

## RAMA CHANDRA PRADHAN

### Contact Address:

Department of Food Process Engineering

National Institute of Technology (NIT)

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### CAREER SUMMARY

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Current : Assistant Professor

Highest Degree : **Ph. D.**, Indian Institute of Technology Delhi, India;  
**M. Tech**, Indian Institute of Technology, Kharagpur, India

Teaching : 03 year 07 month

Research : 09 year

Patent : 1

Publications : **Int. Journal: 23; National Journal: 01; Article: 01**

Skills : Agricultural Bio-Process & Food Engineering, Value addition and Biomass utilization and Bio-Energy production, Engineering properties of biomaterials and Post Harvest equipments for oilseeds.

### EDUCATION

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**Ph. D** (Post Harvest Engineering on oilseeds & Bio-energy)

January 2006 – April 2011

Centre for Rural Development & Technology,

Indian Institute of Technology **IIT**, www.iitd.ac.in, New Delhi, India

*Supervisors:* Prof. S N Naik, Dr V K Vijay, Prof. Naresh Bhatnagar (Mechanical Engg.)

**M. Tech** (Post Harvest Engineering)

July 2002- July 2004

Dept. of Agricultural & Food Engineering,

Indian Institute of Technology (**IIT**, [www.iitkgp.ac.in](http://www.iitkgp.ac.in)), Kharagpur, India

*Supervisor:* Late Prof. H. Das

**B. Tech** (Agricultural Engineering)

Sept 1996 - Oct 2000

College of Agricultural Engineering & Technology (CAET)

OUAT ([www.ouat.ac.in](http://www.ouat.ac.in)), Bhubaneswar, Orissa, India

## **AWARDS**

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1. Jawaharlal Nehru Award for Outstanding Doctoral Thesis Research - 2012 in Agricultural Engineering by I.C.A.R., New Delhi.
2. Awarded Graduate Student Exchange Program (GSEP) Fellowship by the Canadian Bureau for International Education (CBIE) to University of Saskatchewan in the Deptt. of Agriculture and Bioresources Engineering, Saskatoon, Canada from 1<sup>st</sup> Sept 2008 to 28<sup>th</sup> Feb 2009.
3. Awarded full financial assistance for presenting a research paper in an International conference by DST, New Delhi, India, under International Travel Support Scheme.
4. Qualified in *Graduate Aptitude Test in Engineering* (GATE'2002) Exam. in Agricultural Engineering.
5. Qualified in *Indian Council of Agricultural Research* (ICAR'2001) Exam. in Agricultural Engineering. With all India Rank 10.

## **RESEARCH / WORK EXPERIENCE**

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**Research Scholar (Ph.D.)**

January 2006 – April 2011

Centre for Rural Development & Technology, Indian Institute of Technology, New Delhi, India

Work Load: Research 100%

Worked on Post Harvest Equipments (Decorticator, Oil expeller, etc) of Non-edible Oilseeds feed stock for Production of Biodiesel.

**Project Associate**

April 2005 – December 2005

Centre for Rural Development & Technology, Indian Institute of Technology, New Delhi, India

Work Load: Research 100%

Worked in the NOVOD (National Oilseeds and Vegetable Oils Development) Board, Ministry of Agriculture, India, sponsored project “National Network on Integrated Development of Jatropha & Karanja”. I was responsible for research, development and testing of low cost post harvest equipments for Jatropha (*Jatropha curcas*) and Karanja (*Pongamia pinnata*) and production of Biodiesel.

**Project Assistant**

August 2004 – January 2005

Indian Institute of Technology (IIT, www.iitkgp.ac.in), Kharagpur, India

Workload: Research 100%

Worked on the performance evaluation of cashew nut sheller machine, screw conveyor and their maintenance and oil extraction of betel leaves.

**RESEARCH GUIDANCE**

S. No.	Degree /Thesis	Title of Thesis	Year of award/ Status
01	Ph.D. in Agricultural Engineering (Bio Process and Food Engineering)	Super-Critical CO <sub>2</sub> Extraction of Bottle gourd ( <i>Lagenaria sicerari</i> ) seed oil	Thesis submitted
02	M. Sc. In Food Science and Technology	Expression of Bottle gourd ( <i>Lagenaria sicerari</i> ) seed oil and its Byproduct Utilization	2014 (Completed)

## PATENT

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Naik, S.N., Bhatnagar, N., **Pradhan, R.C.** 2009. An apparatus for decortications of oil fruits/seeds for separation of shell from kernel. Indian Patent Application, CODEN: INXXBQ IN 2007DE01590 A 20090306.

## PUBLICATIONS

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### International Journal's Paper: 23

1. Said P.P., Sharma N., Naik B., **Pradhan R.C.** 2014. Effect of pressure, temperature and flow rate on supercritical carbon dioxide extraction of bottle gourd seed oil. International Journal of Food and Nutritional Sciences, **Accepted.**
2. Said, P. P., Arya, O.P., **Pradhan, R.C.**, Singh, R.S., Rai, B.N. 2014. Separation of oleoresin from ginger rhizome powder using green processing technologies. Journal of Food Process Engineering, **Accepted.**
3. Mohanty, C. S., **Pradhan, R. C.**, Singh, V., Singh, N., Pattanayak, R., Prakash, O., Chanotiya, C. S., Rout, P. K. 2014. Physicochemical analysis of *Psophocarpus tetragonolobus* (L.) DC seeds with fatty acids and total lipids compositions. Journal of Food Science and Technology, **Accepted.**
4. Said, P. P., **Pradhan, R.C.**, Rai, B.N. 2014. A green separation of *Lagenaria siceraria* seed oil. Industrial Crops and Products, 52, 796-800.
5. Said, P. P., **Pradhan, R.C.** 2013. Preservation and value addition of jiggery- A Review. International Journal of Agricultural Engineering, 6(2), 569-574.
6. Said, P. P., **Pradhan, R.C.** 2013. Moisture Dependent Physical Properties of *Lagenaria siceraria* seed. International Journal of Agricultural and Biological Engineering, 6(4), 111-120.
7. Said, P. P., **Pradhan, R.C.**, Kumar, A. 2013. Effect of pre-shelling treatments on physical properties of nutmeg (*Myristica fragrans* Houtt.). Seed Technology, 35(1), 137-143.

8. **Pradhan, R.C.** Said, P. P., Singh, S. 2013. Physical Properties of Bottle Gourd Seeds. *Agricultural Engineering International: CIGR Journal*, 15(1), 106-113.
9. Sharma, V., **Pradhan, R.C.**, Naik, S.N., Bhatnagar, N., Singh, S. 2013. Evaluation of a centrifugal impaction-type decorticator for shelling of tung fruits. *Industrial Crops and Products*, 43, 126-131.
10. Patel, M., **Pradhan, R.C.**, Naik, S.N. 2011. Physical properties of fresh mahua. *International Agrophysics*, 25, 303-306.
11. **Pradhan, R.C.**, Mishra, S, Naik, S.N., Bhatnagar, N., Vijay, V.K. 2011. Oil expression from *Jatropha* seeds using a screw press expeller. *Biosystem Engineering*, 109, 158-166.
12. Sharma, V., Das, L., **Pradhan, R.C.**, Naik, S.N., Bhatnagar, N., Kureel, R.S. 2011. Physical properties of tung seed: An industrial oil yielding crop. *Industrial Crops and Products*, 33, 440-444.
13. **Pradhan, R.C.**, Naik, S.N., Rout, P.K., Dalai, A.K., Meda, V. 2010. Supercritical CO<sub>2</sub> extraction of wheat distiller's dried grain with solubles. *International Journal of Food Science and Nutrition*, 61(8), 829-836.
14. **Pradhan, R.C.**, Meda, V., Naik, S.N., Tabil, L. 2010. Physical properties of canadian grown flaxseed in relation to its processing. *International Journal of Food Properties*, 13, 732-743.
15. **Pradhan, R.C.**, Meda, V., Rout, P.K., Naik, S.N., Dalai, A.K. 2010. Supercritical CO<sub>2</sub> extraction of fatty oil from flaxseed and comparison with screw press expression and solvent extraction processes. *Journal of Food Engineering*, 98, 393- 397.
16. **Pradhan, R.C.**, Naik, S.N., Bhatnagar, N., Vijay, V.K. 2010. Design, development and testing of hand-operated decorticator for *Jatropha* fruit. *Applied Energy*, 87, 762-768.
17. Pradhan, S., Sahoo, N.K., **Pradhan, R.C.**, Das, L., Naik, S.N., Sahoo, P.K. 2010. Toxic phorbol ester in *Jatropha* oil, Cake, and Biodiesel- A Study. *SAARC Oils and Fats Today*, March 2010, 10-14.

18. **Pradhan, R.C.**, Naik, S.N., Bhatnagar, N., Vijay, V.K. 2009. Physical properties of tree borne oilseed: Potential biodiesel feedstock in India. Assam University Journal of Science & Technology: Physical Science and Technology. 4, 46-53.
19. Sahoo, N.K., Pradhan, S., **Pradhan, R.C.**, Naik S.N. 2009. Physical properties of fruit and kernel of *Thevetia peruviana* J.:a potential biofuel plant. International Agrophysics, 23, 199-204.
20. **Pradhan, R.C.**, Naik, S.N., Bhatnagar, N., Vijay, V.K. 2009. Moisture-dependent physical properties of jatropha fruit. Industrial Crops and Products, 29, 341-347.
21. **Pradhan, R.C.**, Naik, S.N., Bhatnagar, N., Swain, S.K. 2008. Moisture-dependent physical properties of karanja (*Pongamia pinnata*) kernel. Industrial Crops and Products, 28, 155-161.
22. Dash, A.K., **Pradhan, R.C.**, Das, L.M., Naik, S.N. 2008. Some physical properties of Simarouba fruit and kernel. International Agrophysics, 22, 111-116.
23. Garnayak, D.K., **Pradhan, R.C.**, Naik, S.N., Bhatnagar, N. 2008. Moisture-dependent physical properties of jatropha seed (*Jatropha curcas* L.). Industrial Crops and Products, 27, 123-129.

#### **National Journal's Paper: 01**

24. Said, P. P., **Pradhan, R.C.** 2013. Effect of pre-shelling treatment, cylinder speed and moisture content on performance on nutmeg decorticator. Bioinfolet, 10 (4C), 1587-1590.

#### **Article: 01**

25. Sharma, N, Said, P. P., **Pradhan, R.C.** (2013). High pressure freezing: A novel food freezing techniques. Process Food Industry, 16 (9): 14-16.

#### **Book : 01**

1. **R. C. Pradhan, S. N. Naik**, Post Harvest Processing of *Jatropha curcas*-Decorticator, Oil Expeller. Lambert Academic publishing, Germany (ISBN: 978-3-659-27692-7), 2012.

**Book Chapter: 03**

1. **Pradhan, R.C.**, Goyal, S.K. 2013. Post-Harvest Equipments for Processing of Oilseeds. In: Goyal et al Eds., Agricultural Education, Research and Extension in India, ISBN: 978-81-921360-5-9, Podder Publication, Varanasi, Uttar Pradesh, India.
2. Said, P.P., **Pradhan, R.C.**, Sharma, N. 2013. Screw Press Oil Expression: A modern Oil Separation tool. In: Rao, RK, Eds., Systematic Approach in Implementation of Informational and Resource-Saving Technologies in Food-Crop Production: Prerequisite for Eco-balancing, ISBN: 978-81-926935-2-1, Mahima Publications, Varanasi, Uttar Pradesh, India.
3. **Pradhan, R.C.**, Ghadei, K., Mahapatra, S. 2013. Role of Agro-Processing Industry for Rural Development. In: Gupta, D., Eds., Advances in Extension Education and Rural Development, Volume II, ISBN: (13):978-81-7754-150-2, M/S Agrobios (India), Jodhpur, Rajasthan, India, pp-39-54.

**Papers in Conferences/Symposia: 16**

1. Naik, S.N., **Pradhan, R.C.**, Pradhan S. 2007. Post Harvest Processing of Jatropha for the production of Biodiesel, National workshop on biodiesel, Madurai, India (2007), Oct.
2. **Pradhan, R.C.**, Naik, S.N., Bhatnagar, N., Vijay, V.K. 2008. Some Physical Properties of Jatropha Seed (*Jatropha curcas* L.): In Indian Context. International Conference on Energy Security and Climate Change: Issues, Strategies, and Options (ESCC 2008), Bangkok, Thailand (2008), 6-9<sup>th</sup> August.
3. **Pradhan, R.C.**, Naik, S.N., Bhatnagar, N., Vijay, V.K. 2008. Engineering Processing of Jatropha: a Potential Biofuel Crop in India. One-Day Conference at Assam University, Silchar, India (2008) 3rd December.
4. **Pradhan, R.C.**, Naik, S.N., Meda, V., Bhatnagar, N., Vijay, V.K. 2009. Mechanical Expression of oil from Oilseeds in a Screw Press Oil Expeller. International Conference on Food Security and Environmental Sustainability (FSES 2009), IIT Kharagpur, India (2009), 17-19<sup>th</sup> December.

5. **Pradhan, R.C.**, Naik, S.N., Meda, V. 2009. Effect of Worm-shaft Speed and Moisture Content on Oil Expression of Flaxseed. 64<sup>th</sup> Annual Convention and International Conference on Oils, Fats, Fuels and Surfactants (ICOFFS 09), New Delhi, India (2009), 9-11<sup>th</sup> December, p. 72.
6. Naik, S.N., **Pradhan, R.C.**, Das, L., Sharma, V. 2009. Physical Properties of Tung Seed in Relation to its Processing. 64<sup>th</sup> Annual Convention and International Conference on Oils, Fats, Fuels and Surfactants (ICOFFS 09), New Delhi, India (2009), 9-11<sup>th</sup> December, p. 99
7. Pradhan, S., Sahoo, N.K., **Pradhan, R.C.**, Das, L., Naik, S.N., Sahoo, P.K. 2009. Production of Biodiesel and Study of Toxic Phorbol Ester in Jatropha Curcas Oil, Cake and Biodiesel. 64<sup>th</sup> Annual Convention and International Conference on Oils, Fats, Fuels and Surfactants (ICOFFS 09), New Delhi, India (2009), 9-11<sup>th</sup> December, p. 105.
8. **Pradhan, R.C.**, Singh, D.S. 2011. Protected cultivation: A technology for efficient use of irrigation water. National Seminar on Sustainable Management of Water Resources, 14-15 January, 2011, Dept. of Farm Engineering, Banaras Hindu University, Varanasi, India.
9. Kumar, A., **Pradhan, R.C.** 2011. Present status and prospects of food processing industries in India. International Symposium on Recent Trends in Processing & Safety of Speciality and Operational Foods, 23-25 November 2011, Defence Food Research Laboratory, DRDO, Ministry of Defence, Mysore, Karnataka, India.
10. **Pradhan, R.C.** 2011. Sustainable agricultural production through protected cultivation. National Conference on Controlling Environmental Pollution through Water Conversation for Sustainable Development, 26-27 November, 2011, Department of Philosophy & Religion faculty of Arts, Banaras Hindu University, Varanasi, India.
11. **Pradhan, R.C.** 2012. An alternate source of energy: Jatropha seed oil. National Seminar on Environmental Concerns and Sustainable Development: Issues and Challenges for India, 2-4 March, 2012, Institute of Environment and Sustainable Development, Banaras Hindu University, Varanasi, India.
12. **Pradhan, R.C.**, Kumar, R. 2012. Post harvest equipments for processing of oilseeds. National Seminar on Agricultural Education, Research and Extension: Problems, Solution and Prospects, 11 April 2012, Krishi Vigyan Kendra, Institute of Agricultural



Sciences, Banaras Hindu University, Rajiv Gandhi South Campus, Barkachha, Mirzapur, U.P., India.

13. **Pradhan, R.C.**, Said, P. P. 2013. An overview of Garden cress seed for its medicinal and nutritional properties. International Conference on Global Scenario of Traditional System of Medicine, Ayurveda, Agriculture and Education, 21-22 January 2013, Rajiv Gandhi South Campus, Barkachha, Mirzapur, U.P., India.
14. **Pradhan, R.C.**, Said, P. P. 2013. Entrepreneurial Development and Agri-Business through Post Harvest Technology for Oilseeds. XI Agricultural Science Congress-2013, 7-9 February, 2013, Orissa University of Agriculture & Technology, Bhubaneswar, India.
15. Said, P. P., **Pradhan, R.C.**, Sharma, N. 2013. Screw press oil expression: A modern oil separation tool. National Conference on Systematic Approach in Implementation of Informational and Resource-Saving Technologies in Food-Crop Production: Prerequisite for Eco-Balancing, 23-24 November, 2013, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, India.
16. **Pradhan, R.C.** 2014. Effect of pressure, temperature and flow rate on supercritical carbon dioxide extraction of bottle gourd seed oil. 4<sup>th</sup> International Conference on Updating Food Technology: A Challenge Towards Public Health Nutrition (ICUFT-2014), 7-8 May, 2014, Jawaharlal Nehru University, New Delhi, India.

#### **Report : 01**

1. Naik, S.N., Bhatnagar, N., **Pradhan, R.C.** 2007. "Design and Development of Post Harvest Equipments for Jatropha & Karanja", Report submitted to NOVOD Board, India. Centre for Rural Development & Technology, Indian Institute of Technology, New Delhi, India.

## **TRAINING / EXTENSION EXPERIENCE**

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- Attended National Oil seeds and Vegetable Development Board (NOVOD) 2<sup>nd</sup> review meeting on “National Network Jatropha & Karanja” on 28<sup>th</sup> November, 2005 at India International Centre, New Delhi, India.
- Attended “Workshop on Jatropha” on 19<sup>th</sup> May, 2005 at Natural Resource Management Center, Sonha , Gurgaon, India.
- Attended vacation training programme on “Bio resources for School Children” on June 19, 2006, organised by CCS Haryana Agril. University, Regional Research Station, Bawal, India.
- Attended NOVOD 3<sup>rd</sup> review meeting on “National Network Jatropha & Karanja” on 5<sup>th</sup> January, 2007 at NOVOD Board, Gurgaon, India.
- Attended NOVOD 4<sup>th</sup> review meeting on “National Network Jatropha & Karanja” on 12<sup>th</sup> February 2008 at NASC complex, IARI, New Delhi, India.
- Participated in the Trainers’ Training Programme on “Development of Value Added Products from Fresh Mahua Flowers”. Organized by Centre for Rural Development & Technology, IIT Delhi from 4.2.2011 to 5.2.2011.
- Participated in the Training-cum-workshop on “Application of ICTs in Modified Agricultural Extension Reforms”. Organized by Deptt. of Extension Education, Institute of Agricultural Sciences, B.H.U., Varanasi from 01.08.2012 to 03.08.2012.
- Participated in the “5<sup>th</sup> Refresher Course in Environmental Studies”. Organized by UGC Academic Staff College, B.H.U., Varanasi from 03.08.2012 to 03.09.2012.
- Participated in the Orientation Programme for the Academic Counsellors. Organized by Indira Gandhi National Open University, Regional Centre, Varanasi from 22.09.2012 to 23.09.2012.
- Participated in the “USAID supported Agricultural Innovation Partnership Training for bakery Processor”. Organized by Dept. of agri. & food Techn., Sardar Vallabhbhai Patel University of Agri. & Techn., Meerut, U.P., from Novemeber 6-8, 2012.

**WORKSHOP: *Invited As Subject Specialist***

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- Given a presentation on “Post harvest processing of Jatropha and Production of biodiesel” in Farmers Training programme at C.S.A. Agril. University, Kanpur, India.
- Given a presentation on “Processing and Production of biodiesel from Jatropha” as in “National Seminar on Biofuel: Future Energy Source” at Ajay Binay Institute of Technology, Cuttack, Orissa, India.
- Given a presentation on “Post Harvest Technology of Jatropha” on “Jatropha Cultivation: Current Status, Viability and Future Strategies” on 26<sup>th</sup> July, 2006 at C.C.S.Haryana Agril. University, Hissar, India.
- Given a presentation on “Post harvest technology of Jatropha for production of biodiesel” on 18<sup>th</sup> and 26<sup>th</sup> December, 2006 in Trainer Training programme organized by NOVOD Board, Gurgaon, India.
- Given a presentation on “Machine Requirements for Mango Cultivation and Processing” in National Seminar on “Chausa Mango Processing and Export Opportunities from Uttar Pradesh, Saharanpur” on 13<sup>th</sup> August, 2013 at Saharanpur, UP, India.

Ramachandra Guha (born 29 April 1958) is an Indian historian and economist whose research interests include environmental, social, economics, political, contemporary and cricket history. He is also a columnist for The Telegraph, Hindustan Times and Hindi Daily Newspaper Amar Ujala. A regular contributor to various academic journals, Guha has also written for The Caravan and Outlook magazines. For the year 2011â€“12, he held a visiting position at the London School of Economics and Political Science (LSE) Ramachandra Guha2020-05-05T23:34:31+00:00April 19th, 2020]. Six years ago, the then editor of the Hindustan Times invited me to write a fortnightly column. I agreed, on condition that there would be no censorship. Ramachandra Pradhan is on Facebook. Join Facebook to connect with Ramachandra Pradhan and others you may know. Facebook gives people the power to share...Â

Ramachandra Pradhan (Krishna) is on Facebook. To connect with Ramachandra, sign up for Facebook today. Log In. or. Sign Up. About Ramachandra Pradhan. Work. Zenith Institute Of Science & Technology ZIST Bhubaneswar.