



Department of Renewable Energy Engineering
COLLEGE OF AGRICULTURAL ENGINEERING AND TECHNOLOGY,
Dr. BALASAHEB SAWANT KONKAN KRISHI VIDYAPEETH,
Dapoli, Dist. : Ratnagiri



Faculty Strength:

Academic:



Name **Dr. A. G. Mohod**
Qualification B.Tech (Agril. Engg.)
M.Tech (Energy)
Ph.D (Renewable Energy Engg.)
Designation Professor and Head
Experience 25.0 year
Area of Specialization Renewable Energy
Email ID agmohod@rediffmail.com



Name **Dr. Y P Khandetod**
Qualification B.Tech (Agril. Engg.)
M.Tech (Post Harvest Engg.)
Food Engg.)
Ph.D (Agril. Food Engg.)
Designation Professor (REE) & Associate Dean
Experience 30.0 year
Area of Specialization Renewable Energy
Email ID ypkhandetod@rediffmail.com



Name **Mrs. S. V. Aware**
Qualification B.Sc. (Physics)
M.Sc. (Electronics)
Designation Assistant Professor
Experience 22.0 year
Area of Specialization Physics and Electronics
Email ID seemaaware21@gmail.com



Name **Er. R. M. Dharaskar**
Qualification B.E. (Electrical)
M.E. (Electrical power system)
Designation Assistant Professor
Experience 20.0 year
Area of Specialization Electrical Power System
Email ID rdharaskar@yahoo.com



Name **Er. P. P. Chavan**
Qualification B.Tech (Agril. Engg.)
M.Tech (Renewable Energy Sources)
Designation Assistant Professor
Experience 6.0 year
Area of Specialization Renewable Energy
Email ID Chavan_poonam21@rediffmail.com



Name **Er. M. B. Patil**
Qualification B.E (Instrumentation and Control)
M.Tech (Process Instrumentation)
Designation Assistant Professor
Experience 8.35 year
Area of Specialization Process Instrumentation
Email ID mayor.mayuresh@gmail.com

Technical:



Name **Er. H. Y. Shrirame**
Qualification B.Tech (Agril. Engg.)
M.E (Renewable Energy Engg.)
Designation Senior Research Assistant
Experience 14.0 year
Area of Specialization Biomass & Bio-Energy
Email ID hemantshrirame@rediffmail.com



Name **Er. N. K. Palte**
Qualification B.E (Instrumentation)
M.E (Instrumentation & Process Control)
Designation Instrument Mechanic
Experience 17.0 year
Area of Specialization Instrumentation and control
Email ID nitinpalte@gmail.com

Supporting:



Name **Shri. V. K. Pimpalkar**
Qualification Diploma in (Electrical Engineering)
Designation Laboratory Assistant
Experience 14.0 year
Area of Specialization Electrical Maintenance
Email ID vaibhav19860@rediffmail.com



Name **Shri. P. Gimhavanekar**
Qualification 12th Std
Designation Laboratory Boy
Experience 1.8 year
Area of Specialization
Email ID Gimhavanekarprathamesh307@gmail.com

Education:

Degree Offered	Intake Capacity	Year of Establishment
B. Tech. (Agricultural Engineering)	64	1999
M.Tech (Renewable Energy Engineering)	04	2004
Ph.D (Renewable Energy Engineering)	02	2006

Courses Offered:

B.Tech (Agricultural Engineering)	1 st Term	2 nd Term
	<ul style="list-style-type: none"> • REE-111 (Engineering Chemistry) • REE-354 (Renewable Power Sources) 	<ul style="list-style-type: none"> • REE-122 (Electrical Machines and Power Utilization) • REE-243 (Fundamental of Renewable Energy Sources) • REE-365 (Bio Energy Systems: Design and Application) • EL-REE-481 (Photovoltaic Technology and System)
M.Tech (Renewable Energy Engineering)	REE-501* (Renewable Energy Technologies) REE-502* (Solar Thermal Energy Conversion Technologies) REE-503* (Biomass Energy Conversion Technologies) REE-504 (Energy Auditing, Conservation and Management) REE-505 (Wind Energy Conversion and Utilization) REE-506 (Solar Photovoltaic System Design and Analysis) REE-507 (Renewable Energy Policy, Planning and Economics) REE-508 (Alternate Fuels and Applications) REE-509 (Biogas Technology and Mechanism) REE-510 (Energy, Ecology and Environment) REE-511 (Design and Analysis of Renewable Energy Conversion Systems) REE-512 (Energy Generation from Agricultural Waste and Byproducts) REE-513 (Agro Energy Audit and Management) REE-515 (Energy Management in Food Processing Industries)	
Ph.D (Renewable Energy Engineering)	REE-601 (Biochemical Conversion of Biomass) REE-602* (Thermo-Chemical Conversion of Biomass) REE-603* (Advances in Renewable Energy Systems) REE-604 (New Alternate Energy Systems) REE-605 (Fuels and Combustion) REE-606 (Advances in Biogas Technology) REE-607 (Solid Waste and Waste Water Management) REE-608 (Advanced Photovoltaic Power Generation) REE-609 (Energy Planning, Management and Economics) REE-610 (Renewable Energy for Industrial Application) REE-611 (Biofuel Technologies and Applications) REE-612 (Energy Modelling and Simulation)	

*Compulsory courses

Training Imparted:

Sr. No.	Training	Title	Year
1.	ICAR Winter School	Energy Quantification Techniques and Opportunities for Renewable Energy Utilization	2018
2.	ICAR Winter School	Renewable energy Technologies for Agricultural Sector and Rural Industries	2022

PG & Ph.D Student Research Projects:

M.Tech (Renewable Energy Sources)				
Sr. No.	Name of Candidate	Title of thesis	Year of submission	Name of the Guide/CO-guide
1	Mr. S. J. Tambe	Design, development and evaluation of Scheffler concentrating cooker for steam generation.	2004-2005	Dr. A.G Mohod
2	Ms. R. G. Manjarekar	Performance evaluation of solar tunnel dryer for fish drying.	2004-2005	Dr. A.G Mohod
3	Ms. K. N. Kadam	Studies on characterization of undi for biodiesel production.	2005-2006	Dr. A.G Mohod
4	Ms. P. P. Bhor	Performance Study of Solar Dryer for Fish Drying.	2005-2006	Dr. Y. P Khandetod
5	Ms. A. S. Patil	Performance Evaluation of Solar Drying Parabolic Concentrating Cooker for Ethanol Preparation.	2009-2010	Dr. Y.P. Khandetod
6	Mr. P. B. Gadakari	Development and evaluation of gasifier based community cooking system.	2010-2011	Dr. A. G. Mohod
7	Ms. S. Mehetre	Design and Development of improved carbonized cashew nut shell burning cooking stove.	2011-2012	Dr. S. H. Sengar
8	Ms. A. S. Kadam	Performance evaluation of solar tunnel dryer for drying of grapes.	2013-2014	Dr. Y.P. Khandetod
9	Ms. N. C. Gawali	Development and evaluation of biomass based composite water heater and dryer.	2013-2014	Dr. A.G. Mohod
10	Mr. V. R. Birwatkar	Development of briquetting machine for locally available biomass.	2014-2015	Dr. Y.P.Kandetod
11	Mr. N. S. Sonawane	Development and evaluation of biomass carbonization kiln.	2014-2015	Dr. A.G. Mohod
12	Ms. B. M. Bhangare	Development and Evaluation of Solar Photovoltaic Operated Weedicide Sprayer.	2015-2016	Dr. A.G. Mohod
13	Ms. S. N. Dongardive	Development and Evaluation of Forced Convection Solar Cabinet Dryer.	2016-2017	Dr. Y.P.Kandetod
14	Ms. M. H. Jagadale	Development and Evaluation of solar photovoltaic system for paddy winnowing.	2017-2018	Dr. A.G. Mohod
15	Ms. P. A. Bhavsar	Study On Briquetting of Non Woody Biomass in Konkan Region.	2017-2018	Dr. Y.P. Khandetod
16	Ms. S. P. Sood	Development and Evaluation of Biomass Cook Stove.	2017-2018	Dr. Y.P. Khandetod
17	Ms. P. D. Phadtare	Performance evaluation of modified solar photovoltaic powered paddy winnower.	2018-2019	Dr. A.G. Mohod
18	Mr. O. S. Karpe	Development and evaluation of folding type pyramid shape solar dryer for domestic use.	2018-2019	Dr. A.G. Mohod
19	Ms. S. S. Gawande	Development and evaluation of concentrating folding dish type solar cooker.	2019-2020	Dr. Y.P. Khandetod
20	Mr. M. S. Mankar	Development and Evaluation of Rice Husk Based Gasifier for Thermal Application.	2018-2019	Dr. A.G. Mohod
21	Mr. A. N. Nawale	Development and Evaluation of Solar Photovoltaic Powered cream Separator.	2018-2019	Dr. A.G. Mohod

22	Mr. S. N. Rokade	Development and Evaluation of Cook Stove Based Waste Heat Recovery System for Water Heating and Drying.	2018-2019	Dr. Y.P. Khandetod
23	Ms. A. A. Gadikar	Development of system for solar insect light trap and bird deterrent.	2019-2020	Dr. Y.P. Khandetod
24	Mr. S. R. Gadade	Development of steam assisted system for solar dryer.	2019-2020	Dr. A.G. Mohod
25	Ms. S. B. Ghule	Development of SPV driven condensing unit for solar distillation unit.	2020-2021	Dr. A.G. Mohod
26	Ms. S. R. Salunkhe	Studies on carbonization and steam activation of coconut shell.	2020-2021	Dr. A.G. Mohod
27	Mr. A. M. Kshirsagar	Development and performance evaluation of solar based milk pasteurizer.	2020-2021	Dr. Y.P. Khandetod

Ph.D (Renewable Energy Sources)

Sr. No.	Name of Candidate		Year of submission	Name of the Guide/CO-guide
1	Mr. C. B. Khobragade	Design and development of briquetting machine based on carbonized cashew nut shell and rice husk.	2014-2015	Dr. Y.P. Khandetod
2	Mr. V. J. Chopade	Development and Evaluation of Solar Energy Based Cashew Apple Ethanol Production System.	2018-2019	Dr. Y.P. Khandetod
3	Ms. D. R. Pavane	Design and development of pyramid shape solar biomass hybrid drying system for nutmeg.	2018-2019	Dr. Y.P. Khandetod
4	Mr. V. R. Birwatkar	Design and development of steam generation system compatible to shuffler solar concentration for elephant foot yam.	2021-2022	Dr. Y.P. Khandetod
5	Mr. G. S. Ade	Development and evaluation of portable solar photovoltaic power system for agricultural field operations.	2021-2022	Dr. A. G. Mohod

Research and Development:

A. Technology Developed and Recommendations:

Low cost rice husk stove



2004

Low cost suitcase type solar box cooker "Rasai"



2007

Solar photo voltaic powered grass cutter



2007

Biodiesel processor for Undi oil



2009

Cashew-nut shell liquid (CNSL) extractor



2010

Ethanol production unit

Solar Tunnel Dryer



2010

Open top gasifier cum stove



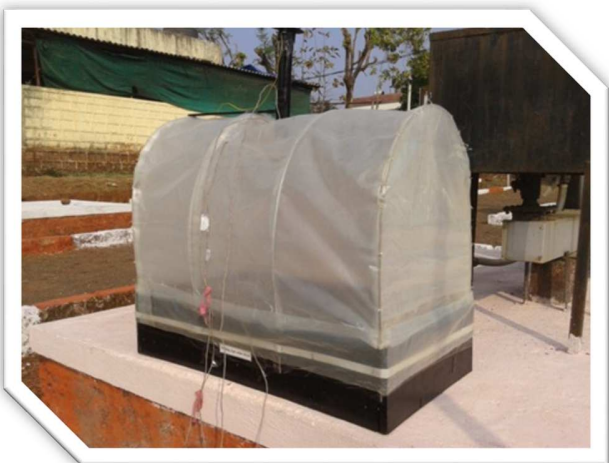
2011

Portable folding type solar dryer



2013

Pico-hydroelectric power generator



2015

Single axis automatic solar track



2017

Biomass Fired Drying Unit



2017



2015

Carbonization and liquefaction combine unit



2018

Hand cum pedal operated briquetting machine



2021

B. Externally Funded Projects:

Completed Projects

Sr. No.	Completed Year	Project
1.	2005-2007	Design and Development of Solar Tunnel Dryer for Fish. (ICAR, New Delhi)
2.	2004-2005	Development of Energy Park. (MNRE, New Delhi)
3.	2007-2009	Use of Solar Cooker (SK-14) for CNSL Extraction and Cooking. (World, Bank, New Delhi)

Ongoing Projects

Sr. No.	Completed Year	Project
1.	2022-2024	Capacity building through Domestic solar Dryer as Disaster Mitigation Tool.
2.	2022-2024	Interventions for Energy Production and CNSL Extraction from Cashew Nut Shells for Zero Waste Processing.

C. Research Publications:

Sr. No.	Title of the paper	Naas Rating
1.	Panwar N.L. and Shirame H. Y. 2010. The emission characteristics of a compression ignition engine operating on castor methyl ester. Int. J. Global Warming, Vol .1, No. 1/2/3, Pages 368-377, ISSN: 1758-2083.	7.29
2.	Panwar N.L., Shirame H. Y., Rathore N.S., Jindal S. and Kurchania A.K. 2010. Performance evaluation of a diesel engine fueled with methyl ester of castor seed oil. Int. J. Applied Thermal Engineering, Volume 30, Issues 2-3, Pages 245-249, ISSN: 1359-4311.	11.29
3.	Panwar N. L., Shirame H. Y. and Bamniya B. R. 2010. CO2 mitigation potential from biodiesel of castor seed oil in Indian context. Int. J. Clean Technology and Environmental Policy, Vol. 12, Pages 579–582, ISSN: 1618-954X	9.36
4.	Shrirame H. Y. and Panwar N. L. 2011. Bio Diesel from Castor oil – A Green Energy Option. Journal of Low Carbon Economy, Vol. 2, Pages 01-06, March 2011, ISSN: 2158-7000	7.05
5.	Sengar S.H., Mohod A.G., Khandetode Y.P., Shirame H.Y. and Deshmukh A.S. 2011. Study of Carbonization for Cashew Nut Shell. Research Journal of Chemical Sciences, Vol. 1(2), Pages 43-55, May 2011, ISSN 2231-606X	6.8
6.	Khandetod Y.P., Mohod A.G., Sengar S. H., Shirame H. Y. and Patil A.S. 2012. Optimization and production of bioethanol from cashew apple juice using Saccharomyces cerevisiae culture by solar energy. Journal of Engineering and Technology in India. Vol.3 (2):89-96, 2012, ISSN: 0976-1268	3.24
7.	AtulMohod,Y.P.Khandetod, S. H. Sengar, and H. Y. Shirame.2012. Energy Analysis of Baby Boiler for Steaming of Raw Cashew Nut Seeds. International Scholarly Research Network ISRN Renewable Energy. Volume 2012, 1-6 Article ID 476702.	-
8.	R.G.Manjarekar, A.G.Mohod and Y.P.Khandetod.2012.Multipurpose solar tunnel dryer for mixed farming system. J. of AMA (Agricultural Mechanization in Asia, Africa and Latin America). Vol 43 (2) 2012: 32-38 ISSN: 00845841	6.3
9.	S.H.Sengar, Y.P.Khandetod and A.G. Mohod. 2012. Low cost solar still. J. of Engineering and Technology in India. Vol.3 (2) Oct.2012:59-70. ISSN: 0976-1268.	3.24
10.	Y.P.Khandetod, A.G. Mohod, S. H. Sengar, and H. Y. Shirame and A.S.Patil .2012. Optimization and production of bioethanol from cashew apple juice using Saccharomyces cerevisiae culture by solar energy. J. of Engineering and Technology in India. Vol.3 (2) Oct.2012:89-96. ISSN: 0976-1268.	-
11.	A. G. Mohod, Y. P. Khandetode, H. Y. Shirame., 2014. Development and Evaluation of Solar Tunnel Dryer for Commercial Fish Drying. Journal of The Institution of Engineers(India):Series-A, Vol 95 No.1: 1-8, ISSN:2250-2149.	3.3
12.	C.B. Khobragade, Y.P. Khandetod, A.G. Mohod and Deepak Kumar. (2014). Optimization of physical and thermal properties of a biomass briquettes fuel made from carbonized cashew nut shell and rice husk. Green Farming, International Journal of Applied Agricultural & Horticultural Sciences, Vol .5, No. 4, Pages 172-176	4.79
13.	Mohod A. G., Khandetode Y. P. and Shirame H. Y. 2014. Development and Evaluation of Solar Tunnel Dryer for Commercial	3.3

	Fish Drying. Journal of The Institution of Engineers(India):Series-A, Vol 95 No.1: 1-8, ISSN:2250-2149.	
14.	Mohod A., Khandetod Y. P., Sengar S. H., Shirame H. Y. and Gadkari P. B. 2015. Development and Evaluation of Open Top Biomass Gasifier for Thermal Application. Agricultural Mechanization in Asia, Africa and Latin America (AMA). 46 (2), 77-81, ISSN:0084-5841.	6.06
15.	Seema V. Aware, Vijay V. Aware, SamelKushal and Puja Pachbhai, 2016. Design and development of pelton wheel for pico-hydro power generation unit. International Journal of Agricultural Sciences, ISSN:0973-130 X, Vol 12, Issue I, Pp :60-64	2.73
16.	Seema V. Aware, Vijay V. Aware, AkshayJadhav and SujataRaut, 2016. Modification and performance evaluation of pico-hydro power generation unit. International Journal of Agricultural Sciences, ISSN:0973-130 X, Vol 12, Issue I, Pp :85-89	2.73
17.	M. Jagdale, A. G. Mohod, Y. P. Khandetod, R. M. Dharaskar, K. G. Dhande, 2017. Evaluation of Solar Photovoltaic (SPV) Operated Paddy Winnowing. Advanced Agricultural Research & Technology Journal, ISSN:2373-423X, Vol.-I No.2 Pp: 177-182.	-
18.	Chavan P. P., Patil M. B., Shirame H. Y., Mohod A. G. and Khandetod Y. P. 2018. Performance evaluation of small capacity solar tunnel dryer for drying of fish. Green Farming International Journal of Applied Agricultural & Horticultural Science, Vol. 9, Number 3, May-June. pp 570-574, ISSN No-0974-0775.	4.38
19.	Sonawane N. S., Mohod A. G., Khandetod Y. P. and Shirame H. Y. 2018. Fuel properties of charcoal from mango (Mangifera spp.) tree biomass. Green Farming International Journal of Applied Agricultural & Horticultural Science, Vol. 9, Number 5, September-October, pp 902-905, ISSN No-0974-0775.	4.38
20.	Chavan P.P., Patil M.B., Shirame H.Y., Dhande K.G. 2020. Utilization of Solar Tunnel Dryer for Drying of Fodder Crop. International Journal of Science and Research, Volume 9 Issue 3, 647-652. ISSN: 2319-7064.	6.28
21.	Shirame H. Y., Mohod A. G., Khandetod Y. P., Dhande K. G. and Dhekale J. S. 2021. Fuel properties of cashew nut shells as a feedstock for thermochemical process. The Pharma Innovation Journal, 10(7): 410-414.	5.23
22.	S. B. Ghule, A. G. Mohod, Y. P. Khandetod, Y. P. Khandetod, M. B. Patil. 2021. Development and evaluation of solar photovoltaic driven condensing unit for the solar distillation system. International Journal of Advance Research, Ideas and Innovations in Technology.7(4): 572-576	-
23.	Patil MB, Pathak SV, Shirsat NA and Chavan PP. 2021. Sensor network applications in precision agriculture. The Pharma Innovation Journal 2021; SP-10(6): 46-51	5.23
24.	Ajay Kshirsagar, Dr. Yashwant Khandetod, Dr. Atul Mohod, Dr. Kishor Dhande. 2021. Development and Performance Evaluation of Solar based milk Pasteurizer. International Journal of Innovative Research in Science, Engineering and Technology, 10 (8): 11521-11527.	-
25.	Shreya Salunkhe, Atul Mohod, Yashwant Khandetod, Kishor Dhande, Seema Aware. 2021. Development and Evaluation of Carbonization Cum Steam Activation Unit for Coconut Shell. 8(8):936-940.	-

Extension Education:

1. Popularization & Demonstration of Renewable Energy Technologies

Established in
2006

District Level Energy Park

Sponsored by
MNRE, New
Delhi



Visitor Count:

- 1,05,000 Upto
2022

Use for:

- Demonstration
- Practical
- Make Awareness

2. Training

Year Title of Training

2007 Distribution of SK-14 solar cooker programme.

2008 Use of Concentrating Solar Cooker for CNSL extraction and Cooking.

2010 Application and Maintenance of Solar Energy for Cooking.

2018 Use of Solar Energy in Agriculture.

2018 Use of Solar Cooker for Bakery Product.



3. Extension Publications

Booklet = 08

Leaflet = 13

Training Manual = 06

TV Talk = 08

Radio Talk = 12

Popular Article = 55

Gallery:



Updraft Gasifier



Biomass Gasifier



Solar Tunnel Dryer for Fish Drying



Solar Tunnel Dryer



Solar Tunnel Dyer



Solar Tunnel Dryer for Mango Lether



Screw Press Briquetting Machine



Biomass Briquettes



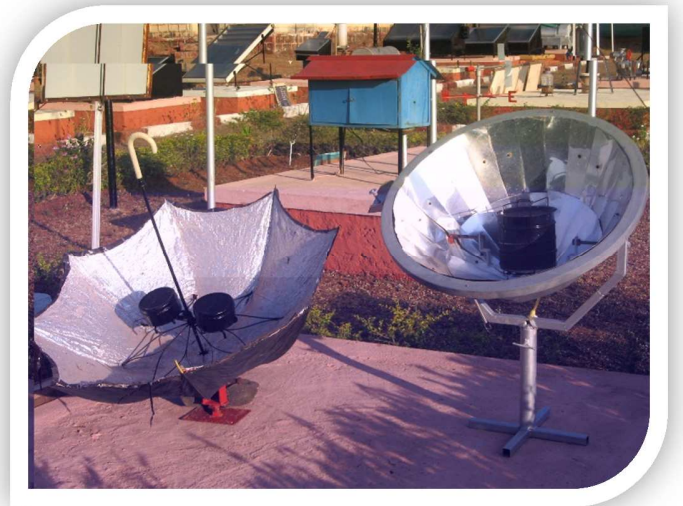
Solar Distillation Unit



CNSL Extraction using solar concentrating cooker



Energy Park



Foldable Concentrating Solar Cooker



Scheffler cooker System



Energy Park