288	-do-	
34	Datia	TWMP 1	Chikram Sagar	Chikram Sagar	25.66927, 78.41215	-do-	
35	Datia	TWMP 1	Chikram Sagar	Chikram Sagar	25.66838, 78.41445	-do-	
36	Datia	TWMP 1	Nichrauli	Nichrauli	25.64165, 78.40916	-do-	
37	Datia	TWMP 1	Nichrauli	Nichrauli	25.64191, 78.40618	-do-	
38	Datia	TWMP 1	Saliya Pamar	Saliya Pamar	25.59456, 78.35576	-do-	
39	Datia	TWMP 1	Saliya Pamar	Saliya Pamar	25.59296, 78.35108	-do-	
40	Datia	TWMP 1	Saliya Pamar	Saliya Pamar	25.59297, 78.35145	-do-	
41	Datia	TWMP 1	Saliya Pamar	Saliya Pamar	25.60777, 78.37975	-do-	
42	Datia	TWMP 1	Saliya Pamar	Khamrao no. 1198		-do-	
43	Jhansi	Gram panchayat	Dhakanali	Nayakhera	Chanku Toria ke pas	-do-	Prevention of seepage through RWBIS

पत्रिका
संस्कृत कृषिविज्ञान अनुसंधान संस्थान
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दिनांक: 15 September 2013

विषय: कृषि, कृषिविज्ञान (प्रत्यक्ष अनुसंधान एवं कृषि प्रसारण तकनीकों) से संबंधित कृषि के विकास को सुचारु रूप से लागू करने के लिए

कवरेज: कृषि के विकास को सुचारु रूप से लागू करने के लिए

क्र.सं.	पंचायत	संवर्धन का प्रकार	प्रकार	क्षेत्रफल (वर्ग मी.)	जमीन/कृषि	विवरण
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