Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem

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Indian Council of Agricultural Research (ICAR), with financial assistance from the World Bank (WB), launched National Agricultural Higher Education Project (NAHEP) in 2017 with an aim to bring transformative reforms in agricultural higher education in country. The project development objective is to enhance the quality and relevance of agricultural higher education in the country. NAHEP has taken into consideration the management of environmental and social impacts and improve the knowledge and understanding of these issues especially in the backdrop of climate change, and identify and comply with all relevant environmental legislation and regulation. The purpose of the environmental safeguard policies under NAHEP is to prevent, mitigate or minimize the harm to people and their environment during the implementation of the project.

I am happy to share that Project Implementation Unit- NAHEP has come up with a document on *Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem*' taken up by partner Agricultural Universities. Green Initiatives under these safeguard measures are to provide aesthetic value and conducive environment to work besides reducing the use of energy, enhancing greenery, effective water management, etc. This publication documents the Green Initiatives such as installation of solar SPV, LED bulbs to reduce energy utility and water conservation measures and waste management practices. It also documents the activities carried out by partner AUs to improve the awareness, promote the development of infrastructure to mitigate risks of environment may occur due to implementation of the project.

I compliment National Director and his team for taking significant efforts in developing this publication.

-Dr. Trilochan Mohapatra, Secretary-DARE, Director General- ICAR

Preface

National Agricultural Higher Education Project (NAHEP) is being implemented in 58 AUs. Out of 58 PAUs, 27 PAUs (under Call-1) started during FY2018-19 financial year while 19 PAUs (under Call-2) and 12 PAUs (under Call-3) initiated during FY2019-20. The project proposal includes Environmental Sustainability Plans (ESP) which comprises of applicable legal compliances, risk & mitigation measures and green initiavities/ environment friendly parameters. The purpose this publication is to capture the overview of the green initiates taken up each universities under 5 themes : Greenery, Energy, Water , Waste and Other initiavities by 17 AUs. Also, it illustrates the measures taken by the partner AUs such as capacity building programs, skill development programs, awareness programs for stakeholders and other infrastructure development established to mitigate the risk of environment may occur due to this implementation.

This document comprises activities carried out by 17 universities those who have planted the different varieties of saplings (around 1,79,375) across an area of 229 Ha with a species diversity of 720 to improve the maintain and improve the Greenery in the campuses. Whereas ~11,000 numbers of LED bulbs (12w capacity) were replaced by Non–LED lights saving an amount of Rs 1,02,955 and cutting off carbon emission of 3,72,013 kg to conserve the energy. Around 36.4 crores liters of water is conserved by 10 AUs through water harvesting measures such as roof top, farm ponds, etc. The aim of such initiative under NAHEP is to create the awareness amongst the partner AUs on environmental safeguard measures to reduce the environment risk to be observed due to implementation. Learnings from such activities will certainly help other AUs to take up such initiatives at their campuses in the due course of time. The support, guidance and motivation provided by Dr. Trilochan Mohapatra, Secretary, DARE and Director General, ICAR to PIU-NAHEP has been instrumental to the entire project team in effective implementation and securing achievements. The initiative for bringing this book by National Coordinator, M&E is highly appreciated. The support provided by all the National Coordinators, consultants and ESS specialists is duly acknowledged.

-Dr. R. C. Agrawal, National Director-NAHEP, Deputy Director General-Education

Indian Council of Agricultural Research (ICAR) commenced National Agricultural Higher Education Project (NAHEP) with the assistance of World Bank (WB) in November 2017 with an overall objective to support participating Agricultural Universities (AUs) and ICAR in providing more relevant and higher quality education to the students. NAHEP endeavors increased agricultural productivity and support quality improvements of higher education to create a more skilled workforce that continuously improves the productivity of key sectors, including agriculture. Overall, the project aims to develop resources and mechanism for supporting infrastructure, faculty and student advancement, and providing means for better governance and management of agricultural universities, so that a holistic model can be developed to raise the standard of current agricultural education system that provides more jobs and is entrepreneurship oriented and at par with the global agriculture education standards.

NAHEP is a Multi-Global Practice collaboration (Agriculture and Education) project and supports activities and results directly related to cross-cutting strategic areas of climate change, jobs and gender. NAHEP has been promoting efficiency and competitiveness through changes in working mechanism of AUs, raising the teaching and research standards through improved infrastructure, competency and commitments. There are four key components under NAHEP, namely; Institutional Development Plan (IDP), Centres for Advanced Agricultural Sciences and Technology (CAAST), ICAR to support excellence in agricultural universities (AUs), and ICAR Innovation Grants to AUs. It is envisaged that improved AU performance through quality enhancement, better employment and entrepreneurship opportunities created for agriculture graduates, non-accredited AUs attaining ICAR accreditation, and institutional reforms implemented in Education Division of ICAR and AUs under these components together shall contribute to the achievement of the overall program objective. Till March 2020, 58 Agriculture universities (AUs) have been awarded under NAHEP, wherein 18 AUs come under IDP, 16 AUs under CAAST and 24 AUs under IG in component 1. Besides 3 ICAR institutes i.e. ICAR- Indian Agricultural Statistics Research Institute (IASRI), ICAR-National Institute of Agricultural Economics and Policy Research (NIAP) and ICAR-National Academy of Agricultural Research Management (NAARM) have been implementing Comp 2.

NAHEP under the guidance of ICAR and World Bank has been supporting AUs and ICAR institutes to provide the better quality and more relevance agricultural higher education to the students. With this aim, NAHEP has been sponsoring many activities for enhancing learning outcomes through academic and infrastructure development, enhancing system management and effectiveness with emphasis on industry-academia linkages, creating better employment and entrepreneurship opportunities by coordinating development of teaching, research and extension on emerging areas of agriculture and allied sector. Improving overall competencies for strengthening education through better institutional reforms like curriculum revisions, leveraging ICT infrastructure, human resource capacity development etc.

Towards this endeavor, NAHEP has been conducting environmental assessment to prepare EMF to ensure the sustainability of the project the components. EMF includes Environment Sustainable Plan (ESP), environmental concerns and initiatives of greening the agricultural curriculum. ESP comprises of safeguards (Legal compliances and Mitigation measures), Safeguard plus (Green Initiatives / Best practices) and Education & Awareness. Green initiatives are environmental friendly practices and education combines to promote sustainable and eco-friendly practices in the campus. For ideal educational institutional buildings, it's imperative to put in place sustainable environmental management in terms of green cover, solid, liquid and e-waste management, rain and roof water harvesting, water and energy conservation, waste reuse and recycling, to cite a few

This document focuses on Green Initiates taken up by universities under themes : Greenery, Energy Conservation, Water Conservation, Waste management and other such as establishment of Museum by Navsari university and UAS, Darward planned to construct green building with state contribution for which designed the building concept by an agency.

Green Initiatives



Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem

Greenery

Greenery in a simple word is green foliage, growing plants, or vegetation

According to the Green India Mission, "Greening will go beyond trees and plantation so that greening encompasses both protection and restoration"

The objective of the mission is to increase green cover to the extent of 5 Mn ha and improve quality of existing green cover on another 5 Mn ha, improve eco-system services like carbon sequestration, hydrological services and biodiversity and provisioning services like fuel, fodder, and timber and non-timber forest produces (NTFPs).

India has a target to sequester 2.5 billion tonnes of carbon by 2020-30. "India's current forest cover is 75 Mn ha and to meet our target of carbon sequestration, 30 Mn ha of additional land would be required for forests

Summary: Greenery



Distribution of number of plants planted by AUs





Distribution of plantation area by AUs



TNAU,Coimbatore

- NDRI, Karnal
- MPKV, Rahuri
- UAS, Darward
- UAS,Raichur
- Others

Distribution of number of species by AUs



- UAS ,Banglore
- IARI, Delhi
- CSKHPKV,Palampur
- SKUAST,Jammu
- TNAU,Coimbatore
- NDRI, Karnal
- UAS, Darward
- Others

July 2021

Assam Agricultural University, Jorhat

Category	Activity
Total plantation area	1.6 ha
Sapling planted on plantation area	700
Diversity in species	15
Kay spacies planted	

key species planted

Polyalthia longifolia, Bouganvillea spp, Litchi, Nyctanthes arbortristis, Selenicereus undatus, Persea americana, Annona reticulata, Durio zibethinus, Psidium guajava, Terminalia arjuna



Anand Agricultural University, Anand

Category	Activity
Total plantation area	3.6 ha
Sapling planted on plantation area	7,350
Diversity in species	21
Key species planted	

Hylocereus undatus, Santalum album, Aegle marmelos, Annona squamosa, Tinospora cordifolia, Cassia fistula, Terminalia arjuna



Kerala Agricultural University, Thrissur

Category	Activity
Total plantation area	1.4 ha
Sapling planted on plantation area	600
Diversity in species	10
T 7 1 1 1	

Key species planted

Ribes uva-crispa, Manilkara zapota, Artocarpus heterophyllus, Artocarpus hirsutus, Nephelium lappaceum, Cocos nucifera, Bambusa textilis



University of Agricultural Sciences, Bangalore

Category	Activity
Total plantation area	5 ha
Sapling planted on plantation area	1,500
Diversity in species	120

Key species planted

Acacia auriculiformis, Acacia chundra Acalypha hispida, Aegle marmelos, Ageratum conyzoides, Albizia amara, Albizia lebbeck, Albizia odoratissima, Alstonia macrophylla, Anacardium occidentale, Annona squamosa



Birsa Krishi Vishwavidyalaya, Ranchi

Category	Activity
Total plantation area	1.4 ha
Sapling planted on plantation area	600
Diversity in species	10

Key species planted

Ribes uva-crispa, Manilkara zapota, Artocarpus heterophyllus, Artocarpus hirsutus, Nephelium lappaceum, Cocos nucifera, Bambusa textilis



Birsa Krishi Vishwavidyalaya, Ranchi

Category	Activity
Total plantation area	5 ha
Sapling planted on plantation area	360
Diversity in species	20

Key species planted

Pongamia pinnata, Syzygium cumini, Delonix regia, Azadirachta indica, Adina cordifolia, Artocarpus lacucha, Dalbergia sisoo, Terminalia bellerica, Anthocephalus kadamba, Swietenia mahogony



National Dairy Research Institute, Karnal

Category	Activity
Total plantation area	40 ha
Sapling planted on plantation area	7,414
Diversity in species	41

Key species planted

Delonix regia, Saraca asoca, Azadirachta indica, Ficus religiosa, Melia azedarach, Terminalia catappa, Cassia fistula, Eucalyptus globulus



Kamdhenu University, Gandhinagar

Category	Activity
Total plantation area	0.2 ha
Sapling planted on plantation area	370
Diversity in species	25
Key species planted	

Peltophorum pterocarpum, Acacia dealbata, Senna siamea, Ficus religiosa, Melia azedarach, Terminalia catappa, Cassia fistula, Eucalyptus globulus



Mahatma Phule Krishi Vidyapeeth, Rahuri

Category	Activity
Total plantation area	7 ha
Sapling planted on plantation area	10,000
Diversity in species	25

Key species planted

Azadirachta indica, Santalum album, Syzygium cumini, Tectona grandis, Samanea saman, Delonix regia, Cassia fistula , Lagerstroemia speciose, Peltophorum pterocarpum, Spathodea campanulate



Prof. Jayashankar Telangana SAU, Rajendranagar

Category	Activity
Total plantation area	0.2 ha
Sapling planted on plantation area	300
Diversity in species	12
Key species planted	

Allamanda cathartica , Grevillea robusta ,Tabebuia rosea, Plumeria rubra



University Of Agriculture Science, Raichur

Category	Activity
Total plantation area	4 ha
Sapling planted on plantation area	300
Diversity in species	12
Key species planted	

Millingtonia hortensis, Cocos nucifera, Swietenia mahagoni, Tamarindus indica, Muntingia Calabura, Tecoma stans, Bahunia sps, Saraca indica, Ficus repens



Junagarh Agricultural University, Junagadh

Category	Activity
Total plantation area	0.5 ha
Sapling planted on plantation area	960
Diversity in species	17
Key species planted	

Allamanda cathartica , Grevillea robusta ,Tabebuia rosea, Plumeria rubra



University of Agricultural Sciences, Dharwad

Category	Activity
Total plantation area	20 ha
Sapling planted on plantation area	5,238
Diversity in species	20

Key species planted

Chlorophytum comosum, Peperomia obtusifolia, Pterocarpus santalinus, Syzygium samarangense, Acalpha godseffesana, Alternathera perporia, Ficus variegata, Hibiscus rosasinensis, Collistemon goldiana, Hemelia paten



G.B. Pant University Of Agriculture And Technology, Pantnagar

Category	Activity
Total plantation area	12.4 ha
Sapling planted on plantation area	3 Lakhs
Diversity in species	20

Key species planted

Chlorophytum comosum, Peperomia obtusifolia, Pterocarpus santalinus, Syzygium samarangense, Acalpha godseffesana, Alternathera perporia, Ficus variegata, Hibiscus rosasinensis, Collistemon goldiana, Hemelia paten



Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu (Forestry)

Category	Activity
Total plantation area	20 ha
Sapling planted on plantation area	5,000
Diversity in species	60
Koy spacios plantad	

key species planted

Pinus wallichiana, Cedrus deodara, Asculus indica, Cupressus tarolosa, Cryptomeria spp, Celtis australis, Robunia pseudocasia, Platinus orientalis, Populus deltoids



Tamil Nadu Agricultural University, Coimbatore

Category	Activity
Total plantation area	113 ha
Sapling planted on plantation area	10 Lakhs
Diversity in species	45
Key species planted	

Pinus wallichiana, Cedrus deodara, Asculus indica, Cupressus tarolosa, Cryptomeria spp, Celtis australis, Robunia pseudocasia, Platinus orientalis, Populus deltoids



Did you know?

- India is ranked 10th in world, with 24.4% of land area under forest and tree cover.
- India contributes 5% of the world's greenhouse gas emissions that are leading to climate change
- Among plants, 33% of the world's species are endemic to India

A tree can in its life time provides:

- Supplies oxygen Rs 5.3 lakhs
- Reduces the sound pollution the temperature Rs10.5 lakhs
- Reduces the soil erosion Rs 6.4 lakhs
- Acts as Air purifier Rs 10 lakhs

if we cut a tree, we loose Rs 34 lakhs

Energy Conservation

India's energy sector stands-out amongst the most classified power sector in the world. Generation of energy extends from conventional sources, for example, coal, hydro, gaseous petrol, oil, lignite and atomic energy to reasonable non-conventional sources, for example, wind, sunlight based, and household & agricultural wastages

The Government of India has set a target of 175 GW for renewable energy generation by 2022, with contribution from solar power (100 GW) & wind power (60 GW). The capacity of power generated by coal is 192 GW and is expected to touch 330-441 GW by the year 2040

Summary of Energy Conservation

Major energy sources used to save electric energy

Solar Energy: 4,714 kWBio gas : 15.5 kW

Bio Diesel : 14 kW

Distribution of solar energy power by partner AUs

Total solar energy: 4,714 kW



- IARI, New Delhi
 NDRI, Karnal
 SKUAST, Kashmir
- JAU, Junagadh
- Others

Conservation initiatives

• LED Lights (number) : 11,224 (across 15 AUs)



 Star rated appliances (number) : 1,237 (across 9 AUs



July 2021

Category	Activity
Installation of energy saving appliances	10 street lights500 LED lights

Energy Savings:

500 LED lights can cut off CO2 emission of 18,940 kg against same number of non LED lights



Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola

Category	Activity
Installation of energy saving appliances	 59 LED lights 10 sensor based 12 star rated appliances 195 kW Solar energy 11 kW Bio Mass 50 Cubic meter Bio gas

Energy Savings:

59 LED lights can cut off CO2 emission of 2235 kg against same number of non LED lights



Anand Agricultural University, Anand

Category	Activity
Installation of energy saving appliances	 821 LED lights 100 star rated appliances 115 kW solar energy

Energy Savings:

821 LED Lights can cut off CO2 emission of 31099 kg against same number of non LED lights



Kerala Agricultural University, Thrissur

Category

Installation of energy saving appliances

• 300 LED lights

Activity

- 200 sensor based
- 20 star rated appliances
- 30 kW solar water heater

Energy Savings:

300 LED Lights can cut off CO2 emission of 11364 kg against same number of non LED lights



University Of Agriculture Science, Raichur		
Category	Activity	
Installation of energy saving appliances	 15 LED lights 1 Kwh wind energy 25 kW solar water heater 11 cycles/battery operated vehicles 	

Energy Savings: 400 LED lights can cut off CO2 emission of 15152 kg against same number of non LED lights



Kamdhenu University, Gandhinagar

Category

Installation of energy saving appliances

• 370 LED lights

Activity

- 25 sensor based
- 45 mobile-app based submeters
- 20 kW solar water heater

Energy Savings:

370 LED lights can cut off CO2 emission of 14,015 kg against same number of non LED lights



G.B. Pant University Of Technology, Pantnagar	Agriculture And	National Dairy Resear	ch Institute, Karnal
Category	Activity	Category	Activity
Installation of energy saving appliances	 400 LED lights 25 solar street lights 15kW solar water heater 	Installation of energy saving appliances	 639LED lights 395 star rated appliances 1014kW solar power
Energy Savings:		Energy Savings:	

400 LED lights can cut off CO2 emission of 15,152 kg against same number of non LED lights



639 can cut off CO2 emission of 24,205 kg against same number of non LED lights



Junagadh Agricultural University, Junagarh

Category	Activity
Installation of energy saving appliances	 250 LED lights 150 star rated appliances 2 kw wind power 15 L bio diesel 260 m³ bio gas

Energy Savings:

250 LED lights can cut off CO2 emission of 11,364 kg against same number of non LED lights



JAU Model Agri-voltaic System for Energy and Crop Production:

- Junagadh Agricultural University developed JAU model Agrivoltaic System of 13.5 kW capacity with idea of co-location of agriculture and energy
- Crops like tomato, capsicum and cucumber can be grown under Agri-voltaic System will generate an additional income from electricity along with agricultural produces up to approximately Rs. 3.00- 3.50 lakh/ acer, thus increases rural economy



Tamil Nadu Agricultural University, Coimbatore		
Category	Activity	
Installation of energy saving appliances	 102 LED lights 50 star rated appliances 38 solar street lights 1776.5 kW solar power 63 m³ bio gas 9 e-rikshaw 	

Energy Savings:

102 LED Lights can cut off CO2 emission of 3864 kg against same number of non LED lights





Did you know?

- 1 kW PV plant can be between 3-4.5 kWh of electricity a day on average or 1100-1600 kWh of electricity a year
- A power station with an efficiency of 34 % burns coal, it emits 1.0 kg carbon dioxide for generating one kilowatt hour of electricity.
- India has the world's largest single-location solar power plant in Kurnool (Andhra Pradesh), which has a potential capacity of 1,000 mega watts.
- India's solar generation capacity has expanded by about 370 % in the past three years.
- CFL, LED produces visible light from electricity with efficiency more than five times compared to ordinary bulbs. In other words, it can be stated that it saves about more than 60% of energy for the equal lightning level.

Water Conservation

- 1. Water Conservation is a;
 - 1. Any beneficial deduction in water loss, use, or waste.
 - 2. A reduction in water use accomplished by implementation of water conservation or water efficiency measures
 - 3. Improved water management practices that reduce or enhance the beneficial use of water
- 2. India draws nearly 25 percent of the world's groundwater
- 3. Sixty percent of India's districts have been declared critical on groundwater
- 4. The Union government recently formed a new Jal Shakti (water) ministry, which aims at tackling water issues with a holistic and integrated perspective on the subject. The ministry has announced an ambitious plan to provide piped water connections to every household in India by 2024

Summary of Water Conservation

Major energy sources used to save electric energy

Farm ponds: 36 crore L Roof top water harvest structure: 36 lakh L Percolation tank: 100 thousand L Check dam: 12 lakh L

Roof top water harvesting capacity in 7 PAUs

Total capacity: 36 lakh L



- TNAU, Coimbtore
- KAU, Kerala
- UAS, Raichur
- JAU, Junagadh
- Others

Water conservation through farm ponds

Total capacity: 36 crore L



AU-wise activities carried-out to save water

University of Agricultural Sciences, Raichur

Activity

2,62,750 L conserved through roof top water harvesting method



University of Agricultural Sciences, Bangalore

Activity

- 3095 Lakh L of water conserved through water Farm Pond and Roof Top structure
- 4 Lakh L/day of water conserved through Sewage Treatment



31

AU-wise activities carried-out to save water

Junagadh Agricultural University, Junagarh

Activity

Around 81,00,000 L of water conserved through water farm pond method



Around 1,00,000 L of water conserved through water percolation tank method



 $\sim\!\!2,\!00,\!000$ L of water conserved through farm pond and rooftop water harvesting methods



Around 1200000 L of water conserved through Check Dam method



AU-wise activities carried-out to save water

University of Agricultural Sciences, Dharwad

Activity

Around 15000000 L of water conserved through water Check dam



Activity

• Around 200000 L of water conserved through water farm pond method



Did you Know?

- Per capita availability of water has drastically reduced from 6,008 m³ in 1947 to around 1700 m³ in 2001, and will go down to 1000 m³ over the next three decades.
- Globally, the agricultural sector consumes about 70% of the planet's accessible freshwater more than twice that of industry (23%), and dwarfing municipal use (8%).
- The total potential area to be brought under the micro irrigation (drip and sprinkler) in India is 42.2 million hectare of land, however only 3.9 million hectare of land or 9.2% of the potential is currently under micro irrigation.



Waste Management

- India is getting buried under mounds of garbage as the country has been generating more than 1.50 lakh metric tonne (MT) of solid waste every day. Worse - approximately 90 per cent (1,35,000 MT per day) of the total amount is collected waste
- Nearly 15,000 MT of garbage remain exposed every day, resulting in almost 55 lakh MT of solid waste disposed in open areas each year, which leads to "severe" pollution level. Of the total collected waste, only 20 per cent (27,000 MT per day) is processed and the remaining 80 per cent (1,08,000 MT per day) is dumped in landfill sites
- Waste management or Waste disposal is all the activities and actions required to manage waste from its inception to its final disposal. This includes amongst other things, collection, transport, treatment and disposal of waste together with monitoring and regulation.

Summary of Waste Management

Major energy sources used to save electric energy

- Kitchen waste quantity : 171 thousand kgs
- Farm waste: 26 lakh Kgs
- Animal waste : 5 lakh Kgs

Distribution of kitchen waste treatment (across 10 AUSs)

Total quantity: 171 thousand kgs



- TNAU, Coimbtore
 MPKV, Rahuri
 KAU, Kerala
 NDRI, Karnal
- Others

Distribution of farm waste treatment (across 12 AUSs)

Total quantity: 26 lakh kgs



Distribution of animal waste treatment (across 12 AUSs)

Total quantity: 5 lakh kgs


Assam Agricultural University, Jorhat

Category

Activity

Type of waste converted into organic manure

- Wet: 19,00 kg
- Farm waste: 25,000 kg

Savings:

6900 Kg of CO₂ emission will be cut off against same of Urea is applied



Anand Agricultural University, Anand

Category

Activity

Type of waste converted into organic manure

Farm waste: 23,000 kg

Savings:

4607 Kg of CO₂ emission will be cut off against same of Urea is applied



Indian Agricultural Research Institute, New Delhi

Category

Activity

Type of waste converted into organic manure

• Farm waste: 25,000 kg

Savings:

50,000 Kg of CO2 emission will be cut off against same of Urea is applied



Kerala Agricultural University, Thrissur

Category

Type of waste converted into organic manure

Activity

- Wet waste: 10,800
- Farm waste: 27,216 kg
- Animal waste: 5,44,311 kg

Savings:

76030 Kg of CO2 emission will be cut off against same of Urea is applied



Junagarh Agricultural University, Junagadh

Category

Activity

Type of waste converted into organic manure

• Farm waste: 24,000 kg

Savings:

4,800 Kg of CO₂ emission will be cut off against same of Urea is applied



University of Agricultural Sciences, Bangalore

Category

Type of waste converted into organic manure

• Wet waste: 36,000

Activity

• Farm waste: 12,000 kg

Savings:

3,120 Kg of CO2 emission will be cut off against same of Urea is applied



P. V. N. R Telangana State	Veterinary University,
Hyderabad	

Category

Activity

Type of waste converted into organic manure

• Farm waste: 6,00,000 kg

Savings:

120000 Kg of CO2 emission will be cut off if same of urea is applied



National Dairy Research Institute, Karnal

Category

Type of waste converted into organic manure

• Wet waste: 9,072

Activity

• Farm waste: 3,62,874 kg

Savings:

74,389 Kg of CO2 emission will be cut off against same of Urea is applied



University of Agricultural Sciences, Dharwad



Agriculture Biomass was composted and total of 18-20 t of Vermicompost and 45 t of FYM per month was produced.



Phytoremediation tank Sewage Treatment: District administration has installed sewage treatment plant in the campus which is being renovated and maintained under IDP for phytoremediation.

Navsari Agricultural University, Navsari

'Novel' Organic plant booster developed by NAU scientists' controls pests and diseases in a sustainable manner

- 'Novel': A banana pseudo stem based organic liquid nutrients has been introduced by scientists of NAU, Navsari. This product contains N, P and K as well as other micro-nutrients such as Ca, Mg, S, Mn, Cu, Zn, Fe etc. in required amount to crops. It also contains plant growth regulators such as NAA, cytokinin and GA3 as well as other beneficial soil conditioning and waste decomposing organisms. Scientists and research fellows from NAU are still working on this product for further enrichments.
- Scientists have tried this product with more than 500 different combinations of natural plant extracts to enhance the pesticidal and fungicidal properties and has conducted trials on various categories of the crops. Result data were scientifically analyzed and best combinations were tested again on demonstration plot as well as on the farmer's field on different crops.
- Studies were also carried out to analyse the results on particular insect-pests and diseases on different crops. Results depicts that 'Novel' significantly works to control the aphid, jassid, borers, thrips and all kind of larvae for most of the field crops whereas 'Novel Prime' works efficiently to control the fungal and bacterial diseases.
- NAU has also planned to commercialise this product through select agro-chemical companies across the state.

Did you Know?

- In India, 77% of waste is disposed of in open dumps, 18% is composted and just 5% is recycled
- Improper treatment and disposal of waste causing 1.6 billion tones of CO2 emission Globally
- Maharashtra has emerged as the top municipal waste-generating state in the country followed by Uttar Pradesh and Tamil Nadu
- It has been estimated that organic resources available in the country alone can produce not less than 20 million tonnes of plant nutrients (NPK)



Compliances and mitigation measures



Legal Compliances applicable to projects under NAHEP

Legal Compliances applicable to projects under NAHEP



Hazardous Waste Management Rules 2016 (HWM)



Bio Medical Waste Management Rules 2016(BMW)



Construction and demolition waste management rules 2016 (C&DM)



E- Waste Management Rules 2016 (EWM)



Energy Conservation Building Codes (Energy Act) (ECBC (EA)



Others (Tree Act, Water Act, Insecticidal Act, Sewage Water Management Act, Animal Ethics etc)



Environmental Safety Measures undertaken by PIU



Safety measures under Bio-medical waste management

Disposal of Contaminated Materials and Lab Wares at Different laboratories- Biotechnological Waste Management under BMW rules

JAU, Junagadh



Containing 25

iscard Di





MPUAT, Udaipur



Waste Segregation at GADUVAS , Ludhiana



Waste Segregation as per color code UAS, Dharwad

July 2021

Safety measures under Lab Safety & Fire Standards



Safety measures under Lab Safety & Fire Standards



Natural Lighting in Labs under Energy Conservation Building Codes



Construction and Demolition Waste Management Rules



Activities carried out by partner AUs under ESP





Other key initiatives







Green and Clean Campus Award initiative by PIU-NAHEP

Greening the campus is all about turning around wasteful inefficiencies and using conventional sources of energies for its daily power needs, correct disposal handling, purchase of environment friendly supplies and effective recycling program. Institute has to work out the time bound strategies to implement green campus initiatives. These strategies need to be incorporated into the institutional planning and budgeting processes with the aim of developing a clean and green campus.

The award instituted for the partner Agriculture Universities under the NAHEP.

This award encourages ensuring compliances and promoting adaptation and implementation of best practices related to environmental safeguards.

Number of Awards: 3 plus 1 consolation prizes

- Rs 10 lakhs 1^{st} prize
- Rs 8 lakhs 2nd prize
- Rs 6 lakhs -3rd prize
- Rs 4 lakhs Consolation prize

Web portal was developed for online registration and submitting of the document

LevWebraddress; https://pahep.icar.gov.in/greencleancampus/



Waste to Wealth initiative by PIU-NAHEP

PIU NAHEP came with the proposal of 'Waste to Wealth' programme under the NAHEP, that would help the students' entrepreneurship by development and translation into action innovative ideas for converting waste to wealth.

The partnering AUs will prepare and submit a concept note on possible novel conversion of common but difficult to handle agricultural such as- Agro-industrial waste and organic wastes (by products from crop harvest, crop debris (stalks and stubble (stems), leaves, and seed pods), residues (bamboo, rice husk, jute, coconut coirs, bagasse, wheat straw, chir pine needles, cotton stalks, casuarina leaves, banana stem etc.,)



Manure and other wastes from farms, poultry houses and slaughterhouses; fertilizer run- off from fields; pesticides that enter into water, air or soils; and salt and silt drained from fields, ani-mal manures, wastes from meat processing, leather tanning, cereal grain milling, oilseed extraction, brewery, malt production, fruit and vegetable processing, dairy shed effluent (containing urine, dung, wash water, residual milk, and waste feed), Dairy manure, poultry litter, renderings, livestock finishing operations, etc) in the campus or in the community.

Eligibility Criteria:

- Participation will be limited to only existing partners (including those have completed project under IG) in the NAHEP
- The applicant AU should have proven expertise in the subject area of converting waste into wealth on commercial scale with documental proof in support.
- Applicant AU having linkage with Industries in bio-degradable agricultural waste conversion/ recycling.
- Experience in involving stakeholders (particularly farmers/ fishers) in commercial bio degradable waste conversion.

Project duration: One year

Budget: ~2 crores based on the proposal

Green Building Concept at UAS, Dharwad

- Buildings require air, water, energy and space for its occupants. These are provided by systems in place like the ventilation system, the water supply system and the electricity supply system. The materials which are used in the construction of the building also produce environmental impact like carbon footprint, pollution through wastes and slurry, and the consumption of water and power. Buildings are one of the major sources of pollution that cause air pollution and are responsible for climate change.
- The objective of green building concept is to develop buildings which use the natural resources to the minimal at the time of construction as well as operation. Green buildings emphasize on the resource usage efficiency and also press upon the three R's – Reduce, Reuse and Recycle.
- The technique of green building maximizes the use of efficient construction materials and practices; boosts the use of natural sources and sinks in the building's surroundings; minimizes the energy usage to run itself; uses highly proficient equipment for the indoor area; uses highly proficient methods for water and waste management. The indoor equipment includes lighting, air-conditioning and all other needed equipment



Proposed Green building at UAS, Dharwad

Non-Timber Forest Products – Museum at NAU, Navsari

Non-Timber Forest Products – Museum

- Bamboo Museum was developed to conserve these species and to make them available to local farmers.
- One objective is informational to display and profile the different uses of bamboo species, thereby improving local knowledge of and appreciation for conservation efforts







A Non-Timber Forest Products (NTFPs) and Medicinal and Aromatic Plants (MAPs) museum was established under the banner of ICAR-NAHEP-CAAST sub-project entitled "Establishment of Secondary Agriculture unit for skill development in students and farmers". Approximately, 70 NTFPs and MAPs specimen are placed in museum. The collection of more specimens is in progress

Capacity building programme



Capacity building programme

- Training /Workshop
- Webinars/Guest lecture held during covid-19 pandemic
- Awareness programme
- Students participation in environmental conservation safeguard activity
- Environment/ soil/Ozone day celebration



NHEP

ICAR NAHEP Sponsored

Hands on Training on "Waste Utilization and Value Addition of Non-Timber Forest Resources" January 22-24, 2020





Trainings/Workshops



:: ORGANIZED BY :: Centre for Advanced Agricultural Science and Technology (CAAST) Directorate of Research Navsari Agricultural University Navsari-Gujarat (INDIA) www.nau.in

> Venue: Conference Hall, College of Forestry Navsari Agricultural University, Navsari-396 450 Gujarat





International Workshop

Groundwater Monitoring, Planning, Recharge and Sustainable Use: Village Level Participatory Approaches and Tools

Date: 4-5 September 2019

Venue: University of Agricultural Sciences, Bangalore, India

Organised by: University of Agricultural Sciences, Bengaluru NAHEP Centre for Next Generation Technologies in Adaptive Agriculture (CAAST 1a-Reduced Runoff Farming), ICAR, New Delhi Western Sydney University, Australia







The World Bank

ASSESSMENT METHODS FOR SOIL CARBON AND

GREENHOUSE GAS EMISSIONS

12-19 February 2020



Training Manual (Compiled by)

GS Dheri and OP Choudhary

Department of Soil Science Punjab Agricultural University, Ludhiana



Sponsored By Indian Council of Agricultural Research under National Agricultural Higher Education Project (NAHEP)



NAHEP



ORGANIZED BY Centre for Advanced Agricultural Science and Technology (CAAST) Directorate of Research Navsari Agricultural University Navsari-Gujarat (INDIA) www.nau.in

Venue Conference Hall, College of Forestry Navsari Agricultural University, Navsari-396 450 Gujarat



Swami Keshwanand Rajasthan Agricultural University, Bikaner

Event Name	Renewable Energy for Sustainable Agriculture and Environmental Protection	
Date	08-03-2021 To 10-03-2021	
Venue	IABM, KRAU, Bikaner	
Objective	 To Impart training about various source of Renewable Energy for Sustainable Agriculture and Environmental Protection. To provide insight about usage of renewable energy mediums present status and future role to make agriculture sustainable. To provide practical exposure to student about existing renewable energy plants located in Bikaner through visit and concerns for environmental protection. 	
Target group	Academicians, Employees, Researchers, Scholars, Scientist, Subject Experts	





Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, Kashmir

Event Name	Orientation cum Foundation programme, IRTIQA-II"-Forestry	
Date	22-02-2021 To 22-02-2021	
Venue	IDP-NAHEP SKUAST KASHMIR.	
Objective	 Orientation cum Foundation programme, IRTIQA-II – please provide few more details 	
Target group	Students, Subject Experts	



Swami Keshwanand Rajasthan Agricultural University, Bikaner

Event Name	Role of biogas plants in organic farming and environmental protection	
Date	19-02-2021 To 19-02-2021	
Venue	Museum, SKRAU, Bikaner	
Objective	 Organic biogas production aims to improve soil fertility in organic farming systems. A safe and efficient process with low emissions, particularly of methane, is essential for the sustainability. Positive impacts are expected on water quality, conservation, and biodiversity. 	
Target group	Academicians, Employees, Researchers, Scholars, Scientist, Subject Experts	





Tamil Nadu Agricultural University, Coimbatore

Event Name	Certificate Course on Energy Auditing and Management	
Date	09-03-2020 To 13-03-2020	
Venue	Agricultural Engineering College and Research Institute, TNAU, Kumulur Campus	
Objective	PendeInstitute, TNAU, Kumulur CampusInstitute, TNAU, Kumulur Campus• To enable students to understand the core concepts of Energy Auditing and Energy Management.• To understand and identify the Energy Conservation Opportunities in all scenarios.• To perform Preliminary Energy Audit in any given facility.• To analyse and understand the energy consumption data and pattern using Minitab software.• To understand and operate the Energy Minitab 	
Target group	Students	Direct Beneficiaries B.Tech. Agricultural Engineering Student of AEC & RI, Kumulur, Trichy District.



incering Students

Course Fee

INR 10,000 + GST per student funded by

Director (ABD) & PI (TNAU-IDP), **Directorate of Agribusiness Development**, TNAU, Coimbatore - 641003 Ph. 0422 6611310



Directorate of Agribusiness Development Tamil Nadu Agricultural University, Colmbatore - 641 003

Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem

July 2021

Mahatma Phule Krishi Vidyapeeth, Rahuri

Event Name	Workshop on Preparation of Institutional and Agricultural Farm Disaster Management Plan	
Date	04-03-2020	
Venue	CoA, Pune and MPKV, Rahuri	
Objective	Visit of Environment and Safeguard representatives from NAHEP – Please provide more details	
Target group	Researchers, Scientist, Students, Subject Experts	





Punjab Agricultural University, Ludhiana

Event Name	Hands-on training workshop on Assessment Methods for Soil Emission and Greenhouse Gas Emission in Agriculture	HANDS-ON TRAINING WORKSHOP ON ASSESSMENT METHODS FOR SOIL CARBON AND	HANDS ON TRAINING ON "ASSESSMENT METHODS FOR SOIL CARBON AND GREEN HOUSE GAS EMISSIONS IN AGRICULTURE" 12-19" February, 2020 by Department of Soil Science, Punjab Agricultural University, Ludhiana (PB)-141004
Date	12-02-2020 To 19-02-2020	GREENHOUSE GAS EMISSIONS	
Venue	Department of Soil Science Punjab Agricultural University, Ludhiana	IN AGRICULTURE 12-19 February 2020	
Objective	• Assessment methods for soil carbon and greenhouse gas emissions in agriculture		
Target group	Researchers, Scholars, Scientist, Students	Training Manual (Compiled by) GS Dheri and OP Choudhary Department of Soil Science Punjab Agricultural University, Ludhiana	Sitting Row 1 Ibr Sanjaev Chauhan (HOD-F&NR, PAU), Dr. O.P. Chaudhary (HOD-cum-Course Director, Soil Science, PAU), Dr. G.S. Dheni/Course Co-Orrector), Dr. Prathlyot Kaur Sidhu (HOD-CC&AM, PAU) Standing Row 2 Dr Shweta Mehrotra, Parul, Bornail Borah, Patel Poojaben Kamlesh Bhai, Anjai, Manjeet Kaur Standing Row 3 Sr. Usha Nara, Gagendeep Dhawan, Athalaras: S., Sarveen Kaur Standing Row 4 Dr. Mansoor Al, Kadivala Varis Ali Habib Ali, Parmar Parlik Mansukhbhai, Valbhav Baliyan, Dr. Amit Kaul, Dr. Pritpal Singh, Dr. B.K. Yadav Standing Row 5 :Gurjeet Singh, Parveen Thakur, Sachin Dhanda, Ankur Chaudhary, Dr. BS Bhople, Dr. Jagdeep Singh

Navsari Agricultural University, Navsari

Event Name	Hands on training on "Waste Utilization and Value Addition of Non-Timber Forest Resources" under NAHEP-CAAST Sub-project NAU Navsari	N/HEP ICAR NAHEP Sponsored Hands on Training ON ON ON ON ON ON ON ON ON ON
Date	22-01-2020 To 24-01-2020	"Waste Utilization and Value Addition of Non-Timber Forest Resources" January 22-24, 2020 Father Name:
Venue	Conference Hall of College of Forestry, NAU, Navsari	Date of Birth: / (DD/MM/YYYY) Gender: Male/Female Social Category: (~)(General/OBC/SC/ST)) Application Category: (~)
Objective	 To provide hands-on-training to post graduate students on waste utilization and value addition of Non-Timber Forest Resources including MAPs 	Currently enrolled NAU-PG students Currently enrolled NAU-PG students Commer PG students of NAU and SAUs *Educational Qualification (attach proof): *Educational Qualification: *Educational Qualification: *CGPA in Graduation: *CiPA in Octor *CiPA in Octor *CiPA in Craduation: *CiPA in Octor *CiPA in Craduation: *CiPA in Octor *CiPA in Craduation: *CiPA in Craduation: *CiPA in Octor *CiPA in Craduation: *CiPA in Octor *CiPA in Craduation: *CiPA
Target group	Scholars, Students	Navsari Agricultural University Date: Navsari Gujarat (INDIA) Place: Venue: Signature of the Applicant Conference Hall, College of Forestry Note : Scanned copy of the registration form may be mailed in advance to skilinaucaast@gmail.com Gujarat "Mandatory field & attach proot

Mahatma Phule Krishi Vidyapeeth, Rahuri

Event Name	Training program on Carbon and Water Foot printing for Climate Smart Agriculture	Training Programme on Carbon and Water Foot Printing for Climate Smart Agriculture The CAAST-CSAWM, MPKV, Rahuri is organizing two days training on "Carbon and Water Foot Printing for Climate Smart Agriculture" at Central Campus MPKV Rahuri. The terms carbon and water footprint are an important expression of greenhouse gas (GHG) intensity. There are standards and procedures	
Date	23-12-2019 To 24-12-2019	developed for an accounting of carbon and water foot printing through life cycle assessment in control fille cycle assessment in	
Venue	Seminar Hall, Dr.ASCAET, MPKV, Rahuri	As agriculture is the largest contributor to anthropogenic emissions of greenhouse gases, so the quantification of different agricultural practices is essential for identification of more precision and sustainable practices. Carbon and water foot printing has the potential for assessing and comparing GHG performances of different agricultural products along with identification of points to improve environmental	
Objective	• To make awareness about carbon and water foot printing on CSA	efficiencies. This training will be helpful to learn a standard guideline for addressing carbon and water foot printing specifically for agriculture, in context to climate smart WHERE WHEN Seminar Hall, December 23-24, 2019 Dr. A. S. College of Apricultural Engineering & Technology, MPKV, Rabut TRAINERS Dr. S. C. Conneeller Mr. Rajsch Kannar (Folder, Conneeller Mr. Rajsch Kannar (Folder, Conneeller Mr. Rajsch Kannar (Folder, Students, Officers, Farmers and Policy makers in agriculture can participate this workshop December 23, 2019 Dr. P.G. Popule Autoor (IDE) Control of APPLICATION Scientists, Faculty Members, Students, Officers, Farmers and Policy makers in agriculture can participate this workshop December 23, 2019 December 23, 2019	
Target group	Researchers, Scientist, Students, Subject Experts	December 22, 2019 December 23, 2019 Conveneer Dr.S.D. Gronwisser Dricipal Investigator (CAAST-CSAWM) & NO REGISTRATION FEE Scan QR code or Visit us for Registration www.mpkv-caast.ac.in Ca-Principal Investigator Member CAAST-CSAWM CAAST-CSAWM	

Central Institute of Fisheries Education, Mumbai

Event Name	Workshop on "Environment & Social standard"	
Date	26-11-2019 To 26-11-2019	
Venue	ICAR-CIFE, Mumbai	
Objective	• Ensuring the environmental sustainability of the project and studies on environment compatible stock development	
Target group	Academicians, Others, Scientist, Students	

Georger De Gepal Kristen Devener, KAB-GFE Frinzipal Torontgator, GFE NAHEP

Programme Organizer Dr.N. P. Salus Dean (Academice) and Hull FMEP Devices, Co-PL OFE-MARKEP

Organising Secretaries De Vidue Steve Ilhari Senier Scientiz, ADIM Division Go-PLA CRO, CHUANNEP

De Tiney Vargimu-Scientist, FNHF Division Ga-PL CIFE-NAHEF

McSatysPrakali Scientiet, Aquaculture Division Go PL, CIFG-BARREP

Resource Persons Nobel Officers of Environmental Sustainability Plan (ESP), Equity Action Plan (EAP) and Generator Robustal Machanian (GEM) of the following institutes:

SCAF Control Interture of Following Moving
 Subarava strate University of Agriculture and Technology (MRAR), Uslager
 Agriculture Internetity (AL), Soldpur
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Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem

July 2021

Mahatma Phule Krishi Vidyapeeth, Rahuri

Event Name	Training and Workshop on Water Budgeting for Efficient Water Resources Management in Watersheds	
Date	20-09-2019 To 21-09-2019	
Venue	Seminar Hall, Dr. ASCAET, MPKV, Rahuri	
Objective	 To make awareness of the promoting water budgeting through water stewardship. To learn Integrating climate change concerns in water resources planning and management. 	
Target group	Scientist, Students	



University of Agricultural Sciences, Bangalore

Event Name	International workshop on Groundwater Monitoring, Planning, Recharge and Sustainable Use: Village Level Participatory Approaches and Tools	
Date	04-09-2019 To 05-09-2019	
Venue	UAS, GKVK, Bangalore	International Workshop Groundwater Monitoring, Planning, Recharge and Sustainable Use: Village Level Participatory Approaches and Tools
Objective	• Share learning from the MARVI project and other similar projects with relevant research groups and stakeholders	Date: 4-5 September 2019 Venue: University of Agricultural Sciences, Bangalore, India Organised by: University of Agricultural Sciences, Bengaluru NAHEP Centre for Next Generation Technologies in Adaptive Agriculture (CAAST 1aReduced Runoff Farming), ICAR, New Delhi Western Sydney University, Australia Image: Delta in the second
Target group	Academicians, Employees, Researchers, Scholars, Scientist, Students, Subject Experts	WESTERN SYDNEY UNIVERSITY INIVERI

Navsari Agricultural University, Navsari

Event Name	Hands-On Training on Wooden Decorative	N/HEI
Date	24-07-2019 To 26-07-2019	"Wo
Venue	Conference Hall, College of Forestry, Navsari Agricultural University, Navsari	Indian National A
Objective	• To provide Hands-On training to PG students regarding preparation of wooden and bamboo decorative	Centre
Target group	Scholars, Students	Cor Navsari A



Sponsored By Indian Council of Agricultural Research under National Agricultural Higher Education Project (NAHEP)



ORGANIZED BY Centre for Advanced Agricultural Science and Technology (CAAST) Directorate of Research Navsari Agricultural University Navsari-Gujarat (INDIA) www.nau.in

Venue Conference Hall, College of Forestry Navsari Agricultural University, Navsari-396 450 Gujarat






Acharya N G Ranga Agricultural University, Guntur

Event Name	Meeting with Indian Green Building Council Team	
Date	09-07-2019 To 09-07-2019	
Venue	Board Meeting Hall, ANGRAU, Guntur	
Objective	Overview on Green campus certification Please provide more details	
Target group	Academicians, Scientist	







Event Name	Advances in Forest Resource Utilization and Management		
Date	13-03-2021 To 13-03-2021	National Webinar on Advances in Forest Resource Utilization and Management Date: 13/03/2021, Saturday @ 10:00 AM The Centre for Advanced Agricultural Science & Technology (CAAST), Navsari Agricultural University, Navsari is organizing a National Webinar on "Advances in Forest Resource Utilization and Management" under NAHEP-CAAST sub-project. For registration, follow up the link given here: https://forms.gle/H9Atubtso1z6edx48 and submit Google form on or before 11/03/2021 @ 5:00 pm	
Venue	Online Platform, Hosted by CAAST-NAU-Navsari		
Objective	To acquaint Trainees and faculties with latest techniques in Forest Resource Utilization and Management	Talk 1: Legal Provisions for NTFPs and concept of Access Benefit SharingGuest Speaker Drofessor of Law & Centre for Environmental Law Education, Research & Advocator, BengaluruTime total to a start and the environmental Law Education, Research & Advocator, BengaluruTime total to a start and	
Target group	Academicians, Employees, Others, Scientist, Students, Subject Experts	Interested PG students and faculty members of different disciplines/subjects of NAU and other SAUs/CAUs can join this Webinar through online platform Event Organizing Panel Dr. T.R. Ahlawat Dr. M.S. Sankanur Dr. A.S. Sinka Dr. A.A. Mehta Mr. Balvant Ahir Dr. Abhilit Chaudhary	

Event Name	Environmental Footprint of Dairy Farming: Issues and Approaches	NOHEP	
Date	13-02-2021 To 13-02-2021	National Webinar on Environmental Footprint of Dairy Farming: Issues and Approaches Data: 13/02/2021 Saturday at 10:30 AM	
Venue	Online Platform, Hosted by CAAST-NAU-Navsari	The Centre for Advanced Agricultural Science & Technology (CAAST), Navsari Agricultural University is organizing a National Webinar on "Environmental Footprint of Dairy Farming: Issues and Approaches" under NAHEP-CAAST sub-project.	
Objective	To enhance the knowledge of PG students and faculties about Issues and Approaches of Dairy Farming	Our Experts Dates of discussion Image: Strate of the strate of	
Target group	Academicians, Employees, Others, Students, Subject Experts	Conveners: Abhijit D Chaudhary, SRF, NAHEP-CAAST-NAU Sawan Rathwa, SRF, NAHEP-CAAST-NAU Ankur K Shekhada, SRF, NAHEP-CAAST-NAU Certificate will be provided to each participant of this event Kindly register at https://forum.gle9HTWER:KsoBLeMmX6 This link will remain open till 5:00 PM, 11/02/2021 For any query contact u: on naunshepcaast3/agmail.com, drenplicit@gmail.com, 9687296049, 9099062296.	

Event Name	Non-Timber Forest Products as Sources of Secondary Agriculture for Livelihood Security	Invitation for Non-Timber Forest Products as Sources of Secondary Agriculture	
Date	06-02-2021 To 06-02-2021	for Livelihood Security Date: 06/02/2021, Saturday at 10:00 AM The Centre for Advanced Agricultural Science & Technology (CAAST), Navsari Agricultural University, Navsari is organizing a National Webinar on "Non-Timber Forest Products as Sources of	
Venue	Online Platform, Hosted by CAAST-NAU-Navsari	Secondary Agriculture for Livelihood Security" under NAHEP-CAAST sub-project. For registration, follow up the link given here: https://forms.gle/K2kUJERJScWmGuWF9 and submit Google form on or before 3:00 pm, 05/02/2021	
Objective	To acquaint PG students and faculties about Non-Timber Forest Products as Sources of Livelihood Security	Talk 1: Honey as a Source of Livelihood Security Speaker Dr. Pramod Mall Professor of Entomology GB Pant University of Agn. & Tech., Pannagar Talk 2: Non-Timber Forest Product as Source of Livelihood Security Speaker Shri, Cradeep Dubry General Manager Gram Mooligal Company Limited, Jabalpur Talk 3: Goodness, Demand and Marketing Issues in Sandalwood Shri, Cr. M. Stowarna Rumar General Manager (Marketing) Karnataka Soaps & Detergents Limited, Bengaluru	
Target group	Academicians, Employees, Others, Students, Subject Experts	Event Organizing Panel Dr. T.R. Ahlawat Dr. R.P. Gunaga Dr. M.S. Sankanur Dr. H.T. Hegde Dr. S.K. Sinha Dr. A.A. Mehta Mr. Balvant Ahir Dr. Abhijit Chaudhary	

Anand Agricultural University, Anand

Event Name	Cost Effective and Innovative Green Energy Initiatives for Futuristic Agriculture	
Date	11-11-2020 To 11-11-2020	
Venue	Centre for Agricultural Market Intelligence under NAHEP-CAAST, International Agribusiness Management Institute, Anand Agricultural University, Anand.	
Objective	 To orient the students faculties on; Solar PV Energy for Agriculture Bio Refining of Lignocellulogic Biomass for Energy Generation Emerging Energy Efficient Green Technologies for Biomass and Agricultural Applications 	
Target group	Academicians, Employees, General Users, Others, Researchers, Scholars, Scientist, Students, Subject Experts	



Event Name	Career Opportunities in Forestry Sector		
Date	17-10-2020 To 17-10-2020	Invitation for Online Guest Lecture on "Career Opportunities in Forestry Sector" Date: 17/10/2020 The Centre for Advanced Agricultural Science & Technology	
Venue	Online Platform, Hosted by CAAST-NAU-Navsari	[CAAST]. Novsari Agricultural University. Novsari is going to organize an Online Guest Lecture on "Career Opportunities in Forestry Sector" under NAHEP-CAAST sub-project. For registration, follow up the link given here: https://forms.gle/Yg6zBuGpx2xXfV702 and submit Conclusion on on bottom 16 00 0000 at 5 00 organize	
Objective	• To increase awareness among PG Students regarding forest certification and career options in timber industries from an international perspective	For registration, follow up the link given here https://forms.gle/Yg52b.Gpv2xtV7ch Section 1: Forest Certification: Career Opportunities Speker: Mr. AGHAVENDRAS M Madditor - Bureau Veritas India Pvt Ltd: Speker: Mr. VIKRANT TOMAR Mr. VIKRANT TOMAR Managing Director Amazon Exports / Vietnam	
Target group	Academicians, General Users, Others, Scholars, Students	UG and PG students of different disciplines/subjects of NAU and other SAUs/CAUs are invited to attend invited lectures on online platform. Event Organizing Panel Dr. T.R. Ahlawat, Dr. H.T. Hegde, Dr. M.S. Sankanur, Dr. S.K. Sinha, Dr. A.A. Mehta, Dr. R.P. Gunaga, Mr. Balvant Ahir and Mr. Abhijit Chaudhary	

Rajendra Prasad Central Agricultural University, Bihar

Event Name	Geospatial Approaches for Agricultural Water Management	
Date	07-10-2020 To 09-10-2020	
Venue	Online Platform, Hosted by CAAST-NAU-Navsari	
Objective	• To create awareness among different stakeholders engaged in water management. 2. To build capacity of the scientific community in use of Geospatial techniques.	
Target group	Academicians, Employees, General Users, Others, Researchers, Scholars, Scientist, Students, Subject Experts	



Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem

Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar

Event Name	Biodiversity conservation and management for ecosystem service and climate change mitigation	
Date	15-09-2020 To 15-09-2020	
Venue	Hosted online on the ZOOM platform from Uttar Banga Krishi Viswavidyalaya, Pundibari, Cooch Behar, WB - 736165, INDIA.	
Objective	To confer the present scenario of species loss, destruction of habitats, climate change capacity and knowledge building is indeed necessary. Ex vitro and In vitro techniques will help in conservation. Biodiversity conservation helps in restoration of ecology and thereby a reduction in climate change hazard. Biodiversity management can be done by practicing principles of sustainable forest management while along with ecological restoration. A dynamic platform which aims to share and discuss on these aspects are welcomed in this scenario.	
Target group	Academicians, Researchers, Scholars, Scientist, Students, Subject Experts	



Event Name	Solid waster management	
Date	01-09-2020 To 01-09-2020	
Venue	UAS, Main Campus Dharwad	
Objective	• The sources of solid waste include residential, commercial, institutional, and industrial activities. Certain types of wastes that cause immediate danger to exposed individuals or environments are classified as hazardous. All non-hazardous solid waste from a community that requires collection and transport to a processing or disposal site is called refuse or municipal solid waste (MSW).	
Target group	Academicians, Employees, General Users, Others, Researchers, Scholars, Scientist, Students, Subject Experts	



Event Name	Impact of e- Waste on environment	
Date	28-07-2020 To 28-07-2020	
Venue	Zoom Meeting	
Objective	• The present webinar on e-Waste Management / Impact of e-Waste Management aims to discuss the basics of e-Waste and throw light on the rules for e-waste disposal and management.	
Target group	Academicians, Researchers, Scholars, Students	





Event Name	Bio- Waste Management		
Date	27-07-2020 To 27-07-2020		
Venue	Online Webinar		
Objective	 Sensitize the students and faculty of Agricultural and Veterinary Universities about the importance of waste management, segregation of waste and methods used for disposal. Introduction to the rules and regulations governing bio-waste management. Entrepreneurial opportunities in livestock waste management. 		
Target group	Academicians, Researchers, Scientist, Students		





Central Agricultural University, Imphal, Manipur

Event Name	Environment and climate change	College of Agriculture, Iroisemb
Date	11-07-2020	Central Agricultural University Imphal, Manipur – 795004
Venue	Online Webinar	
Objective	• Microbial polyhydroxyalkanoates (Bioplastics) as an agent to counter plastic pollution	If talk Series on Environmental If talk Series on Environmental Indian Serpectre Indian Serpectre
Target group	Academicians, Researchers, Scientist, Students	Registration link: https://us02web.zoom.us/webinar/register/WN_zCv9rIVQThn

NOHEP

Pool. 50, Pennyit Singh Hou ble Vice-Chancellar, CAUJuphal

Dr. Saiburs Bacanta Singh Di and PL IDP

CAU Jushi

Prof, Indica Nanangthraw Dean and Nodal Officer, IDP CoA, Iroisemba, Imphal

nvironmental Issues

Title: Climate Change and its impact on Indian Agriculture

ter/WN_zCv9rlYQThm3SS2eGsidOg

Event Name	Impact of construction and demolition waste on environment	
Date	18-07-2020 To 18-07-2020	
Venue	Main Campus UAS, Dharwad	
Objective	• Construction and demolition wastes (CDW) pose serious problems in environmental, social and economic realms. Construction & demolition activities generate huge quantities of waste and more accumulation of waste is creating harmful effects on both environment and human life.	
Target group	Academicians, Employees, General Users, Others, Researchers, Scholars, Scientist, Students, Subject Experts	



Event Name	Renewable Energy Sources – Future Prospects		
Date	17-07-2020 To 17-07-2020		
Venue	UAS, Dharwad		
Objective	• The proposed webinar aimed to provide the information on overall view of renewable energy sources such as Solar energy, Wind energy and Biomass conversion technologies.		
Target group	Academicians, Employees, General Users, Others, Researchers, Scholars, Scientist, Students, Subject Experts		



Mahatma Phule Krishi Vidyapeeth, Rahuri

Event Name	Bioenergy, a Climate Smart Renewable Energy: Present Status and Future Prospects	National Online Webinar on Bioenergy, a Climate Smart Renewable Energy: Present Status and Future Prospects
Date	30-06-2020 To 30-06-2020	You are cordially invited for Online National Webinar and Live Interaction with Visionary Speaker
Venue	Online Platform (CISCO WebEx)	Date: 30 June 2020; Time: at 1100 hrs
Objective	• For making awareness on "Bioenergy, a Climate Smart Renewable Energy: Present Status and Future Prospects"	Shri. Nitinji Gadkari Hon. Minister for Road Transport and Highways of India: Shipping and Micro, Small and Medium Enterprises: Covernment of India
Target group	Academicians, Employees, General Users, Others, Researchers, Scholars, Scientist, Students, Subject Experts	

G.B. Pant University Of Agriculture And Technology, Pantnagar

Event Name	Managing the India's Invisible Resource-The Role of Participatory Groundwater Monitoring and Management at the Village Level	IDP-NAHEP and College of Technology, GBPUAT, Pantnagar in association with WSU, Australia presents International Webinar on the occasion of
Date	05-06-2020 To 05-06-2020	WORLD ENVIRONMENT DAY "Managing the India's Invisible Resource- The Role of Participatory Groundwater Monitoring and Management at the Village Level"
Venue	Zoom Cloud Webinar Platform)	
Objective	• To make the participants understand the role of participatory methodologies in managing water resource To help the researchers and scientific communities understand the role of participatory practices in ensuring environment sustainability	Prof. Prof. Rathes Banks of Water. States and States hashing the states of Water. States and States hashing the states of Water.
Target group	Academicians, General Users, Researchers, Scholars, Scientist, Students, Subject Experts	The assetting IDs will be mailed to registered participants Contact Us: Dr. S. K. Guru Prof. Jyothi Prasad Nodal Officer (Academic) +91-941119571 skguru123@yahoo.com IDP-NAHEP, Pantnagar Prof. H. J. Shiva Prasad Department of Civil Engg. +91-941919571 ProfDyothiPrasad@gmail.com College of Technology College of Technology

Chandra Shekhar Azad University Of Agriculture & Technology, Kanpur

Event Name	Climate change and Agro-forestry impact implication & strategies	१८ फोसदा कम वन क्षत्र स तजा से हो रहा जलवायु परिवर्तन
Date	05-06-2020 To 05-06-2020	टीएटरए तमलपुर (बरिष्ठ संवाददाला कई पालों से जलवायु में जिसका परिवर्तन
Venue	C.S. Azad University, Kanpur	हो। रहा है। इसके पांछ मुख्य कारण पड़ा जिस करने और कन क्षेत्र का लग का तोना है। प्रदेश में सिर्फ 6.3 परीमधी ही यन क्षेत्र बचा है। जनकि सामाप्त्व रूप से 25 थे में जनवाय प्रथियतीन तेजी से हो रहा है। वेबिनार में दाज्यपाल आनंदी बेन पटन और सूर्व के दुन्ही मंत्री सुर्वधलाप साही आदि।
Objective	• For skill upgradation of students and faculty	पर्व कि कि की अन्यवान आनंति के की के कि की कि की कि की कि की कि की कि की कि की कि की कि की कि कि कि की कि कि कि की कि कि की कि कि की कि कि की कि कि कि कि की कि कि कि की कि की कि कि कि कि कि कि कि कि की कि कि कि कि कि कि कि कि की कि
Target group	Researchers, Scholars, Scientist, Students	राष्ट्रीय वेविनार में वोली राज्यपाल, जानवरों के पति संवेदनशीलता वरते आगरण संग्रह्मान अन्य : आनृतिन संतुलन बनाए रखने के लिए हमें जल, जंगल, जगीत और जानवरी के प्रति संवेदनजीलता बरतने डोगी। भाज पर्यावरण जी समस्या पूरे बिरन के लिए पिया का विषय है, लिसमें

Birsa Agricultural University, Kanke, Ranchi, Jharkhand

Event Name	A Guest lecture delivered by Dr. U. C. Sharma on the topic of "The Indigenous Soil and Water Management Farming System of the Tribes of North Eastern Region of India"	
Date	17-01-2020 To 17-01-2020	
Venue	Dr. R. B. Prasad Hall, Faculty of Agriculture, Birsa Agricultural University, Kanke, Ranchi, Jharkhand, India	
Objective	 To acquaint the faculty and students about indigenous soil and water management in the farming system of tribal's in North Eastern Region. Integration of agriculture, livestock and agroforestry components by the tribal's for better livelihood and economic gain. 	
Target group	Academicians, Employees, General Users, Others, Researchers, Scholars, Scientist, Students, Subject Experts	



Birsa Agricultural University, Kanke, Ranchi, Jharkhand

Event Name	A guest lecture delivered by Prof. Biswapati Mandal on the topic "Governance of Soil Health – Some Random Thoughts"
Date	16-01-2020 To 16-01-2020
Venue	Dr. R. B. Prasad Hall, Faculty of Agriculture, Birsa Agricultural University, Kanke, Ranchi, Jharkhand, India
Objective	 To improve the quality of soil and check the soil degradation Awareness among the students about proper handling of the soil for increase in yield of the crops.
Target group	Academicians, Employees, General Users, Others, Researchers, Scholars, Scientist, Students, Subject Experts





University of Agricultural Sciences, GKVK, Bengaluru

Event Name	Good Laboratory Practices and Environmental Safety		
Date	20-11-2019 To 20-11-2019		
Venue	North Block Auditorium, University of Agricultural Sciences, GKVK, Bengaluru		
Objective	• The GLP is a set of principles intended to assure the quality and integrity of laboratory studies/practices that are essential to support quality research. There are set of guidelines, do's and don'ts to be followed in any laboratory for personal and environmental safety. As per the standard definition, GLP is a quality system concerned with the organisational process and the conditions under which non-clinical health and environmental safety studies are planned, performed, monitored, recorded, archived and reported.		
Target group	Academicians, General Users, Researchers, Scholars, Students, Subject Experts		





Mahatma Phule Krishi Vidyapeeth, Rahuri

Event Name	Seriousness of hazardous waste and its disposal		
Date	11-11-2019		
Venue	Webinar		
Objective	 Uncontrolled emission of toxic gasses during experimentation and its health hazardous. Importance of containers, their placement while temporary storing of the hazardous chemicals. Monitoring while storage, handling of reactive agents and metals, physical and chemical analysis methods, application of Gas chromatography–mass spectrometry (GC-MS). Elaborated on Central Pollution Control Board (CPCB) guideline for waste sample analysis, secured landfill design and plasma rector for gasification etc 		
Target group	Academicians, General Users, Researchers, Scholars, Students, Subject Experts		



Swami Keshwanand Rajasthan Agriculture University, Bikaner

Event Name	Lecture on Rain Water Harvesting & Management	Event Name	Lecture on Water Resource Management
Date	17-09-2019 To 17-09-2019	Date	17-09-2019 To 17-09-2019
Venue	IABM, SKRAU, Bikaner	Venue	IABM, SKRAU, Bikaner
Objective	To Acquaint students about Rain Water Harvesting & Management	Objective	To acquaint the students about water resources and their management practices for optimum utilization
Target group	Scholars, Students	Target group	Scholars, Students

Awareness Programme



Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu

Event Name	Awareness programme on Soil Biodiversity For Sustainable Argo- ecosystem Functioning		
Date	02-12-2020 To 12-12-2020		
Venue	Division of Soil Science, Faculty of Horticulture in Collaboration with IDP NAHEP-SKUAST-K		
Objective	Keep Soil Alive, Protect Soil Biodiversity.		
Target group	Academicians, Others, Students		



SKUAST - KASHMIR National Agricultural Higher Education Project Index Integr (1972) (spatiangipulation, 1984) ACIM



Soil Biodiversity for Sustainable Agro-ecosystem Functioning





BACKGROUND

World Soil Day (WSD) is held annually on 5 December as a means to focus attention on the importance of healthy soil and to advocate for the sustainable management of soil resources.

An international day to celebrate Soil was recommended by the international Union of Soil Sciences (IUSS) in 2002. Under the leadership of the Kingdom of Thailand and within the framework of the Global Soil Partnership, FAD has supported the formal establishment of WSD as a global awareness raising platform. The FAD Conference unanimously endorsed World Soil Day in June 2013 and requested its official adoption at the 68th UN General Assembly. In December 2013, the UN General Assembly responded by designating 5 December 2014 as the first official World Soil Day.

Why 5 December?

The date of 5 December was chosen because it corresponds with the official birthday of the late His Majesty King Bhumibol Adulyadej, King of Thailand, who was one of the main proponents of this initiative.

WORLD SOIL DAY 2020

World Soil Day 2020 and its campaign "Keep soil alive, Protect soil biodiversity" aims to raise awareness of the importance of maintaining healthy ecosystems and human well-being by addressing the growing challenges in soil management, fighting soil biodiversity loss, increasing soil awareness and encouraging governments, organizations, communities and individuals around the world to commit to proactively improving soil health.

Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu

Category

Activity

Awareness Programme

Awareness programme on Soil Biodiversity For Sustainable Argo-ecosystem Functioning





BACKGROUND

World Soil Day (WSD) is held annually on 5 December as a means to focus attention on the importance of healthy soil and to advocate for the sustainable management of soil resources.

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Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem

Tamil Nadu Agriculture University, Coimbatore

Category

Activity

Awareness Programme

Mock Drill on Fire Safety Measure



Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem

Junagadh Agricultural University (JAU)

Category	Activity
Awareness Programme	Environmental Awareness Training at Gir Forest National Park Sanctuary



Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem

Student Activity Programme









Category	Activity	
Student activity Programme	Tree planting Programme	



Acharya N G Ranga Agricultural University, Guntur

Category

Activity

Student Activity Programme

Vermi compost

36.6 T of Compost prepared by students in five accredited colleges







Acharya N G Ranga Agricultural University, Guntur

Category

Activity

Student Activity Programme

- **1.** Agrico Green Programme (2018-19 **596** Saplings Planted, 2019-20 **833** Saplings Planted)
- 2. Awareness on COVID-19





Distribution of masks to Farm staff



Distribution of sanitizers to Farm staff



CAE 2K16



Tamil Nadu Agricultural University, Coimbatore

Event Name	IDP Forest - Planting		NAMEP ICAR TRADE TP Forest
Date	21-09-2019 To 21-09-2019		STREAM AND A
Venue	Tamil Nadu Agricultural University, Coimbatore	IDP FOREST	
Objective	To increase area under trees in the campus. To encourage students to maintain trees, so that they can learn and disseminate a forestation activities		
Target group	Academicians	TNAU - IDP - NAREP - ICAR Directorate of Agribusiness Development Tamil Nadu Agricultural University Combatore	Undergraduate students, adopting the Miyoowki Tree Planting create the IDP Forest thereby supporting the Nature

ique to

Junagadh Agricultural University (JAU)

Activity

Student Activity

Category

Coastal Clean up Campaign

Around 2-3 tonnes of waste has been collected



Maharana Pratap University of Agriculture and Technology , Udaipur, Rajasthan

Category	Activity
Student Activity Programme	Online quiz was prepared with 50

179 students attempted the quiz

Sher-e-Kashmir University of Agricultural Sciences & Technology of Kashmir

Category	Activity
Student Activity Programme	Slogan and Painting Competition



Event Name	Online Quiz on 05 June, 2020 to celebrate "WORLD ENVIRONMENT DAY-2020" under NAHEP-CAAST Sub-project	Celebration of "WORLD ENVIRONMENT DAY-2020" JUNE 05, 2020 The Centre for Advanced Agricultural Science & Technology (CAAST), Navsari		
Date	05-06-2020 To 05-06-2020			
Venue	Navsari Agricultural University, Navsari	Agricultural University, Navsari is going to organize event to celebrate "World Environment Day-2020" on 05 th June, 2020 by organizing Online Quiz on "Environment" under NAHEP-CAAST sub-project. The details of event are as under:		
Objective	To celebrate World Environment Day - 2020 and spread awareness regarding its importance	Online Quizon Tenvironment Optimizing Contraction of the second of the sec		
Target group	Students			
Junagadh Agricultural University, Junagadh

Category	Activity
Student activity	Rally and Marathon with theme – Run for Environment

Around 500 students participated in the rally and Marathon







Tamil Nadu Veterinary and Animal Sciences University

ategory	Activity
tudent Activity Programme	Door to door campaign to creat awareness against plastic use

179 students attempted the quiz



Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem

Category	Activity
Student Activity	Essay competition on Plastic
Programme	Waste impact on environment

100 students participated students participated in the competition



ICAR- National Dairy Research Institute, Karnal, Haryana

Category

Student activity Programme

Activity

Campus Clean up Activity



Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem

University of Agricultural Sciences, Dharwad

Category

Activity

Activity Programme

Mask Distribution Programme



Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem

Odisha University of Agriculture and Technology, Bhubaneswar

Category	Activity	Category	Activity	
Student activity Programme	Lake Clean up	Student activity Programme	Waste Management Programme	
50 to 80 Students participated in the programmes		80 Students participated in the programmes		



Birsa Agricultural University, Ranchi, Jharkhand

Event Name	World Soil Day celebration on "Soil Health and Environmental safety"	
Date	05-12-2019 To 05-12-2019	
Venue	Ranchi Agriculture College auditorium Kanke, Ranchi, Jharkhand	
Objective	• To develop awareness programme regarding organic cultivation of crops to the farmers, under graduate and post graduate students of Agriculture. • To develop awareness programme for reclamation of acidic, alkaline and saline soil etc. • To manage soil borne pathogens in different types of soil of Jharkhand. • To developed awareness programme for improving soil fertility.	
Target group	Academicians, Employees, General Users, Others, Researchers, Scholars, Scientist, Students, Subject Experts,	



Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu

Event Name	World Ozone Day-2020	NHEP SKUAST - KASHMIR National Agricultural Higher Education Project		
Date	07-10-2020 To 09-10-2020	oom ID: 88612050993 Faculty of Agriculture, SKUAST-Kashmir Passcode: 12345 WORLD OZONE Day-2020 Theme: "Ozone for Life" 16 th September, 2020 Three 2:00 pm		
Venue	Faculty Of Agriculture SKUAST KASHMIR			
Objective	Ozone for Life	 Online Quis Competition Online Video Competition My Parametity Video Synd Hugist at Balagah Senta Nabi Saka Ashraf Online Series of Loctures Learnch of "Eastembr Chapter of Association of Agromoteorologists" Chief Guest Prof. Nazeer Ahmad Hon'be Vice Chancellor, SKUAST-Kashmir Dester of Honour Prof. Mushtag Ahmad, Director Extension, SKUAST-Kashmir Der S. R. Rathore, Ex DG, IMD Dr. J. S. Rathore, Ex DG, IMD Dr. J. S. Rathore, Ex DG, IMD Dr. S. Rathore, Chapter AAM, Anand Prof. B. A. Khanday, Chaiperson, AAM-Kashmir Distinguished Guests 		
Target group	Academicians, Others, Students,	Life members of AAM-Kashmir CO-Patrons Prof. Nazeer Ahmad Prof. Nazir Ahmad Ganai Prof. A. H. Hakeem Hon'ble Vice Chancellor PI-IDP NAHEP Dean, Faculty of Agriculture SKUAST Kashmir SKUAST Kashmir SKUAST Kashmir Organizing Secretary Organizing Members Dr. Aijaz A Qureshi Prof. Raihana Habib Kanth Dr. Aijaz A Qureshi Dr. Naveed Hamid Chief Scientist, Agronomy ASWO, FoA, Wadura BDA, NAHEP SKUAST-K		



Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem



धर्मील रब्बाल, जी. चिंताम्बणी देखभाव. पेटली, तर जीवसूच्टी तरीच पत्रविरण विजय कोंगे आयेळी उपरिश्वत होते.

▲ ៩សូ៨ភ្លូល Wed, 29 July 2020 https://kpepaper.asianetnews.com/c/53834212

Birsa Agricultural University, Ranchi, Jharkhand



Mahatma Phule Krishi Vidyapeeth, Rahuri



नवभारत संवाददाता

अष्ठमवनगर. देश की 85 फीसदी जनता खेती पर निर्भर करती है. इस कारण भारतीय खेती देश की दृष्टि से काफी महत्वपूर्ण है. देश में प्रति ज्यकित आमदनी बढाने की दृष्टि से कुषि, प्रामीण और आदिवासी क्षेत्र का विकास प्रधानता से होना जरुरी है. किसानों को पर्यावरणपूरक फसल करना आवश्यक हुआ है.

इस कारण किसानों को गेह, चावल, बाजरा, बांस जैसी फसल बोने का महत्व समझाना चाहिए. जैब इंशन के साथ बांस की फसल से रोजगार निर्मिति होकर प्रायविकास को चढाबा मिलेगा. ऐसा प्रतिपादन केंद्रिय सडक परिवहन मंत्री नितिन गडकरी ने किया

चीनी उत्पादन का जैविक इंधन में रूपांतर जरूरी

महात्मा कुले कृषि विद्यापीठ व्यारा जेव उर्जा नुतानीकरणक्षम उर्जा की मोन्सूता रिस्वति, आगामी दिशा विषय पर आयोजित वेबिनार में मंत्री गडकरी बोल रहे थे, कुलगुरू डॉ. के. पी. विच्चनाथा की अध्यक्षता में इस वेबिनार के लिए अक्वोरा के पंजाबराव येशमुख कृषि विवि के कुलगुरू डॉ. अशोक ढवाण, अधिष्ठाता डॉ. अशोक फरांदे, संचालक संशोधन डॉ. शरद गढाख, डॉ. दिलीप पवार, डॉ. प्रमोद रसाल, डॉ. वितामणी देवकर, नियंत्रक विजय कोते, डॉ. युनील गोरंदीवार, कृषिभूषण युरस्मिराव प्रवार आदि उपस्थित थे.

मडकरी ने कहा कि, पंजाब, हरियाणा राज्य में चावल और उत्तर प्रदेश से चीनी उत्पादन का जैविक इंधन में रूपांतर करना जरुरी है, कुलयुरू डॉ.विश्व नाथा ने स्वागत किया . डॉ.सुनील गोरटीवार ने सुत्र संचालन किया . डॉ.आशोक फरादे ने आभार व्यक्त किए, इस आनलाईन वेबिनार के लिए युट्यूब, फेसबुक, सिस्को वेबेक्स एव आदि माध्यमों की सहायता से देशभर से वेज्ञानिक, अध्यायक, छत्र और किसानों ने भारी संख्या में भाग लिया. दैनिक दिव्यमराठी <u></u>राजेंद्र वाडेकर

जैवऊर्जा निर्मितीतून ग्रामीण विकास शक्य : गडकरी

प्रतिनिधी । राहरी शहर

नागरिकांचे दरडोई उत्पन्न फारच कमी आहे. गरिवी व बेरोजगारी या दोन गोण्टी त्यास कारणीभूत आहेत. त्याकरिता कृषी, ग्रामीण व आदिवासी भागाचा प्रायुख्याने विकास होणे गरजेचे असून जैवऊर्जा निर्मितीतून हे शक्य आहे, असे प्रतिपादन केंद्रीय मंत्री नितीन माडकरी यांची केल्हे.

महात्मा फुले कृषी विद्यापीठ आयोजित जैवऊर्जा - हवामान अद्ययावत नूतनीकरणक्षम ऊर्जा सद्यस्थिती आणि पुढील दिशा या विषयावरील ऑनलाइन राष्ट्रीय वेबिनारमध्ये गडकरी बोलत होते. अध्यक्षस्थानी कलगुरु डॉ. के. पी. विश्वनाथा होते. गडकरी म्हणाले, देशातील ८५ टक्के लोकसंख्या शेतीशी निगडीत आहे. त्यासाठी कृषि, ग्रामीण व आदिवासी विकास होणे गरजेचे आहे. पीक पध्दतीत बदल करून पर्यावरणपुरक पिकांचे उत्पादन घेण्यासाठी शेलकऱ्यांना भात, गह, बाजरी, बांब यासारख्वा पिकांचे महत्त्व पटवून द्यावे लागणार आहे. पंजाब, हरियाणात भात, तसेच उत्तर प्रदेशात साखरेचे जास्तीच्या उत्पादनाचे जैव इंधनात रुपांतर करणे गरजेचे आहे. हवाई व सागरी वाहतकीसाठी लागणाऱ्या इंधनाची गरज जैव इंधनादारे पूर्ण केली, तर जीवसुष्टी तसेच पर्यावरण



बांबूचे उत्पादन घ्या

रोतातील बायोमास, तसेच बांबूसारख्वा हरित ऊर्जेचे रुपांतर करूत त्याचा उपयोग फर्निचर निर्मिती, पेपर इंडस्ट्रीमध्ये केला, तर जंगलांचे संवर्धन होऊन पेपर पल्प आयातीयरील खर्च कमी होण्यासाठी मदत होईल. त्यासाठी पीक पध्दतीत बदल करणे गरजेचे अखून बांबूसारख्या पिकांचे उत्पादन घेण्यासाठी शीतक-यांना प्रयुत्त करावे लगील, असे मंत्री गडकरी बांनी सांगितले.

संबर्धन होऊन प्रदूषण कमी होईल. अकोला येथील डॉ. पंजाबराव

देशमुख कुमी विद्यापीठाचे कुलगुरु डॉ. विलास भाले, वसंतराव नाईक मराठवाडा कुमी विद्यापीठाचे कुलगुरु डॉ. अशोक खयण, अखिम्ठाता डॉ. अशोक फरादे, डॉ. शरद गडाख, डॉ. दिलीप पवार, डॉ. प्रमोद रसाळ, डॉ. चिंतामणी देवकर, विजय कोते यावेळी उपस्थित होते.



University of Agricultural Sciences, Dharwad



Swami Keshwanand Rajasthan Agriculture University, Bikaner

बीकानेर,(कासं)। स्वामी केशवानंद राजस्थान कृषि विश्वविद्यालय के अभियांत्रिकी विभाग तथा कषि व्यवसाय प्रबंध संस्थान के संयक्त तत्वावधान में राष्ट्रीय कृषि उच्च शिक्षा परियोजना अन्तर्गत आयोजित तीन दिवसीय प्रशिक्षण कार्यक्रम का समापन बुधवार को हुआ।

समारोह में मुख्य अतिथि के रूप में बोलते हुए कुलपति प्रो. आर. पी. सिंह ने ऊर्जा को भावी आवश्यकताओं ऊर्जा स्रोतों- सौर, पवन, बायोमास पर संबोधित कर रहे थे।

पर्यावरण संरक्षण के लिए सोर ऊर्जा

आज की जरूरत : आर. पी. सिंह

के महेनजर पर्यावरण संरक्षण एवं राज. कृषि विश्वविद्यालय के कुलपति प्रो. आर. पी. सिंह ने पर्यावरण जलबायु नियंत्रण हेतू नबीकरणीय संरक्षण व्याख्यानों के संकलन की पुस्तिका का विमोचन किया।

आदि के उपयोग को बढावा देने का सिंचाई हेत पंप चलाने तथा रोशनी स्रोत के उपयोग को आज की आव्हान किया। प्रो. सिंह स्नातकोत्तर करने में किया जा सकता है। पवन उर्जा आवश्यकता बताते हये इसे प्रायोगिक एवं विश्वविद्यालय के कृषि, गृह के उपयोग को विद्युत उत्पादन में रूप से प्रदर्शित करने की आवश्यकता विज्ञान एवं कृषि प्रबंधन संस्थान के लाभकारी बताते हुए उन्होंने कहा कि जताई। कृषि महाविद्यालय के अधिष्ठाता विद्यार्थियों को पर्यावरण संरक्षण एवं हम विश्व में पवन ठर्जा उत्पादन के क्षेत्र डॉ. आई.पी. सिंह ने इस अवसर पर सतत कपि में नवीकरणीय खोत विषय में प्रथम पांच स्थानों में शामिल है। कहा कि हमारे छात्र स्वंय की डकाई कृषि अपशिष्टों के समुचित उपयोग में स्थापित करने की दिशा में सोचे एवं उन्होंने कहा कि हमारे देश में बायो ऊर्जा उत्पादन कर पर्यावरण को नियोक्ता बने जिस हेत नवीकरणीय उर्जा लगभग 300 दिन पर्याप्त सौर ऊर्जा स्वच्छ एवं संरक्षित रखा जा सकता है। एक प्रमुख तकनीको बाजार है। कृषि मिलती है जिसका उपयोग कर खाना इस अवसर पर राष्ट्रीय कृषि उच्च प्रबंधन संस्थान की निदेशिका हॉ मध पकाने, पानी गर्म करने, अशुद्ध जल का शिक्षा परियोजना के प्रधान अन्येक्षक शर्मा ने बताया कि प्रशिक्षण में 68 शोधन करने, फसल को सखाने, प्रो. एन. के. शर्मा ने नवीकरणीय उर्जा प्रतिभागियों ने प्रशिक्षण प्राप्त किया।

चर्यावरण संरक्षण चशिक्षण कार्यकम

0 पत्रिका बीकानेर रत्वामी राजस्थान कथि केशवानंद विश्वविद्यालय के अभियांत्रिकी विभाग तथा कषि व्यवसाय प्रबंध संस्थान के संयक्त तत्वावधान में राष्ट्रीय कषि उच्च शिक्षा परियोजना अन्तर्गत आयोजित तीन दिवसीय पशिक्षण कार्यक्रम का समापन ब्धवार को हआ।

समारोह में मुख्य अतिथि कुलपति प्रो.आरपी सिंह थे। राष्ट्रीय कषि उच्च शिक्षा परियोजना के प्रधान अन्वेक्षक प्रो. एनके शर्मा ने नवीकरणीय उर्जा स्त्रोत के उपयोग को आज की आवश्यकता बताया। कषि महाविद्यालय के अधिष्ठाता डॉ. आईपी सिंह ने भी विचार व्यक्त किए। कृषि प्रबंधन संस्थान की निदेशिका डॉ. मधु शर्मा ने बताया कि प्रशिक्षण में 68 प्रतिभागियों ने प्रशिक्षण पाप्त प्रशिक्षण किया। समन्वयक जितेन्द्रकुमार गौड़ ने खताया कि प्रशिक्षण में बायो डीजल, छत पर सौर उर्जा संयंत्र स्थापना सौर जल उष्मक, सौर उर्जा से जल शोधन आदि पर व्याखान हुए इस अवसर, व्याखानों की संकलन पुस्तिका का विमोचन प्रो.रक्षपाल सिंह जी ने किया। प्रशिक्षणार्थियों को प्रमाण पत्र वितरित किए।

किसान अपनाए बाय राष्ट्रीय

कृषि विशेषज्ञों ने कषक प्रशिक्षण शिविर में दिया विकल्प

पविषका ज्यूजा जेटलकी

भीकानेर कृषि विश्वविद्यालय में राष्ट्रीय कृषि उच्च शिक्षा परियोजना के राहरा जायी गैरा रायओं की जीविका खोली एल पर्यावरण संरक्षण में भूमिकत चिषण्यराखः TO SHOT दिवसीय कवका प्रशिक्षण शिविर शक्तवार वडी वहाँव জানিমাজিকী জিমান তথ্য অনি प्रीयोगिकी सुचना केन्द्र के संयुक्त सरबाबधान में समा।

अण्यवाला करते खुए स्वामी केशवानंद PUTCHE AND THE - म्यूनिय विश्वविद्यालय के कुलपति प्रो. आरपी सिंह ने कहा कि विकास की आधार्थ चौड़ में जलवायु में बड़ा परिवर्तन अनेक दुष्यरिणाम अगया है। इसके हमारे सामने हैं। ऐसे में यह आवश्यक हो जाता है कि हम बायोंगैस की ईंधन के विकटण के रूप में अपनाएं।

प्रसार शिक्षा निदेशक हाँ. एसके शम्म, फाजरी अश्यक हो, एनडी गादव ने भी जिल्लार व्यक्त किंग्र। राष्ट्रीय कवि उच्च शिक्षा परियोजना के समन्वयक यनके अर्मा ने असावा कि

विकालिकाल्य वही 1000-000 परियोजना हारा रवरीफ फसल के लिए म्य. मोठ और ग्वार 100 गुणवसायुक्त जीज विक्रय के लिए तैयार किछ गए हैं। किसान यह जीज रवरीद सकते हैं। समन्त्रयक जेके गौड ने महामीलडम की रूपरेखा के खारे में STOTESTI I

कुलपति ने प्रशिक्षण से संबोधित हरलकः का लिमोचान किल्या लम्पा गोकर गैस प्लांट चलाने वाले किसानों को राग्मानित कुलपति ने जितरित किय प्रमाण पत्रक्षि अन्तसंधान केंद्र के सुनियोजित खेती विकास केन्द्र और उद्याल चित्रान निष्पाग के संयुक्त तत्वावधान में राष्ट्रीय कवि उच्च शिक्षा परियोजना के ततत मुख्क क्षेत्र में जो दनल तकनीक में सब्बी जत्पादन विषयक चार विषशीय प्रशिक्षण पुलल्बार को सम्पन्न मुआ। प्रशिक्षण में एमएससी और पीपलकी के 44 बिद्यार्थियों ने भाग लिया। कवि महाविद्यालय में मुख्य असिथि कलपति प्रो. आरपी सिंह थे। प्रशिक्षण प्रभारी डॉ. राजेन्द्र राठीह ने बताया कि चार दिनों के प्रशिक्षण में पंजाब कुईव विश्वविद्यालय, भारतीय चार्चाच अनुसंधान संस्थान और केन्द्रीय शुष्क जागवानी संस्थान के विशेषजी ने जन्मान्डवान्त् हिएर।





बीकानेर | राष्ट्रीय कृषि उच्च शिक्षा परियोजना के तहत वायोगैस संयंत्रों की जैविक खेती एवं पर्यावरण संरक्षण में महती भूमिका है। किसान बायोगैस को इंधन के विकल्प के रूप में अपनाएं तो बेहतर होगा। किसानों के एक दिवसीय प्रशिक्षण में शक्रवार

F Implementation status of ESS measures at AUs



Implementation status of ESS measures at AUs

	XX 1 6 4 XX	No Of AUs implemented the actions		
Indicators	Number of AUs proposed the actions	Till December 2019	January to December 2020	
Compliance with legal and regulatory requirements				
Hazardous Waste Management	9	7	3	
Biomedical Waste Management	3	3	-	
Construction and Demolition Waste Management	11	7	2	
E-Waste Management	25	25	-	
Energy Conservation Building Code	13	8	6	
Lab Safety Measures	14	9	10	
Accreditation of Laboratories	5	3	2	
Green technology themes adopted				
Water conservation	11	6	10	
Energy Conservation Adopted	9	7	10	
Waste Management	7	7	13	
Plantation	10	10	5	
Number of courses/seminars/workshops /lectures on environmental aspects	5	5	-	
On-going research work	5	5	-	
Leveraging NAHEP to bring environmental sustainability in ICAR AU ecosystem Awareness Programme/ Lectures/ Workshops	0	10	July 2021 25 122	

