

National Education Society®

## JAWAHARLAL NEHRU NEW COLLEGE ENGINEERING

DISTRICT BIO-FUEL RESEARCH, INFORMATION AND  
DEMONSTRATION CENTER SHIMOGA- 577204

Funded and supported by Karnataka State Bioenergy Development Board, Govt. of Karnataka, Bangalore

# ANNUAL REPORT 2021-2022



Dr. H. E. Suresh, Coordinator,  
BRIDC, JNNCE, Shivamoga.

Mr. Chethan S. G.  
Co-Coordinator,  
BRIDC, JNNCE, Shivamoga.

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**BIOFUEL RESEARCH, INFORMATION AND DEMONSTRATION  
CENTRE**

District Biofuel Research, Information, and Demonstration Center, JNNCE, Shimoga has been established in June 2011 by Karnataka State Bio-Energy Development Board, Govt. of Karnataka, Bangalore. This research and information center has been conceptualized as a showcase to study, promote and demonstrate all aspects related to bio-fuel. Through this center, it is possible to provide information on Bioenergy, identification of various non edible oil seeds, agro practices for these sources, Post-harvest technologies like seed collection, oil expelling, treatment, uses of oils, Trans-esterification process & efficiencies, R&D and extension services to purchase oil seeds from Shimoga region and encourage the farmers to take up biofuel activities. Since 8 years, BRID center is actively engaged in fulfilling all objectives listed above by providing information to farmers, entrepreneurs, research students, end users and the general public's. Many research and development activities are being carried out at the center. School, college students and teachers visit the center regularly. We have collected around 6 tons of oil seeds and also collected fried cooking oil from various hotels in Shimoga district during the year 2019-20. We conduct environmental awareness programs and participate in all the major government and other institutional exhibitions. Further, we have created research facilities for, M.Tech., B.E., M.Sc., B.Sc., B.Ed., Students and encourage them to take up research projects on various aspects of Bio-fuel and environment.

### Details of Awareness Program April 2021 to March 2022:

Sl No	Date	Name of the Program	Venue	No. of Participants
1	10-08-2021	Planting the tree at jnnce campus arranged <b>world biofuel day</b>	<b>Jnnce shimoga</b>	50
2	27-08-2021	Dr H.B. Suresh Delivered Talk on Biofuel awareness & Demonstration for the Gram panchayat women SIG Group association with Nesara Center for Rural Development <sup>®</sup>	District Training Center Shimoga	60
3	27-08-2021	Mr Chethan & Lokeshappa u Delivered Talk on Biofuel awareness Demonstration for the Gram panchayat women SIG Group association with Nesara Center for Rural Development <sup>®</sup>	<b>Jnnce shimoga</b>	40
4	31-08-2021	Dr Sreepathi L K & Lokeshappa u Delivered Talk on Biofuel awareness & Demonstration for the Gram panchayat women SIG Group association with Chyathanaya Rural Development Society <sup>®</sup>	<b>Jnnce shimoga</b>	40
5	03-08-2021	Dr H.B. Suresh Delivered Talk on Biofuel awareness & Demonstration for the Gram panchayat women SIG Group association with Poojachaitable Trust <sup>®</sup>	District Training Center Shimoga	40
6	03-08-2021 A/N	Dr Ravikumar & Lokeshappa u Delivered Talk on Biofuel awareness Demonstration for the Gram panchayat women SIG Group association with Poojachaitable Trust <sup>®</sup>	<b>Jnnce shimoga</b>	40
7	14-09-2021	Dr H.B. Suresh Delivered Talk on Biofuel awareness & Demonstration for the Gram panchayat women SIG Group association with Aasare social services Center <sup>®</sup>	District Training Center Shimoga	40
8	14-09-2021 A/N	Dr H.B. Suresh & Lokeshappa u Demonstration for the Gram panchayat women SIG Group association with Aasare social services Center <sup>®</sup>	BRIDC Jnnce shimoga	40
9	21-09-2021	Dr H.B. Suresh MR Chethan & Lokeshappa u Delivered Talk on Biofuel awareness & Demonstration for the Gram panchayat women SIG Group association with Chyathanaya Rural Development Society <sup>®</sup>	BRIDC Jnnce shimoga	40
10	19-10-2021	Dr H.B. Suresh Delivered Talk on Biofuel awareness & Demonstration for the Gram	UAS	40

		panchayatwomenSIGGroupassociationwith Aasare social services Center® ®	shimoga	
11	19-10-2021 A/N	Dr H.B. Suresh Delivered Talk on Biofuel awareness & Demonstration for the Gram panchayat women SIG Group association with Aasare social services Center® NGO	BRIDC Jnnce shimoga	40
12	27-10-2021	Dr H.B. Suresh Delivered Talk on Biofuel awareness & Demonstration for the Gram panchayat women SIG Group association with Poojacharitable Trust® NGO	ADBBlockSeminar hall Jnnce shimoga	40
13	27-10-2021 A/N	MRChethan&LokeshappauDeliveredTalkon Biofuel awareness & Demonstration for the Gram panchayat women SIG Group association with Poojacharitable Trust®	BRIDC Jnnce shimoga	40
14	09-11-2021	Karnataka State biofuel DevelopmentBoardManaging Director Sri K R Rudrappa KGSVisited BRIDC, JNNCE	BRIDC Jnnce shimoga	02
15	27-11-2021	LondonVerzencompanyMrManjunatha Mrs Samanvitha Visited BRIDC, JNNCE	BRIDC Jnnce shimoga	02
16	30-11-2021	Dr H.B. Suresh Delivered Talk on Biofuel awareness & Demonstration for the Gram panchayat women SIG Group association with Aasare social services Center®NGO	UAS shimoga	40
17	30-11-2021 A/N	MR Chethan & Lokeshappa u Demonstrationfor the Gram panchayat women SIG Group association withAasare social services Center®	Jnnce shimoga	40
18	30-12-2021	Lokeshappa u Demonstration for the Gram panchayat women SIG Group association with ChyathanayaRural Development Society®.	Jnnce shimoga	40
19	12-01-2022	GovthighSchoolstudentKomanaluVisited BRIDC, JNNCE.	BRIDC Shimoga	40
20	17-02-2022	Biofuelawareness&Demonstrationforthe GrampanchayatwomenSIGGroupassociation	BRIDC	30

		with Chyathanaya Rural Development Society®.	Shimoga	
21	23-02-2022	Dr H.B. Suresh Delivered Talk on Biofuel awareness & Demonstration for the Sahyadri college NSS Program at konagavalli village	konagavalli	100
22	04-03-2022	Dr H.B. Suresh Delivered Talk on Biofuel awareness & Demonstration for the Gram panchayat women SIG Group association with Aasare social services Center® NGO.	UAS shimoga	40
23	04-03-2022	Dr H.B. Suresh Lokeshppa.u Biofuel awareness & Demonstration for the Gram panchayat women SIG Group association with Aasare social services Center® NGO.	BRIDC Shimoga	40
24	22-03-2022	Dr H.B. Suresh Lokeshppa.u Biofuel awareness & Demonstration for the First year BE Student	BRIDC Shimoga	65
25	25-03-2022	Dr Ravikumar & Lokeshappa u Demonstration for the First BE Students, JNNCE	BRIDC Shimoga	60
26	28-03-2022	Deepankar & Shivanandappa Demonstration for the First BE Students, JNNCE	BRIDC Shimoga	60

## Biofuel & Chiranthana Activities Photo

### 1. Awareness programs

We have organized 23 Bio-energy awareness programs in various Taluk and villages around Shivamogga district. Awareness programs were arranged for village peoples, Farmers, school students, NSS students and also for women society members. In all awareness programs, presentation on bio-fuel program, display of various types of oil, seeds, oil cake, biodiesel and display of biofuel plants had been arranged.



Planting the tree at jnncecampus arranged **world biofuel day (10.08.2021)**



Dr.H.B.SureshDeliveredTalkonBiofuelawareness&DemonstrationfortheGrampanchayat women SIG Group association withNesara Center for Rural Development ®(27.08.2021)



Mr. Chethan & Lokeshappa u gave presentation on Bio- Fuel importance to for the Gram panchayatwomen SIG Group association withNesara Center for Rural Development®(31.08.2021)



Dr Sreepathi L KDelivered Talk on Biofuel awareness & Demonstration for the Gram Panchayat women



SIG Group association with Chyathanaya Rural Development Society®(03.08.2021)



Mr Lokeshappa u gave presentation on Bio- Fuel importance to for the Gram Panchayat womenSIG Group association with Chyathanaya Rural Development Society®(14.09.2021)



100% Biodiesel Usage Truck





Dr Ravikumar B N & Lokeshappa Mr Ravikumar gave presentation on Bio- Fuel importance for the GrampanchayatwomenSIGGroupassociationwithNesaraCenterforRuralDevelopment®(03.08.2021)



Dr.H.B.SureshDeliveredTalkonBiofuelawareness&DemonstrationfortheGrampanchayat women SIG Group association withAasare social services Center®(14-09-21)



Dr H B Suresh & Mr Chethan and Lokeshappa u Delivered Talk on Biofuel awareness & Demonstration for the Gram Panchayat women SIG Group association with Chyathanaya Rural Development Society®(21-09-2021)



Dr. H.B.Suresh motivating farmer for the Grampanchayat women SIG Group toward the collection of biofuel seeds and usage of biofuel resources in their premises association with Aasare social services Center®NGO(19-10-21)



Dr.H.B.Suresh Delivered Talk on Biofuel awareness & Demonstration for the Grampanchayat women SIG Group association with Aasare social services Center®NGO(27-10-21)



KarnatakaStatebiofuelDevelopmentBoardBangaloreManagingDirector Sri K R Rudrappa KGSVisited BRIDC, JNNCE (09-11-2021)



London Verzencompany Mr. Manjunatha Mrs. Samanvitha Visited BRIDC, JNNCE



Mr. Chethan & Lokeshappa u aware and sharing biofuel information for the Gram panchayat women SIG Group association with Aasare social services Center® (30-11-2021)



Dr.H.B.SureshawareandsharingbiofuelinformationfortheSahyadricollege NSS Program at konagavalli village (23.02.2022)







Dr H.B. Suresh & Lokeshppa.u aware and sharing biofuel information for the Gram panchayat women SIG Group association with Aasare social services Center®NGO. Date 04-03-2022



Mr. Lokeshappa U gave presentation on Bio- Fuel importance to School students (22.03.2022)



Mr Dr Ravikumar gave presentation on Bio- Fuel importance to Mechanical Engineering students  
(25.03.2022)

## **World Environmental Day- 2021**

World environmental day 2021 celebrated from our center in association with members of environmentalist, Shimoga, Around 100 environmentalists, publics, students and teachers participated in the world environmental day program at JNNCE Campus

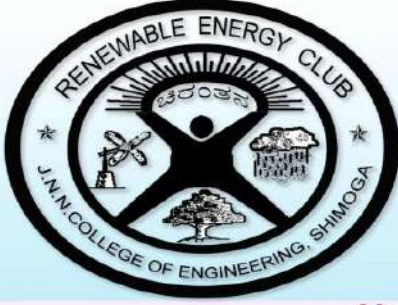


**World Environmental Planting the Tree Dr Tjasvi Head of Dept Electrical. Dr H.B. Suresh  
Coordinater BRIDC & StudentStaff jnnce environmentalists, (05.06.2021)**

## Annual Stock Details:2021-2022

Stock Details:1-04-2021 to 31-01-2022

Sl. No	Name of particular	Procurement Kg/liter	Utilization/Sales Kg/ liter
1	Pongamia pod	0.0	0.0
2	Pongamia seed	246.0	246.0
3	Waste coconut	0.0	0.0
4	Waste cooking oil	1762.0	1520.0
5	Pongamia oil	40.0	122.0
6	Oil cake	150.0	150.0
7	Biodiesel	1261.0	1400.0
8	Glycerine	54.0	456.0



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**RENEWABLE ENERGY CLUB**

National Education Society (R)

JAWAHARLAL NEHRU NATIONAL COLLEGE OF ENGINEERING, SHIVAMOGGA

- *The importance of the use of renewable energy sources*
- *The significance of energy conservation and its methodologies*
- *Conducting demo, competitions for school and college students on this topic*
- *Information on rain water harvesting to students , farmers and societies Activities*
- *Demos of various energy saving instruments to Public.*
- *Various Competitions to school and college students.*
- *Nature camps and trekking.*
- *Surveys of various resources.*
- *Open discussions on current nature threats, and Solutions.*
- *Invited talks from various resourceful persons.*
- *Nature Games.*
- *Conservation Activities with the help of Government.*
- *Celebration of various nature festival*
- *Vanamohatsava program*

#### *List of Renewable Energy Demonstration Devices*

- **75kVA biomass gasifier with generator**
- **Flat and parabolic solar cookers**
- **LED and CFL solar lighting systems**
- **Solar street light**
- **High efficiency Chula**

- **Hand operated pump**
- **Electric vehicle Solar cycle**
- **Wind-Solar hybrid system**
- **Rain water harvesting system**
- **Kitchen waste biogas plant**
- **Biofuel Demonstration unit**
- **75kVA biomass gasifier with generator**
- **Flat and parabolic solar cookers**
- **LED and CFL solar lighting systems**
- **Solar street light**
- **High efficiency Chula**
- **Hand operated pump**
- **Electric vehicle**
- **Solar cycle**
- **Wind-Solar hybrid system**
- **Rain water harvesting system**
- **Kitchen waste biogas plant**
- **Biofuel Demonstration unit**



**Evacuated solar cooker**



**Butterfly solar cooker**

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**DISTRICT BIO - FUEL RESEARCH, INFORMATION AND  
DEMONSTRATION CENTER SHIMOGA- 577204**

Funded and supported by Karnataka State Bioenergy Development Board, Govt. of Karnataka, Bangalore

# ANNUAL REPORT 2020- 2021



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**Coordinator,**  
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**Mr. Chethan S.G.**  
**Co-Coordinator,**  
**BRIDC, JNNCE, Shivamoga.**

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## **BIOFUEL RESEARCH, INFORMATION AND DEMONSTRATION CENTRE**

District Biofuel Research, Information, and Demonstration Center, JNNCE, Shimoga has been established in June 2011 by Karnataka State Bio-Energy Development Board, Govt. of Karnataka, Bangalore. This research and information center has been conceptualized as a showcase to study, promote and demonstrate all aspects related to bio-fuel. Through this center, it is possible to provide information on Bioenergy, identification of various non edible oil seeds, agro practices for these sources, Post-harvest technologies like seed collection, oil expelling, treatment, uses of oils, Trans-esterification process & efficiencies, R&D and extension services to purchase oil seeds from Shimoga region and encourage the farmers to take up biofuel activities. Since 8 years, BRID center is actively engaged in fulfilling all objectives listed above by providing information to farmers, entrepreneurs, research students, end users and the general public's. Many research and development activities are being carried out at the center. School, college students and teachers visit the center regularly. We have collected around 6 tons of oil seeds and also collected fried cooking oil from various hotels in Shimoga district during the year 2019-20. We conduct environmental awareness programs and participate in all the major government and other institutional exhibitions. Further, we have created research facilities for, M.Tech., B.E., M.Sc., B.Sc., B.Ed., Students and encourage them to take up research projects on various aspects of Bio-fuel and environment.



## 1. Awareness programs

We have organized 9 Bio-energy awareness programs in various Taluk and villages around Shivamogga district. Awareness programs were arranged for village peoples, Farmers, school students, NSS students and also for women society members. In all awareness programs, presentation on bio-fuel program, display of various types of oil, seeds, oil cake, biodiesel and display of biofuel plants had been arranged.

## Biofuel Activities Report

### Details of Awareness Program from 01.04.2020 to 31.03.2021

Sl No	Date	Name of the Program	Particular	Venue	No. of Participants
1	14-07-2020	Biofuel Awareness program	Planting of Saplings at Kuvempu Nagara Area, Opp. to JNNCE.	Kuvempu Nagara, Ragigudda, Shimoga	30
2	10-08-2020	World International Biofuel day celebration	Celebration of World Biofuel day-2020 along with plantation activity by the guest at JNNCE campus	JNNCE Campus Premises	50
3	15-10-2020	Biofuel Awareness program	Awareness about biofuel resources and its importance to the Principal and Staff Govt. Pu College Nyamathi,	BRIDC JNNCE	10
4	23-01-2021	Biofuel Awareness program	Dr H.B. Suresh Delivered Talk on Biofuel awareness & renewable resource to farmers of Kadikal	Kadikal	60
5	25-01-2021	Biofuel Awareness program	Dr H.B. Suresh Delivered Talk on Biofuel awareness & renewable resource to farmers of Bedarahosalli	Bedarahosalli	70
6	28-01-2021	Biofuel Awareness program	Dr H.B. Suresh Delivered Talk on Biofuel awareness & renewable resource to farmers of Holaluru	Holaluru	60
7	24-03-2021	Biofuel Awareness program	Dr H.B. Suresh Delivered Talk on Biofuel awareness & renewable resource to farmers of Mathru.	Mathru.	50

8	25-03-2021	Biofuel Awareness program	Dr H.B. Suresh Delivered Talk on Biofuel awareness & renewable resource to farmers of Veeranabenavalli.	Veeranabenavalli.	50
9	29-03-2021	Biofuel Awareness program	Dr H.B. Suresh Delivered Talk on Biofuel awareness & renewable resource to farmers of balaki	Balaki	50

## Awareness activity Photos



Dr.H B.Sures gave demoonbio-fuel seeds and its importance the Pdo Officer Shimoga dist (14.07.2020)



Dr. H. B. Suresh motivating farmer of bedarahosahalli village towards the collection of biofuel seeds and usage of biofuel resources in their premises (10.08.2020)



Mr chethan S G gave presentation on Bio- Fuel importance to SKDRDP members(15.10.2020)



Mr. Lokeshappa U gave presentation on Bio- Fuel importance to School students (23.01.2021)



Mr Ravikumar gave presentation on Bio- Fuel importance to Mechanical Engineering students (25.01.2021)



Dr. H. B. Suresh motivating woman SIG group Member of usage of biofuel resources in their premises (28.01.2021)



Mr Bhdharish chathanya Rurel Devlpment Socety delivered a talk on Bio-fuel for SIG Groop Member at Soraba.TP Hall (24.03.2021)

## 2.Training programs:

We have organized 03 a Bioenergy training program for farmers association, SKDRDP members. The A one-day Bio-fuel training program includes, one session is presentation on Bio-fuel program, raw materials, production of Bio-diesel and value addition of by-products. The second session involves hands-on training on Biodiesel production and valued addition of by-products. A short movie on Bio-fuel and Bio-fuel entertainment programs were also generally arranged. This year training program on soap production from crude glycerol for women society member has been arranged. Further, training program has been arranged for other Bio-fuel and I & d centers staffs and also for some entrepreneurs.



Dr.H B.Sures gave demo on bio-fuel seeds and its importance to the Pdo Officer Shimoga dist (17.01.2021)

Dr.L.K.Sreepahigave presentation on Bio-fuels resources to the Kamala Nehru Woman College students (23.01.2021)



Mr. lokeshappa gave training for soap production to the Kamala Nehru Woman College Students participants. (23.01.2021)

### 3.Bio-fuel Exhibitions:

We have installed a stall in 02 exhibitions during the year 2020-2021. In this exhibition a stall containing bioenergy samplings, oils, oil seeds, oil cake and biodiesel samples was displayed. Bio-fuel pamphlets were distributed and additional information on Bio-fuel resources and importance was given through PPT presentation



### World Environmental Day- 2020

World environmental day 2020 celebrated from our center in association with members of environmentalist, Shimoga, Around 100 environmentalists, publics, students and teachers participated in the world environmental day program at JNNCE Compus



**World Environmental Planting the Tree Shree Saraswathi district judge & Shree Mrs Vaishali CEO ZP.& Nagarja S N Secretary NES Principal & Staff jnnce environmentalists,**



### **World International Bio-fuel Day- 2020**

Bio-energy Research Information and Demo Center had organized World Bio-fuel Day- 2020 at JNN College of Engineering , Shivamogga on 10.08.2020 in association with social forest department Chaitanya Rural Development Society, Shivamogga. The program was inaugurated through the planting of Bio-fuel plants After inauguration addressed the students and women society members to promote and accelerate to grow Bio-fuel plants and collection of Bio-fuel seed and also support to use biodiesel as a fuel for Zilla panchayath vehicles. The program conducted successfully with the presence of district social forest officer Shree Nataraja Dhesaee. Bhadrish. B.T Dr. H. B Suresh, Coordinator BRIC, Shimoga, Dr. L K Sreepathi, Dr. H. R Mahadevswami, Principal, JNNCE, Shivamoga.



World Bio-fuel Day Celebrationsocial forest dept with JNN College of engineering Shimoga.(10.08.2020)

**Dignitaries visited at BRIDC JNNCE, Shivamogga.**

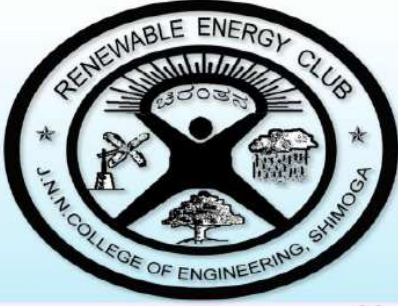






## Annual Stock Details:2020-2021

Sl. No.	Name of particular	Procurement Kg/liter	Utilization/Sales Kg/ liter
1	Pongamia pod	0.0	0.0
2	Pongamia seed	1282.0	1431.5
3	Waste coconut	00.0	64.5
4	Waste cooking oil	1695.0	1542.0
5	Pongamia oil	343.00	740.0
6	Oil cake	1034.0	1141.0
7	Biodiesel	2062.0	2112.0
8	Glycerine	129.0	65.0



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## RENEWABLE ENERGY CLUB

National Education Society (R)

JAWAHARLAL NEHRU NATIONAL COLLEGE OF ENGINEERING, SHIVAMOGGA

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- *The significance of energy conservation and its methodologies*
- *Conducting demo, competitions for school and college students on this topic*
- *Information on rain water harvesting to students , farmers and societiesActivities*
- *Demos of various energy saving instruments to Public.*
- *Various Competitions to school and college students.*
- *Nature camps and trekking.*
- *Surveys of various resources.*
- *Open discussions on current nature threats, and Solutions.*
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- *Nature Games.*
- *Conservation Activities with the help of Government.*
- *Celebration of various nature festival*
- *Vanamohatsava program*

### *List of Renewable Energy Demonstration Devices*

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- **Flat and parabolic solar cookers**
- **LED and CFL solar lighting systems**
- **Solar street light**
- **High efficiency Chula**

- **Hand operated pump**
- **Electric vehicleSolar cycle**
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**Evacuated solar cooker**



**Butterfly solar cooker**

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Evacuated Solar Water heater



Butterfly design Solar Cooker



Parabolic solar cooker



LED solar lightings



Wind-solar Hybrid system



Solar bicycle



Navagni stove



Single and Double high efficiency Chula



Kitchen waste Biogas Plant

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## **BIOFUEL RESEARCH, INFORMATION AND DEMONSTRATION CENTRE**

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## 1. Awareness programs

We have organized 42 Bio-energy awareness programs in various Taluk and villages around Shivamogga district. Awareness programs were arranged for village peoples, Farmers, school students, NSS students and also for women society members. In all awareness programs, presentation on bio-fuel program, display of various types of oil, seeds, oil cake, biodiesel and display of biofuel plants had been arranged.

### 1. List of awareness program conducted:

Sl No	Date	Name of the Program	Venue	No. of Participants
1	25-5-19	Biofuel Awareness at BRIDC, Visit by JNNCE students	BRIDC, JNNCE, Shimoga	120
2	5-6-19	Planting the trees in the campus on World Environmental Day	<b>JNNCE Campus</b>	45
3	<b>25-6-19</b>	Awareness at BRIDC, Visit by PDO's and Elected Members of Grama Panchayath and Formers in Association with Zilla Panchayath	BRIDC, JNNCE, Shimoga	<b>65</b>
4	8-7-19	Technical Talk on Biofuel Conversion Technologies	DSDN Polytechnic, JNNCE Campus, Shimoga	120
5	9-7-19	Biofuel Awareness at BRIDC, Visit by DSDN Polytechnic students	BRIDC, JNNCE, Shimoga	90
6	16-7-19	Biofuel Awareness at BRIDC, Visit by Taluk shree shankthi Block Society, Madhugiri taluk, Tumkur District.	BRIDC, JNNCE, Shimoga	20
7	23-7-19	Biodisel use start Zill Panchayat Vechicle	Zill Panchayat Shimoga	10
8	27.07.19	Technical Talk on Biofuel Conversion Technologies and Responsibilities of Students in Environmental Conservation	Govt. Degree College, BH Road, Shimoga	50
9	30-7-19	Biofuel Awareness Program for Sahyadri Science College students	BRIDC, JNNCE, Shimoga	10
10	05-8-19	Technical talk on Global Warming and Climate Change is delivered by Dr. L.K. Sreepathi . Dr. H.B. Suresh delivered by talk on Biofuel, during the workshop. National Institute of Technology, Surathkal, Dakshina Kannada.	National Institute of Technology (NITK), Surathkal, Dakshina Kannada	80



11	15-8-19	Planting the trees in the campus on World Bio-fuel Dayin Association with deistic social Forest Dept,	JNNCE Campus	650
12	19-8-19	Technical talk on Biofuel for First year students during the Induction Program.	BRIDC, JNNCE, Shimoga	450
13	14-9-19	Biofuel awareness program Stall Demo for Shimoga dist High School/College Student During the Parisara Jagrthi Dinacharane(PJD)	Ananya Mantapa JNNCE, Shimoga	400
14	16-9-19	Biofuel awareness program Stall Demo for Karanataka Janapada Parishath Mambers	Thirtha Remeshwara Balaguthi Namti Taluk	200
15	18-9-19	Acharya tuls National college students visited BRIDC, Shimoga	BRIDC, Shimoga	100
16	26-9-19	JNNCE 7 <sup>th</sup> Sem Mechanical Engineering students visited BRIDC, Shimoga	BRIDC, Shimoga	60
17	24-10-19	Podhr International School students visited BRIDC, Shimoga	BRIDC, Shimoga	15
18	5-11-19	Addichuchnagire School students visited BRIDC, Shimoga	BRIDC, Shimoga	10
19	6-11-19	JNNCE First sem Civil students visited BRIDC, Shimoga	BRIDC, Shimoga	60
20	6-11-19	JNNCE 7 <sup>th</sup> Sem Mechanical Engineering students visited BRIDC, Shimog	BRIDC, Shimoga	60
21	8-11-19	JNNCE 7 <sup>th</sup> Sem Mechanical Engineering students visited BRIDC, Shimoga Solid waste, Gasifier, Biogas,	BRIDC, Shimoga	60
22	9-12-19	Environmental Conservation Biofuel awareness program Stall Demo for Kuvempu shatmanotswwa mahavidhylya NSS Students is delivered by Dr. H.B. Suresh	Sree Rama Nagar Bhadravathi	110
23	19-12-19	Technical Talk on delivered by Dr. L.K. Sreepathi . Dr. H.B. Suresh delivered A talk on Biofuel . Mr chetha &Lokesh to Hand Made soap Phenyl training for Kastruba Woman College students.	BRIDC, Shimoga	18
24	23-12-19 To 27-12-19	Biofuel awareness program Stall Demo for DST Inspire Inter ship Camp Students,	MBA/MCA Auditorium JNNCE Shimoga	150
25	28-12-19	Technical talk on Rain Water harvesting delivered by Dr. L.K. Sreepathi . Dr. H.B. Suresh delivered by talk on Biofuel for Kastruba Woman College NSS students.	Pillangiri	120
26	31-12-19	Govt Pu college &High School Thirthalli Govt Pu college &High School students visited BRIDC, Shimoga	BRIDC, Shimoga	48
27	31-12-19	Govt Girl Pu college &High School,New Town Bhadravathi students visited BRIDC, Shimoga	BRIDC, Shimoga	35

28	17-01-2020	MHIRD With Association Biofuel Awareness program at Taluk Panchayat Soraba for SIG Group Member Mr Lokeshappa delivered A talk on Biofuel .	Taluk Panchayat Soraba	150
29	20-1-2020	Sree Sree Ravishankar Vidya Mandira School Stuudent study Tour visited BRIDC, Shimoga	BRIDC, Shimoga	75
30	21-1-2020	Vikasa High School Student Visitted BRIDC, Shimoga	BRIDC, Shimoga	150
31	25-01-2020	Rotary Mid towan Member Visited BRIDC, Shimoga	BRIDC, Shimoga	30
32	28-01-2020	MHIRD With Association Biofuel Awareness program at Doda Mathli Village for SIG Group Member Mr Lokeshappa delivered A talk on Biofuel .	Doda Mathli Shimoga Taluk	80
33	30-01-2020	MHIRD With Association Biofuel Awareness program at T P Member Hall Thirthalli for SIG Group Member Mr Lokeshappa delivered A talk on Biofuel .	Taluk Panchayat Thirthalli	100
34	12-02-2020	JNNCE Engg College Indication Program Dr. H.B. Suresh delivered by talk on Biofuel	Ad Block Seminar hall JNNCE	120
35	13-02-2020 To 15-02-2020	KTES-2020Karanataka TECH Entrepreneurship Summit-2020 program arranged at JNNCE With Association Biofuel Awareness Stall	MBA/MCA Auditorium JNNCE Shimoga	400
36	15-02-2020	PESIT Engg College Indication Program Dr. H.B. Suresh delivered by talk on Biofuel	PESITM Shimoga	120
37	16-02-2020	JNNCE NSS program at Navele Basavapura Dr. H.B. Suresh delivered by talk on Biofuel	Navele Basavapura	150
38	18-02-2020	NPS High School Student Visitted BRIDC, Shimoga	BRIDC, Shimoga	150
39	28.02.19	KRVP & PES PU College arranged National Science Day arranged at PESITM With Association Biofuel Awareness Stall	PESITM Shimoga	250
40	05.03.2020	Govt High School Abblagere Student Visitted BRIDC, Shimoga	BRIDC, Shimoga	60
41	17.03.2020	JNNCE Technical staff	BRIDC, Shimoga	60
42	18.03.2020	JNNCE Supporting Staff	BRIDC, Shimoga	45

## 1. Awareness program photos.



KTES-2020Karnataka TECH Entrepreneurship Summit-2020 program arranged at JNNCE With Association Biofuel Awareness Stall(13.12.2019)



Planting the trees in the campus on World Environmental Day (05.06.2019)



NPS High School Student Visited BRIDC, Shimoga(18.02.2020)



JNNCE 7<sup>th</sup>Sem Mechanical Engineering students visited BRIDC, Shimog( 06.11.2019)



JNNCE First sem Civil students visited BRIDC, Shimoga (06.11.2019)



Vikasa High School Student Visitted BRIDC, Shimoga (21.01.2020)



Biofuel stall installed during KVP conference at kuvempu ranga mandira (19.12.2019)



Dr. H. B. S inaugurated Awareness program with MGIRED at Bhadravathi



Mr. Chethan gave awareness to the students on bio- energy fuels at ananya school, Shimoga.



MHIRD With Association Biofuel Awareness program at Taluk Panchayat Soraba for SIG Group Member Mr Lokeshappa delivered A talk on Biofuel .(17.01.2020)



Mr Bhdharish chathanya Rurel Devlpment Socoety delivered a talk on Bio-fuel for SIG Groop Member at Soraba.TP Hall (23.12.19)



Mr. Chethan gave a demo on Renewable energy resources in Awareness program at haramagatta village.(17.01.2020)



Dr. H .B. Suresh explaining Bio- gas installation to the ITI students.(20.01.2020)



Mr. Lokeshappa gave presentation on Bio- Fuel importance to SKDRDP members (17.01.2020)





JNNCE Engg College Indication Program Dr. H.B. Suresh delivered by talk on Biofuel (20.01.2020)

## 2. Training programs:

We have organized a Bioenergy training program for farmers association, SKDRDP members. The A one-day Bio-fuel training program includes, one session is presentation on Bio-fuel program, raw materials, production of Bio-diesel and value addition of by-products. The second session involves hands-on training on Biodiesel production and valued addition of by-products. A short movie on Bio-fuel and Bio-fuel entertainment programs were also generally arranged. This year training program on soap production from crude glycerol for women society member has been arranged. Further, training program has been arranged for other Bio-fuel and I & d centers staffs and also for some entrepreneurs.

### List of a training program organized at BRIDC:

Sl. No.	Date	District /	Farmers/village	No. of Participants
1	25-6-19	Shimoga	PDO's and Elected Members of Grama Panchayat	65
2	30-7-19	Shimoga	Biofuel Training for Sahyadri Science College students	10
3	19-12-19	Shimoga	Hand Made soap Phenyl training for	15



			Kastruba Woman College students.	
4	17.03.2020	Shimoga	Biofuel Training for JNNCE Technical staff	60
5	18.03.2020	Shimoga	Biofuel Training for JNNCE Supporting Staff	45

**Training program photos:**



Dr. L. K. Sreepathi gave presentation on Bio-fuels resources to the Kamala Nehru Woman College students. (25-6-2019)



Dr. H. B. Suresh gave Demo on bio- fuel seeds and its importance the Pdo Officer Shimoga dist (30.07.2019)



Dr. H. B. Suresh gave Demo on bio- fuel seeds and its importance the Pdo Officer Shimoga dist (30.07.2019)



Dr. L. K. Sreepathi gave presentation on Bio- fuels resources to the Kamala Nehru Woman College students. (25-7-2019)



Mr. lokeshappa gave training for soap production to the Kamala Nehru Woman College Students participants. (19.12.2019)



Mr. Chethan gave introduction to the chirantana Energy resources to the students.(17.03.2019)



Dr. L K Sreepathi and Mr. Lokesh give information about gassifier technology to the Students (18.3.2020).

### 3. Bio-fuel Exhibitions:

We have installed a stall in 05 exhibitions during the year 2019-2020. In this exhibition a stall containing bioenergy samplings, oils, oil seeds, oil cake and biodiesel samples was displayed. Bio-fuel pamphlets were distributed and additional information on Bio-fuel resources and importance was given through PPT presentation.

#### List of exhibition conducted:

Sl No	Date	No of Days	Exhibition Name	Venue	Strength
1	14-9-19	01	Parisara Jagruthi Dinacharane	Jnnce College Campus	500
2	16-9-19	01	Biofuel awareness program Stall Demo for Karnataka Janapada Parishath Mambars	Thirtha Remeshwara Balaguthi Namti Taluk	400
3	23-12-19 To 27-12-19	05	Biofuel awareness program Stall Demo for DST Inspire Inter ship Camp Students,	MBA/MCA Auditorium JNNCE Shimoga	800
4	13-02-2020 To	04	KTES-2020 Karnataka TECH Entrepreneurship Summit-2020 program arranged at JNNCE With	MBA/MCA Auditorium JNNCE Shimoga	600

	15-02-20		Association Biofuel Awareness Stall		
5	28.02.20	01	KRVP & PES PU College arranged National Science Day arranged at PESITM With Association Biofuel Awareness Stall	PESITM Shimoga	250



KTES-2020Karnataka TECH Entrepreneurship Summit-2020 program arranged at JNNCE With Association Biofuel Awareness Stall (28.02.2020)



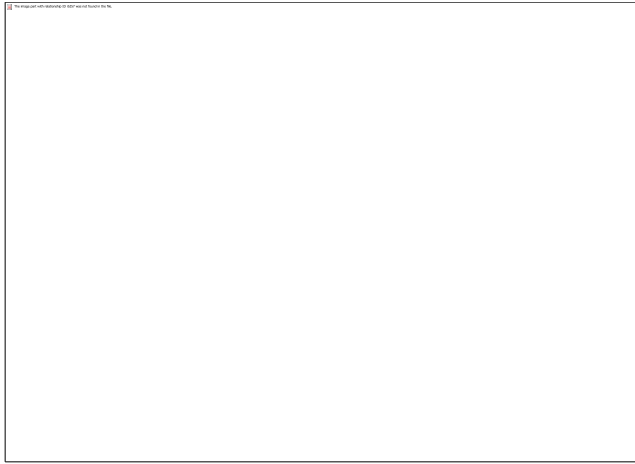
Mr. Lokeshppa explains the importance and use of Biofuel to the farmers in KRVP conference.(28.02.2020)



Biofuel awareness program Stall Demo for Karnataka Janapada Parishath Mambers(14.09.2019)



Mr. Chethan S. G gave information on biofuel during the PESTM college Science day Celebration (28.02.2020).



Dr. H. B. Suresh gave information on bio fuel to the formers and Students



Dr. H. B. Suresh gave information on bio fuel to the formers and Students (18.03.2020)

## World Environmental Day- 2019

World environmental day 2019 celebrated from our center in association with members of environmentalist, Shimoga, farmers association Shimoga, and other schools and college Institutes of Shimoga. This year environmental day program was organized quite differently, by organizing procession at different places of Shimoga city, skits on the environment and folk songs on the environment. The main theme of

this year program is to aware public and students and various departments in taking the role to save the environment and keep the city clean. At the end of environmental jatha, a protest had been done at the DC office against the government to celebrate the environmental day program. Around 300 environmentalists, publics, students and teachers participated in the world environmental day program.



Jatha during World Environmental Day celebration.(05.06.2019)

### **World International Bio-fuel Day- 2019**

Bio-energy Research Information and Demo Center had organized World Bio-fuel Day- 2018 at Akshara school and college, Shivamogga on 10.08.2018 in association with Chaitanya Rural Development Society, Shivamogga. The program was inaugurated through the planting of Bio-fuel plants by Sri Ashok NayakKB, MLA, Shimoga rural. After inauguration Sri Ashok Nayak K.B. addressed the students and women society members to promote and accelerate to grow Bio-fuel plants and collection of Bio-fuel seed and also support to use biodiesel as a fuel for Zilla panchayath vehicles. The program conducted successfully with the presence of Bhadrish. B. T, Dr. H. B Suresh, Coordinator BRIC, Shimoga, Dr. L K Sreepathi, Dr. H. R Mahadevswami, Principal, JNNCE, Shivamoga.

After inauguration, Dr. H B Suresh delivered a talk on bioenergy source collection, biodiesel production, usage of by-product etc.





World Bio-fuel Day Celebration with  
2MLA K. B. Ashok Naik at Akshara  
School and College Shimoga.(05.06.2019)

### Dignitaries visited at BRIDC JNNCE, Shivamogga.

Sl.No	Dignitaries Name	Profession
Sl. No.	Date	Name & Address
1	5-4-19	MR. Dinesh Kumar D.K Karnataka Renewable Energy Development Board, Mysore
2	5-4-19	Mr. Mahesh S Kotian AEA, Shimoga
3	29-4-19	Mr. Farazuddin Khan (Alumni-2005 Mechanical) Area Sales Manager (South India), Mars International Limited.
4	29-04-19	Mr. Santosh Naik (Alumni-Electrical) Executive Engineer, MESCOM, Shimoga
5	29-04-19	Smt. Hamsa (Alumni-Electrical) Assistant Executive Engineer, MESCOM, Shimoga
6	16-5-19	Dr. R. Ananda Kumari, Principal, Siddaganga College of Arts and Science, Tumkur.
7	29-6-19	Mr. Devanand Assistant Professor, Sustainable Economics, Henaga, Belagavi
8	15-07-19	Mr. H.N. Sreekanth Research Scholar, VTU, Bangalore
9	15-7-19	Dr. Prathima Manohar, The Urban Vision, Mumbai
10	30-7-19	Dr. Nagaraja Parisara, Professor and Head, Department of Environment Science, Sahyadri Science College, Shimoga.
11	3-7-19	Alumni's, Year 2002 Passed out from Mechanical Engineering Branch, Visited BRIDC.
12	15-8-19	Deesayee DCF, & ACF, and forest officers
13	14-9-19	Sree Prasana. Social chithakur Shimoga. Sree T.S. Mahadeva Swamy Ret MPM Bhadravathi.
14	23-9-19	Dr Sanjeev nayak L&T Technology Services Bangalore
15	1-10-19	Dr R.V. Praveena Gowda BE, ME, Phd, Principal The Oxford College Of Engineering Bangalore.
16	1-10-19	Ashwini L Udupa TaTa Power Solar Systems Limited.
17	25-11-19	G.V. Sukumar, Chief Technical Officer, PRAPATHI Chennai. Vani Sukumar Chief Executive Officer, PRAPATHI Chennai.
18	22-11-19	NBA Expert committee Member Visited
19	29-12-19	Dr Harish, Head of IEEE Asia Europe activities, Mysore,

20	10-1-2020	Dr Shanmukha Nagaraj Dean, Academic RVCE Bangalore
21	19-1-2020	Smt .Subhalakshmi Krishnamoorthy , Deputy Director –ISRO,Bengaluru
22	04-02-2020	Managament, Principal &Staff Vivekananda Polytechnic ,Puttur,
23	11-02-2020	D.R. Kumaraswamy Zonal Head(Ret) Bangalore
24	11-02-2020	Dr. K.S. Shashi Shankar .HOD (me) SiT Tumakar,
25	14-02-2020	Dr Mohan Alava , Alava ,Education institute, Moodubidhare, Daksin kannada



Anil sambaji, Singapur, Visited our Center.



Mr. Manoj Kumar Shukla MD, visited BRIDC center.



District Commissioner, Shivamogga visited our I&D Center.



DHO officers, visit at BRIDC, Shivamogga. I&D center.



Tata technology, Michigan, USA Visited Shimoga I&D Center



Sharp software, ITBP, Bangalore visited our Center.



VTU vice Chancellor visited toBRIDC.



Mr. Kundan basavaraj, NSS Coordinator, Visited BRIDC



K. T. Gangadhar, Karnataka state farmers association President visited BRIDC.



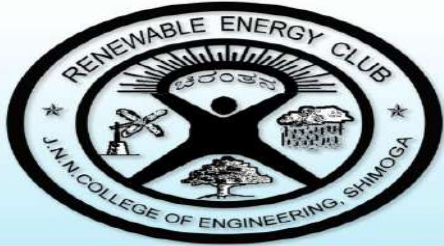
Mr. D. B. Shankrappa, president of kannada sahitya parishath, Shimoga

## Research Activity on Biofuel During 2019-2020:

- Characterization of Neem and Simaruba oil Blends
- Optimization of catalyst for biodiesel production from Neem oil and Simaruba oil Blends
- Production of bio-ethanol from fruit waste
- Bio-plastics from glycerol
- Performance and emission characteristics by using injection pressure using jatropha and Calophyllumblend with diesel.
- Characteristic study of four stroke diesel engine with SVO as a substitute fuel.

### **Annual Stock Details:2019-2020**

<b>Sl. No.</b>	<b>Name of particular</b>	<b>Procurement Kg/liter</b>	<b>Utilization/Sales Kg/ liter</b>
1	Pongamia pod	166.0	136.0
2	Pongamia seed	6251.5	6101.5
3	Karaveera seed	8.4	58.4
4	Waste coconut	30.5.	0.0
5	Waste cooking oil	3123.0	3760.0
6	Pongamia oil	1473.5	829.5
7	Oil cake	4031.0	3892.0
8	Biodiesel	3650.0	3609.5
9	glycerine	192.0	68.0



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**RENEWABLE ENERGY CLUB**

National Education Society (R)

JAWAHARLAL NEHRU NATIONAL COLLEGE OF ENGINEERING, SHIVAMOGGA

About the chirantana club Awareness Activities

- *The impact of conventional energy sources on global environment*
- *The importance of the use of renewable energy sources*
- *The significance of energy conservation and its methodologies*
- *Conducting demo, competitions for school and college students on this topic*
- *Information on rain water harvesting to students , farmers and societies*

*Activities*

- *Demos of various energy saving instruments to Public.*
- *Various Competitions to school and college students.*
- *Nature camps and trekking.*
- *Surveys of various resources.*
- *Open discussions on current nature threats, and Solutions.*
- *Invited talks from various resourceful persons.*
- *Nature Games.*
- *Conservation Activities with the help of Government.*

- *Celebration of various nature festival*
- *Vanamohatsava program*

***List of Renewable Energy Demonstration Devices***

- **75kVA biomass gasifier with generator**
- **Flat and parabolic solar cookers**
- **LED and CFL solar lighting systems**
- **Solar street light**
- **High efficiency Chula**
- **Hand operated pump**
- **Electric vehicle**
- **Solar cycle**
- **Wind-Solar hybrid system**
- **Rain water harvesting system**
- **Kitchen waste biogas plant**
- **Biofuel Demonstration unit**



Evacuated Solar Water heater



Butterfly design Solar Cooker



Parabolic solar cooker

**DISTRICT BIO- FUEL RESEARCH, INFORMATION AND  
DEMONSTRATION CENTER**

**JAWAHARLAL NEHRU NATIONAL COLLEGE  
ENGINEERINGSHIMOGA- 577204**

Funded and supported by Karnataka State Bioenergy Development Board, Govt. of Karnataka, Bangalore

**ANNUAL REPORT 2018- 19**



**Dr. H.B. Suresh  
Coordinator,  
BRIDC, JNNCE, Shivamoga.**

**Mr. Chethan S.G.  
Co-Coordinator,  
BRIDC, JNNCE, Shivamoga.**



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## **BIOFUEL RESEARCH, INFORMATION AND DEMONSTRATION CENTRE**

District Biofuel Research, Information, and Demonstration Center, JNNCE, Shimoga has been established in June 2011 by Karnataka State Bio-Energy Development Board, Govt. of Karnataka, Bangalore. This research and information center has been conceptualized as a showcase to study, promote and demonstrate all aspects related to bio-fuel. Through this center, it is possible to provide information on Bioenergy, identification of various non edible oil seeds, agro practices for these sources, Post-harvest technologies like seed collection, oil expelling, treatment, uses of oils, Trans-esterification process & efficiencies, R&D and extension services to purchase oil seeds from Shimoga region and encourage the farmers to take up biofuel activities. Since 8 years, BRID center is actively engaged in fulfilling all objectives listed above by providing information to farmers, entrepreneurs, research students, end users and the general public's. Many research and development activities are being carried out at the center. School, college students and teachers visit the center regularly. We have collected around 10 tons of oil seeds and also collected fried cooking oil from various hotels in Shimoga district during the year 2018-19. We conduct environmental awareness programs and participate in all the major government and other institutional exhibitions. Further, we have created research facilities for, M.Tech., B.E., M.Sc., B.Sc., B.Ed., Students and encourage them to take up research projects on various aspects of Bio-fuel and environment.

## 1. Awareness programs

We have organized 33 Bio-energy awareness programs in various Taluk and villages around Shivamogga district. Awareness programs were arranged for village peoples, Farmers, school students, NSS students and also for women society members. In all awareness programs, presentation on bio-fuel program, display of various types of oil, seeds, oil cake, biodiesel and display of biofuel plants had been arranged.

### 1. List of awareness program conducted:

Sl. No.	Date	Name of the Program	Venue	Strength
1	06.05.18	NES Mela	JNNCE College Shimoga.	1000
2	05.06.18	World Environmental Day	JNNCE College Shimoga	80
3	05.06.18	World Environmental Day	Shimoga.	300
4	29.06.18	11 <sup>th</sup> Karnataka State Kannada Science Conference	Kuvempu Ranga Mandira, Shimoga.	1500
5	10.08.18	World Bio-Fuel Day	Akshara School And College, Shimoga.	150
6	13.08.18	Bio-Energy Awareness Program	Maravalli Village, Shikaripura.	60
7	30.08.18	Bio-Energy Awareness Program	Ananya Vidyapeeta Ashokanagara. Shimoga.	150
8	08.09.18	Parisara Jagruthi Dinacharane	JNNCE, Navule, Shimoga.	1000
9	15.09.18	Engineers Day	MESCOM Office KEB Circle, Basavanagudi, Shimoga	50
10	22.09.18	Bio-Fuel Awareness Program	SARA Samsthe Dombekoppa, Shimoga	130
11	15.10.18	Bio-Fuel Awareness Program	Okkaligara Samudaya Bavana, Shimoga	100
12	24.10.18	Parisara Jagruthi Karyagara	Shikaripura.	300
13	27.11.18	Bio-Fuel Awareness Program	Uluvi, Sorbha.	100
14	28.11.18	Bio-Fuel Awareness Program	Kargal, Sagar.	80
15	29.11.18	Bio-Fuel Awareness Program	Manchikoppa, Shimoga.	80
16	30.11.18	Bio-Fuel Awareness Program	Shikaripura	60
17	05.12.18	Bio-Fuel Awareness Program	Nelavagilu, Shikaripura	80
18	18.12.18	Bio-Fuel Awareness Program	Holehanasavadi, Shimoga.	60
19	19.12.18	Bio-Fuel Awareness Program	Holaluru, Shimoga.	80

20	20.12.18	Bio-Fuel Awareness Program	Haramagatta, Shimoga.	100
21	21.12.18	Bio-Fuel Awareness Program	Shimoga.	200
22	20.12.18	Bio-Fuel Awareness Program	Badravathi.	50
23	21.12.18	Bio-Fuel Awareness Program	Badravathi.	50
24	24.12.18	KisanDivaws	UAHS Campus, Shimoga.	100
25	12.01.19	Bio-Fuel Awareness Program	Edehalli, Shikaripura	60
26	16.01.19	Bio-Fuel Awareness Program	Ranjadakatte, Thirthahalli.	40
27	17.01.19	Bio-Fuel Awareness Program	Hole Bus Stand, Shimoga.	80
28	18.01.19	Bio-Fuel Awareness Program	Hole Bus Stand, Shimoga	60
29	28.01.19	Bio-Fuel Awareness Program	Sidlipura, Shimoga	120
30	24.02.19	Bio-Fuel Awareness Program	Hasudi, Shimoga	200
31	28.02.19	Bio-Fuel Awareness Program	Kuvempu Ranga Mandira, Shimoga	1200
32	13.03.19	Bio-Fuel Awareness Program	Chamenahall, Shimoga.	80
33	16.03.19	Bio-Fuel Awareness Program	Sompura, Shimoga.	120

## 1. Awareness program photos.



Plantation activity from CGTC centre on world environmental day (05.06.2018)



Dr. Sreepathi giving information about the importance to save environment (05.06.2018)



Public awareness jathaduring environmental day (05.06.2018)



Biofuel stall installed during KVP conference at kuvempurangamandira (29.06.2018)



Dr. H.B. Suresh delivered a talk on Bio-fuel for students at battemallappa.(22.09.2018)



World Bio-fuel day celebration with MLA Mr. Ashok Nayak at Akshara School, Navvale.



Dr. L. K. Sreepathi Delivered a talk on Bio-energy resources.(10.08.2018)



Dr. L. K. Sreepathi and Dr. H. B. Suresh delivered a talk on solid waste management and bio- energy during Engineer's day at MESCOM Office.(15.06.2018)



Mr. Chethan gave awareness to the students on bio- energy fuels at ananya school, Shimoga.(05.12.2018)



Dr. H. B. S inaugurated Awareness program with MGIRED at Bhadravathi Talukpanchayath.(24.12.2018)



Mr. Chethan gave a demo on Renewable energy resources in Awareness program at haramagatta village.(16.01.2019)



Dr. H .B. Suresh explaining Bio- gas installation to the ITI students.(28.01.2019)



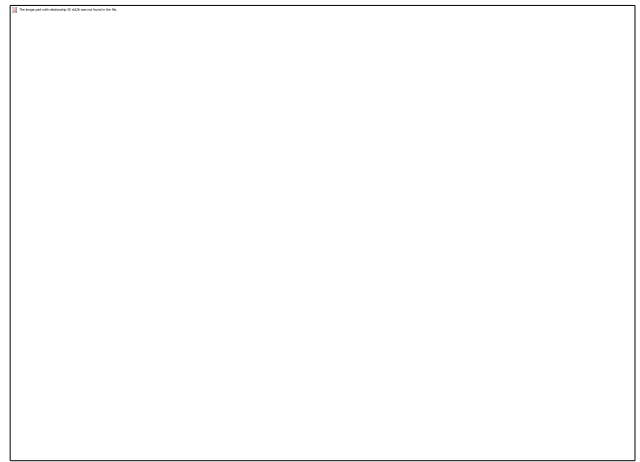
Dr. Sreepathi gave awareness on use of bio-fuel seeds to the farmers of Shettihalli(village.(13.01.2019)



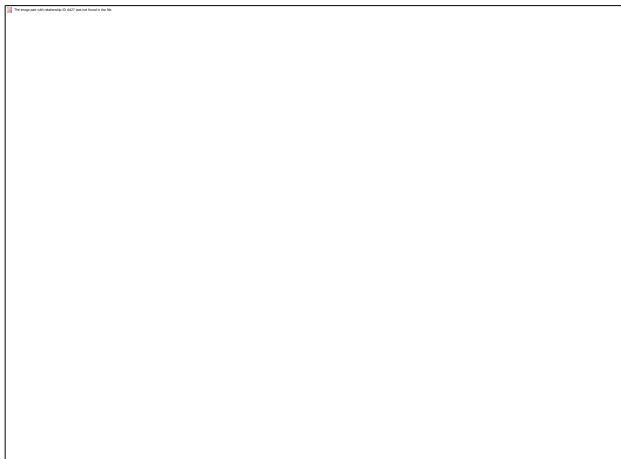
Mr. Vishwanath showing Biofuel seeds demonstration to members of women society. (16.03.2019)



Mr. Vishwanath gave presentation on Bio- Fuel importance to SKDRDP members (18.01.2019)



Mr. Vishwanath gave presentation in NSS camp on Bio- energy fuel at Chamenahalli village.



Swamiji visited our stall in Suttur swami iavanthi programme.(04.01.2019)



Demonstration of Biofuel oil seeds and oil by Dr. H.B. Suresh during the SutturSwamijiJayanthiProgram. (04.01.2019)

## 2. Training programs:

We have organized a Bioenergy training program for farmers association, SKDRDP members. The A one-dayBio-fuel training program includes, one session is presentation on Bio-fuel program, raw materials, production of Bio-diesel and value addition of by-products. The second session involves hands-on training on Biodiesel production and valued addition of by-products. A short movie on Bio-fuel and Bio-fuel entertainment programs were also generally arranged. This year training program on soap production from crude glycerolforwomen society member has been arranged. Further, training program has been arranged for other Bio-fuel and I & d centers staffs and also for some entrepreneurs.

## List of a training program organized at BRIDC:

Sl. No.	Date	District /	Farmers/village	No. of Participants
1	05.07.18	Shimoga	Municipal Members And Officers	50
2	22.12.18	Shimoga	Scout Students	60
3	24.12.18	Shimoga	Teaching And Non-Teaching Staffs	60
4	24.02.19	Shimoga	ZillaPanchayath Car Drivers	30

### Training program photos:



Dr. H. B. Suresh gave presentation to the Scout students on bio- fuel seeds and its importance (05.07.2018)



Dr. H. B. Suresh gave Demo on solar energy appliances to the Bhavasara Mission India group members.(05.07.2018)



Dr. L. K. Sreepathi gave presentation on Bio-fuels resources to the NPS students.22.12.2018



Mr. Chethan gave introduction to the chirantana Energy resources to the students.(22.12.2018)





CEO. Mr. K. Shivaramgowda Inaugurate the Training program for Zillapanchayath car driver (24.12.2018)



Zillapanchayath car drivers and officials visited to BRIDC.(24.12.2018).



Mr. Lokesh Gave information about gassifier technology to the Students.(21.12.2018)



Dr. L. K. Sreepathi arranged a quiz related to biofuel to the students.(13.03.2019)

### 3. Bio-fuel Exhibitions:

We have installed a stall in 03exhibitionsduring the year 2018-19. In this exhibition a stall containing bioenergy samplings, oils, oil seeds, oil cake and biodiesel samples was displayed.Bio-fuel pamphlets were distributed and additional information on Bio-fuel resources and importance was given throughPPT presentation.

### List of exhibition conducted:

Sl No	Date	No of Days	Exhibition Name	Venue	Strength
1	08.09.18	01	Parisara Jagruthi Dinacharane	Jnnce College Campus	1000
2	18.12.18	03	DVS College Platinum Jubilee	DVS College Campus	800
3	04,01.18	06	SutturuSwamijiJayanthiMahotsava	Old Jail Campus	30,000



Mr. Lokesh explains the importance and use of Biofuel to the farmers in KVP conference.(08.09.2018)



Mr. Vishwanath gave information in krushimela 2018 at UAHS Shivamogga to the farmers.(18.12..2018)



Dr. H. B. Suresh gave a Demonstration to the students, farmers, dignitaries, biofuel resources at sutturuswamijijayanthimahotsava(04.01.2019)





Dr. H. B. Suresh gave information on bio fuel to the formers.(04.01.2019)



Mr. Vishwanath explains the importance of Biofuel (04.01.2019)



Mr. Chethan S. G gave information on biofuel during the DVS college diamond jubilee Celebration(18.12.2018)



## World Environmental Day- 2018

World environmental day 2018 celebrated from our center in association with members of environmentalist, Shimoga, farmers association Shimoga, and other schools and college Institutes of Shimoga. This year environmental day program was organized quite differently, by organizing procession at different places of Shimoga city, skits on the environment and folk songs on the environment. The main theme of this year program is to aware public and students and various departments in taking the role to save the environment and keep the city clean. At the end of environmental jatha,

a protest had been done at the DC office against the government to celebrate the environmental day program. Around 300 environmentalists, publics, students and teachers participated in the world environmental day program.



Jathaduring World Environmental Day celebration.(05.06.2018)

### **World International Bio-fuel Day- 2018**

Bio-energy Research Information and Demo Center had organized World Bio-fuel Day- 2018 at Akshara school and college, Shivamogga on 10.08.2018 in association with Chaitanya Rural Development Society, Shivamogga. The program was inaugurated through the planting of Bio-fuel plants by Sri Ashok NayakKB, MLA, Shimoga rural. After inauguration Sri Ashok Nayak K.B. addressed the students and women society members to promote and accelerate to grow Bio-fuel plants and collection of Bio-fuel seed and also support to use biodiesel as a fuel for Zillapanchayath vehicles. The program conducted successfully with the presence of Bhadrish. B. T, Dr. H. B Suresh, Coordinator BRIC, Shimoga, Dr. L K Sreepathi, Dr. H. R Mahadevswami, Principal, JNNCE, Shivamoga.

After inauguration, Dr. H B Suresh delivered a talk on bioenergy source collection, biodiesel production, usage of by-product etc.



World Bio-fuel Day Celebration with MLA K. B. Ashok Kumar at Akshara School and College  
Shimoga.(18.10.2018)

## Bio- fuel marketing stall



Bio- fuel mart is opened in October- 2018 at Vinobanagara, Shivamogga.



Biofuel Byproducts Soap, Floor Cleaner, Oil Cake ( Manure) produced at BRIDC, Shimoga

# District Biofuel Demo and Research centre

## Chirantana Green Technology Centre

Jawaharlal Nehru National College of Engineering, Shivamogga

### Internship on “Waste to wealth Technologies”

(For Mechanical and Civil Engineering branches)

#### Course Objectives:

The Course focuses on Bioenergy in particular on exploration of biomass waste for energy. The course encompasses thermo chemical energy conversion, mechanical and chemical processes and bio chemical processes.

To build knowledge on conversion of biomass in to energy and to reduce waste generation, segregation of waste, effective handling and waste was recycling.

The course also provides knowledge of analysis of energy conversion processes involving biomass and auto mobile engines.

#### Course Contents:

- Sustainable energy resources
- Agronomy of oil seeds
- Chemistry of oils
- Biodiesel and bio ethanol
- Solid Waste Management
- Liquid Waste Management
- Combustion and gasification of biomass
- Waste plastic to oil
- Second and third generation Biofuel
- Value addition from by-products of Biofuel

**Coordinator: Mr. Ravi Kumar B N., Asst. Professor, Mechanical Dept., JNNCE**

## Activities during Internship



Dr. Krishnamurthy, Kuvempu, University, Shankaragatta.



Dr Parisara nagarajdelever a talk on solid waste management to internship participants



Hands on experiments to induction participants on efficiency of Chula.



Hand on experiments on water quality analysis from Prof. Shashikumarheraematt.



Dr. Sreepathi showing water treatment process installed at college campus.



Mr. lokeshappa gave training for soap production to the induction program participants.



## Dignitaries visited at BRIDC JNNCE, Shivamogga.

Sl.No	Dignitaries Name	Profession
1	Anil Sambaji	Managing Director, Singapur.
2	Manoj kumar shukla	Managing Director, MGIRED, Bangalore.
3	K. A. Dayananda	DC, Shivamogga.
4	Dr. Harish	Tata technology, Michigan, USA
5	Mr. Kiran kumar	Sharp software, ITBP, Bangalore
6	K. T. Gangadhar	Karnataka state formers association President
7	Dr.Karisiddappa	VTU vice Chancellor visit to the I& D Center
8	Dr. Kundan Basavaraj	Kuvempu university, NSS Coordinator.



Anil sambaji, Singapur, Visited our Center.



Mr. Manoj Kumar Shukla MD, visited BRIDC center.



District Commissioner, Shivamogga visited our I&D Center.



DHO officers, visit at BRIDC, Shivamogga. I&D center.



Tata technology, Michigan, USA Visited Shimoga I&D Center



Sharp software, ITBP, Bangalore visited our Center.



VTU vice Chancellor visited toBRIDC.



Mr. Kundanbasavaraj, NSS Coordinator, Visited BRIDC



K. T. Gangadhar, Karnataka state farmers association President visited BRIDC.



Mr. D. B. Shankrappa, president of kannadasahityaparishath, Shimoga

## Research Activity on Biofuel During 2018-2019:

- Characterization of Neem and Simaruba oil Blends
- Optimization of catalyst for biodiesel production from Neem oil and Simaruba oil Blends
- Production of bio-ethanol from fruit waste
- Bio-plastics from glycerol
- Performance and emission characteristics by using injection pressure using jatropha and Calophyllumblend with diesel.
- Characteristic study of four stroke diesel engine with SVO as a substitute fuel.

### **Annual Stock Details:2018-2019**

<b>Sl. No.</b>	<b>Name of particular</b>	<b>Procurement Kg/liter</b>	<b>Utilization/Sales Kg/ liter</b>
1	Pongamia pod	270.0	270.0
2	Pongamia seed	8256.0	8256.0
3	Karaveera seed	103.0	42.0
4	Waste coconut	137.3	102.8
5	Waste cooking oil	1524.0	1170.0
6	Pongamia oil	2248.0	2719.0
7	Oil cake	9219.5	9219.5
8	Biodiesel	2590.0	2850.0
9	glycerine	195.0	67.0

Coordinator: Sreepathi L K, Department of Mechanical Engineering, JNNCE, Shimoga



About the chirantana club Awareness Activities

- *The impact of conventional energy sources on global environment*
- *The importance of the use of renewable energy sources*
- *The significance of energy conservation and its methodologies*
- *Conducting demo, competitions for school and college students on this topic*
- *Information on rain water harvesting to students , farmers and societies*

*Activities*

- *Demos of various energy saving instruments to Public.*
- *Various Competitions to school and college students.*
- *Nature camps and trekking.*
- *Surveys of various resources.*
- *Open discussions on current nature threats, and Solutions.*
- *Invited talks from various resourceful persons.*
- *Nature Games.*

- *Conservation Activities with the help of Government.*
- *Celebration of various nature festival*
- *Vanamohatsava program*

*List of Renewable Energy Demonstration Devices*

- **75kVA biomass gasifier with generator**
- **Flat and parabolic solar cookers**
- **LED and CFL solar lighting systems**
- **Solar street light**
- **High efficiency Chula**
- **Hand operated pump**
- **Electric vehicle**
- **Solar cycle**
- **Wind-Solar hybrid system**
- **Rain water harvesting system**
- **Kitchen waste biogas plant**
- **Biofuel Demonstration unit**



Evacuated Solar Water heater



Butterfly design Solar Cooker



Parabolic solar cooker



LED solar lightings



Wind-solar Hybrid system



Solar bicycle



Navagni stove



Single and Double high efficiency Chula



Kitchen waste Biogas Plant



# **JAWARLAL NEHRU NATIONAL COLLEGE OF ENGINEERING**

**DISTRICT BIOENERGY RESEARCH,  
INFORMATION AND DEMONSTRATION CENTER.  
SHIMOGA-577204**

**ANNUAL REPORT 2017-18**



**DR. H. B. SURESH. COORDINATOR,  
DISTRICT BIOENERGY RESEARCH,  
INFORMATION AND DEMONSTRATION CENTER,  
JNNCE, SHIMOGA-577204**



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## **ABOUTOURBIOENERGYCENTER**

DistrictBioEnergyResearch,InformationandDemonstrationCenter,JNNCE,ShimogahasbeenestablishedinJune2011byKarnatakaStateBio-EnergyDevelopment board, Govt. of Karnataka, Bangalore. This research and information center hasbeen conceptualized as a showcase to study, promote & demonstrate all aspects related to bio-energy. Through this center, we are able to provide information on Bio energy, identification ofvarious non edible oil seeds,agronomic practices for these sources, Post-harvest technologieslikede-cortication,oilexpelling,treatment&usesofoils,Transesterificationmethods&efficiencies,R&Dandextension services,topurchaseoilseedsfromShimogaregionandencouragethe farmers to takeup bio fuel activities.

Since 7 years, our center is actively engaged in fulfilling all objectives listed above byproviding information to farmers, entrepreneurs, research students, end users and general public.Ourcenterhasconductedmanyawarenessandtrainingprograms.Manyresearchanddevelopment activities are being carried out at center. School and college students and teachesvisit center regularly. We have collected around 16 tons of oil seeds from farmers during the year2017-18.We conduct environmental awareness programmes and participate in all the majorgovernmentaland other institutional exhibitions.

Further, we have created research facilities for B.E,M.Tech. B.Sc. and M.Sc.Studentsandencouragethemtotakeupresearchprojectsonvarious aspectsofBiofuelandenvironment.

## 1.Awarenessprograms

We have conducted around 32 Bio-Energy awareness programs in different Talukand villages of Shimoga district. Awareness programs were arranged for village people,farmers,schoolstudents,NSSstudentsandwomensocietymembers.Inalltheseawareness programs,presentation on Biofuel programme, display of various types of oilseeds,oil,cakeand biodiesel,displayof bio fuel plantswould bearranged.

### 1.ListofAwareness ProgrammeConducted:

Sl No	Date	Name	District/ Taluk	Venue	strength
1	05.06.2017	WorldEnvironmental Day	shimoga	Gopicircle	300
2	10.08.2017	WorldBiofuel Day	Shimoga	Dr.B.R.Ambedkar PublicTrust. Ragigudda.	200
3	19.08.2017	WorldBiofuel Day	Shimoga	JNNCEcollege Shimoga	100
4	19.08.2017	ParisaraJagruthi Dinacharane	shimoga	JNNCEcollege shimoga	400
5	07.09.2017	BiofuelAwareness program	Bhadravathi	Gramapanchayath Marashettihalli	200
6	27.11.2017	BiofuelAwareness program	Shimoga	Govt.School. Rechikoppa	50
7	28.11.2017	Bioenergy awarenessprogram	Shimoga	JNNCE.PodarInternationalSchool students	50
8	11.12.2017	BiofuelAwareness program	Shimoga	SamudayaBhavana Shettikere	100
9	13.12.2017	Bioenergyawareness program	Shimoga	SahyadricollegeNSS camp	170
10	14.12.2017	Bioenergyawareness program	sirsi	Kadavesreepadha kalyanamantapa	300
11	15.12.2017	Bioenergyawareness program	Shimoga	JNNCE.GHPS. studentskommanalu	30
12	27.12.2017	Bioenergyawareness	Shimoga	TempleVaranda Govindapura	80
13	5-7.01.2018	Bioenergy awarenessprogram	Shimoga	Rotaryconferenceat PESEngineering College	1500
14	8.01.2018	Bioenergyawareness program	Shimoga	Konagavalli	100
15	8.01.2018	Bioenergyawareness program	Shimoga	JNNCE.VikasaSchool Students	150
16	9.01.2018	Bioenergyawareness program	sringeri	Kunchru	80
17	9.01.2018	Bioenergyawareness Program	Shimoga	Muddinakoppa	80

Sl No	Date	Name	District/ Taluk	Venue	strength
18	13.01.2018	Bioenergyawareness Program	Shimoga	JNNCE. GHPS. Students.Gadikoppa	100
19	18.10.2018	Bioenergyawareness Program	Shimoga	JNNCE. GHPS. studentsHolebenavalli	100
20	20.01.2018	Bioenergyawareness Program	shimoga	Shettihalli	150
21	06.02.2018	Bioenergyawareness Program	shimoga	JNNCE. GHPS. studentsmydolalu	100
22	09.02.2018	Bioenergyawareness program	shimoga	Vaderapura	250
23	14.02.2018	Bioenergyawareness program	Hosanagar	Kalluhalla,Gubbiga	150
24	15.02.2018	Bioenergyawareness Program	shimoga	Haihole	150
25	20.02.2018	Bioenergyawareness Program	Hosanagar	JNNCE,GMHPGS. Students	100
26	21.02.2018	Bioenergyawareness Program	Bhadravathi	JNNCE,G.U.H.P. Schoolstudents	100
27	22.02.2018	Bioenergyawareness program	shimoga	JNNCE,G.H.P. Schoolstudents	100
28	9-13.03.2018	Bioenergy awarenessprogram	Shimoga	PUcollegestudentsf romshimoga and Chitradurga Davanagere.	140
29	14.03.2018	Bioenergyawareness program	Thirthahalli	JNNCE.KCGMHP schoolstudents	50
30	16.03.2018	Bioenergyawareness program	Shimoga	Govt.HighSchool, sugur.	80
31	22.03.2018	Bioenergyawareness program	Shimoga	Sogane	165
32	25.03.2018	Bioenergyawareness program	Shimoga	Gondhichatnahalli	150

1. Awareness Programmes Photos.



Dr.Sreepathi L.K.Delivered talk on source of Bioenergy, production and usage of biodiesel  
Bioenergy production and usage of biodiesel (18/10/2017)



Dr.Suresh H.B.sharing bio fuel information with NSS students in NSS special  
students in NSS special camp at Shettihalli



Dr.Suresh H.B.Delivered talk on Bioenergy at NSS camp in



Dr.Sreepathixplainingbiofuelinformationto NSSstudentsand people ofvillageage (07.09.2017)



DemonstrationofBioenergysources, products and by-products.(28.11.20217)



Dr.Sreepathi.L.K.deliverstalkonrenewableenergyresourcesandBioenergyforthe partici patedstudents.(14.12.2017)



ChethanS.G.explainingbiofuelinformationto NSSstudentsand village people.



ParticipatedSKDRDPmembersinB ioenergyawerenessprogram



Bioenergy awareness program with sources, products and byproducts displayed at Sirsi (27.12.2017)



Demonstration of Bioenergy sources, products and byproducts at NSS Camp (08.01.2018).



G.H.P.S. Holebenavalli students visit Bioenergy center. (09.01.2018)



Students discussed about bioenergy sources with Rajesh T.N. (13.01.2018)



Dr. Sreepathi L.K. explains the diesel production process for participants. (21.02.2018)



Lokeshappa U shows the separation of glycerol and diesel after transesterification reaction (22.03.2018)

## 2. Training programs:

We have conducted 06 bioenergy training programs for farmers association, SKDRDP members. Typical one day Biofuel training program includes in the first session a presentation on Biofuel programme, raw materials, production of bio diesel and value addition of by products. The second session involves hands on training on biodiesel production and valued addition of byproducts. Short movie on Biofuel and bio fuel entertainment programs were also generally arranged, this year we trained soap production from crude glycerol to women society members, other Biofuel I&D centers staff and some enterpriners.

### List of training program organised by center.

SlNo	Date	District/Taluk	Farmers village/students	No of trainee participants
1	31.05.2017	shimoga	Tammadihalli	35
2	25.10.2017	Bhadravathi	Thimlapura	15
3	11.11.2017	sirsi	KSNEcoproductssirsi.	4
4	18.12.2017	shimoga	shimoga	50
5	14.03.2018	Dharwad, Hubli, Kala gatagi.	SKDRDPmembers	80
6	15.03.2018	Hubli, Navalagunda	SKDRDPmembers	45

### Training programmes photos



Inauguration of workshop by Y.B. Ramakrishna, Chairman, Working Group on Biofuels, Ministry of petroleum & Natural Gas, Govt. of India. (18.12.2017)



Demonstration of energy efficiency chullas. Date. 18.12.2017





DrSreepathiexplainingbiofuelimportanceto traineeparticipants (14.03.2018)



Dr. Sreepathi L.K. explain the workingprincipalprocedureofbiodieselproductiontoparticipants date (31.05.2017)



Chethan S G gave information for trainingprogramparticipants (15.03.2018)



SoaptrainingforKSNEcoProductCompany,ltd. SIRSI.Date(11.11.2017)



DemoofExpellerworkingprincipalforBRIDCstaff. Date (18.12.2017)



Hands on training towards BiodieselproductionbyDr Ramana. 18

12 2017

## BiofuelExhibitions

We have participated in 1 exhibition conducted by Rotary club shimoga. In this exhibition a stall containing Bioenergy samplings, Oils, Seeds, oil cake and Biodiesel samples was displayed, Biofuel pamphlets were distributed and additional information on Biofuel resource, importance was given through PPT presentation.

Sl No	Date	District /Taluk	No ofDays	ExhibitionName	Venue
1	5.01.2018 to 7.08.2018	shimoga	3	Rotaryconference	PESCollegeof Engineering,



Bioenergy sources, products and by-products displayed at Rotary conference. 05.01.2018 to 07.01.2018

### 3. Special Programs organised during 2017-2018

#### World environmental day 2017

World environmental day 2017 celebrated from our centre in association with member of environmentalist, shimoga, Farmers associations shimoga, and others schools and college institution of shimoga. This year environmental day program was organized quite differently, by organizing jathas at different places of shimoga city, and skits on environmental, and folk songs on environmental. The main theme of this year program is to aware publics and students and various departments in taking role to save environment and keep city clean. A team of environmental jathas, a protest had been done at DC office against government to celebrate environmental day program and taking part in to keep city clean. On that also aware to public for adopt rainwater harvesting systems at their homes. Around 300 environmentalists, publics, students and teachers participated in the world environmental 2017 program.



Ask it on environment played by members of environmentalist at Gopi circle, shimoga. (19.10.2017)



Dr Sreepathi L.K. Talking to public and students on keeping clean environment for future generations (19.10.2017)

### WorldInternationalBiofuelDay2017.

Bioenergy Research Information and Demo centre, had organized 'world Bio-fuel day - 2017' at Dr. B.R. Ambedkar Mission Public Trust., SC/ST girls residential school RagiguddaShimoga on 10.08.2017 in Association with Chaithanya Rural Development Society, Shimoga. The Programeme was Innogurated trough plantation and also adding biodiesel to vehicle by **Dr.Rakesh kumar K.**CEO, Zilla Panchayat, Shimoga, after inaugurationDr Rakesh kumaraddressed the students and women society members promote and accelerateto grow Biofuelplants and collection of biofuel seeds and also support to use biodiesel as fuel for Zillpanchayathvehicles. The programe conducted successful with the presence of R. Prasanna Kumar. MLCShimoga.Bhadrish B.T. president Chaithanya Rural Development Society. **Dr. L.K.Sreepathi**coordinator,DistrictBioenergyResearch,InformationDemoCentre,Dr.Mahadevasw amy,Principal,JNNCE, shimogaand staff of BRIDC.

After inaugurationDr.L.K. Sreepathideliveredtalkonbioenergy source collection,biodiesel production, usage and by-products etc. lunch and refreshment arrangement for all theparticipants.



Inaugurationofprogrampwithplantationby dignitaries.(10.08.2017)



Biodieselfillingasfuel forvehicleby R.Prasannakumar.MLC.Shimoga.



Dr.SreepathiLKdeliveredtalkonbioenergy (10.08.2018).



Studentsand women societymembers participatedinworldBiofueldayprogram.

### World Biofuel day and Seed Ball preparation.

Bioenergy Research Information and Demo centre, had organized 'world Bio-fuel day - 2017' and seed ball preparation held on 19.09.2017 at JNNCE campus. In association with Karnataka State Council for Science and Technology Bangalore, Dinakaran National Diplomo College NSS cell and Saint Charles Kannada high school Bhadravathi.

Dr. L.K. Sreepathi coordinator BRIDC Shimoga inaugurates the program with plantation. And supporting with 100 NSS volunteers and NSS officers plant nearly 200 various biofuel plants. After that 50 students and 5 teachers of Saint Charles Kannada high school Bhadravathi. Prepared 2000 seed balls by using Karaveera, Pongamia and Neem seeds. Lunch and refreshment arranged for all the participants.



Plantation program (11.10.2017)



Seed ball preparation (11.10.2017)

### Seed ball dispersal program.

Seed ball dispersal program was held on 11<sup>th</sup> October 2017 in association with National Service Scheme unit JNNCE Shimoga and Chirantana Green Technology Center JNNCEShimoga.

The program was held at Abbalagere forest region Shimoga. In presence of Dr. Sreepathi L K coordinator, District Bio Energy Research, Information and Demonstration Center Shimoga, Dr. Suresh H B. co-coordinator BRIDC Shimoga, coordinators of NSS JNNCE Shimoga, program will be conducted. In this program 100 NSS volunteers, Chirantana group members, Biofuel center staff participated and more than 2000 seed balls are dispersed.



Participants of NSS volunteers, Biofuel staff and Chirantana Green Technology Center group members. (11.10.2017)

**“BioenergyworkshopforShimogaDistrictPDO’s”**

One day Bioenergy workshopwasheldon16<sup>th</sup>December2017inassociationwithDistrict Bio Energy Research, Information and Demonstration Center JNNCE, Shimoga andZillapanchayath. Shimoga.

TheChiefGuestsoftheinauguralfunctionwere,Dr.SRangaswamyDeputy CEOZillapanchayath Shimoga, Mr. Nagaraj S.N., Secretary, National Education Society, and Sri.Bhadrish B.T. president Chaithanya Rural Development Society Shimoga. The function waspresided by Dr.H.R.Mahadevaswamy,Principal, JNNCE. TheCoordinatorBRIDC ShimogaDr.Sreepathi L.K was also present. Around 103 gramapanchayath development officers fromThirthahalli,Bhadravathiand Shimogataluksparticipated inthe program.

After the inaugural function two important sessions conducted by Dr L.K.sreepathi onsource of bioenergy, bioenergy center activities, importance of bioenergy andgovernmentschemes on biofuel plantation etc. Chethan S G. gave presentation on value addition by-productslike usage of glycerine, oil cake and phenyl etc. Dr Suresh H B presented on renewable energyresources andenergyefficiencydevices.

Lunchandrefreshmentwasarrangedforalltheparticipants.Afterthelunchtheparticipants also visited the bio energy center and got the information about the activities of thecenter.



Inaugurationofonedaybioenergyworkshop forPDO’s(09.03.2018)



BioenergyWork shop participants (23.03.2018)

**Dignitaries Visited at Bioenergy Research, Information and Demo center,JNNCE,Shimoga**

<b>SINo</b>	<b>DignitariesName</b>	<b>Profession</b>
1.	<b>Dr.Rakeshkumar.</b>	CEOZillapanchayathShimoga.
2.	<b>V.Yashavanth</b>	ManagingDirector.KSBDBBangalore
3.	<b>AbhinavKare.</b>	SuperintendentofPolice. Shimoga.
4.	<b>Dr.Sharanappa</b>	Prof.ME.REVAUniversityBangalore.
5	<b>Dr.E.S.Prakash</b>	Prof.ME.UBDTCEDavanagere.
6	<b>Dr.BasavarajappaY.H.</b>	Prof.ME.PESITMShimoga.
7	<b>Dr.Anandhan</b>	AssistnatProf.Dept.ofMetallurgicaland materialEng.NITKmangalore.
8	<b>Prof.S.L.Bapat.</b>	MechanicalEng.Dept.IITBombay
9	<b>ShivaAthreya.</b>	IndianStatisticalInstitution.Bangalore.
10	<b>PVCRao.</b>	HPCL.R&DCenter.Bangalore.
11	<b>V.shivaSubramanian</b>	PERCChennai.
12	<b>Prof.M.Adiga</b>	PresidentCantechEnvironmentalTechnologies. OttawaCanada.
13	<b>SriramRamaswamy</b>	Dept.ofphysics IISCBangalore.
14	<b>MRNMurthy,</b>	MolecularBiophysicsunit,IISCBangalore.



Dr. Sreepathi L.K explaining biodiesel production method to PVC Rao. HPCL R&D Center. Bangalore.



V. Yashavanth. Managing Director. KSBDB Bangalore. Visit at BRIDC Shimoga.





Dr.L.K.SreepathiwithSriramRamaswamy.De  
pt.of physicsIISc Bangalore.

ShivaAthreya.Indian  
StatisticalInstitution.Bangalore. Visitat  
BRIDCshimoga.



Dr.L.K.SreepathiwithProf.M.Adiga,pre  
sident Cantech  
EnvironmentalTechnologies.OttawaCa  
nada.



Dr.E.S.Prakash.Prof.MechanicalEng.de  
pt. UBDTCE Davanagere. Visit  
atBRIDCShimoga.

**4. ResearchActivities.**

- ✓ Detoxificationofoilcake.
- ✓ Designofhighqualityoilfiltrationprocess.
- ✓ Biodieselwashedwatertreatmentplantprocess
- ✓ Performance study on CI engine using SVO blended with petrolas substituent fuel forCIenginesFunded byKSCST
- ✓ AntimicrobialpropertiesofBiofuelbyproducts.
- ✓ Detoxificationofoilcake.
- ✓ AntimicrobialpropertiesofBiofuelbyproducts.
- ✓ Productionoforganicmanure(kitchenwaste and leaf litter).
- ✓ STPSludgetreatmentand itsvalueaddition.

**5. Annualstockdetails:**

SlNo.	Name	Procurement/ production Inkg/lit.	Utilization/ sale Kg/lit.
1.	Pongamiapod	90.0	0.0
2	Pongamiaseed	12539.5	14542.5
3	Karaveera	38.0	0.0
4	Wastecoconut	173.0	145.0
5	Neemseed	2669.0	2669.0
6	Wastecookingoil	1210.7	790.0
7	Oil	2,573.5	2,082.5
8	Oilcake	10,107.5	9,705.0
9	Biodiesel	1,976.0	1567.0
10	Glycerine	178.0	93.0

**6. NurseryDevelopment&Plantationsfortheyear2016-2017**

Sl no	NameofPlants	No of Samplings
1	Pongamia	500.0
2	Pongamiagraftedplants	130.0
3	Jatropha	65.0
4	Karaveera	80.0
5	simarubha	150.0