

Sanjaya K Dash, Ph.D.

Dean

College of Agricultural Engineering and Technology

Odisha University of Agriculture and Technology

Bhubaneswar

and

Formerly Professor and Head, Processing and Food Engineering



Education

- Ph.D. (Agril. Engg.), Indian Agricultural Research Institute, New Delhi, (India)- 1999
- M. Eng.(Ag.) in Processing and Food Engineering, Rajasthan Agricultural University (India)- 1989
- B.Sc. (Ag. Engg. & Tech.), OUAT, Bhubaneswar- 1987

Experience

- Working in OUAT Bhubaneswar since 1989 in different capacities in teaching, research and extension
- Professor, Department of Agricultural Processing and Food Engg. since Jan, 2008 (Head of the Deptt. during 2nd Dec, 2011 to 24th July 2017).
- Dean, College of Agricultural Engineering and Technology, Bhubaneswar since June, 2017.
- Dean, Students' Welfare (Addl. Charge) from 10.09.2018 to 18.06.2021 (2 years 9 months)

International fellowships/ Foreign trainings

- International PG Course on Food Technology, Hebrew University, Jerusalem- 2000 (with MASHAV fellowship)
- International Summer Course on Integrated Agricultural Engineering, University of Goettingen, Germany- 2001 (with DAAD Fellowship)
- Visiting scholar, Ohio State University, Columbus, United States of America under the project entitled "Teaching and learning excellence: a capacity building model" under Indo-US Agricultural Knowledge Initiative Program, 2008
- Visiting Scholar, Michigan State University, United States of America, 2010 under National Agricultural Innovation Project of ICAR for training on Smart Packaging.
- Visiting Scholar, University of Saskatchewan, Canada, during May, 2011 (under NAIP project on A value chain management of ginger and ginger products)
- *Netherland Govt. Fellowship to attend a short course in Wageningen University, Netherlands on 'Lost and wasted food' during 2014.*

Externally Funded Projects/ schemes

- Co-Principal Investigator, Onion Value Chain Improvements in Odisha state (a collaborative project of OUAT with the World Vegetable Centre (AVRDC)) (2016-19)
- Consortium Principal Investigator, World Bank funded National Agricultural Innovation Project (NAIP) subproject on "A Value Chain of Ginger and Ginger Products" (2009-2013) (CPI during 01.10.2013-31.12.2013 and Consortium Co-PI during 15.04.2009-30.09.2013)

- Principal Investigator, “Experiential Learning Facility on Model Agro-Processing Centre” (Project funded by the Indian Council of Agricultural Research) (sanctioned in 2006)
- Co-Scientist of the Govt. of India, Dept. of Bio-Technology sponsored project on “Rural BioResource Complex in Villages of Puri District” (2006-2010)
- Programme I/C, IGNOU programme study centre offering course on “Diploma in Value Added Products from Fruits and Vegetables” (2006-2010)
- In-charge of the Govt. of India, Ministry of Food Proc. Industries funded scheme for ‘Strengthening of Infrastructure for Human Resource Development’ (granted in 2005).
- Core team member of the National Agricultural Technology Project (NATP) on “Technology Assessment and Refinement Through Institute Village Linkage Programme in Eastern Ghat Highland Zone of the Rain-Fed Agro-Eco system”. (2003-05)
- Coordinator, BPCL-OUAT Biofuel project since 2018
- Co-Principal Investigator, Development of nutri-smart villages for combating malnutrition in tribal districts of Odisha (2017-21)

Other important responsibilities handled in recent years

- Member, 6th Deans’ Committee of ICAR
- Member, Committee for Developing PG Course Curriculum of Indo-Myanmar Advanced Centre for Agricultural Research and Education (Coordinated by ICAR-IARI, New Delhi)
- Member, Sub-Committee on Processing and Food Engineering under BSMA on Agricultural Engineering and Technology (Formulation of PG courses) during 2019
- Member, Research Advisory Committee of ICAR-CIPHET, Ludhiana (2017-20), ICAR-IINRG, Ranchi (2018-21), ICAR-NIRJAFT, Kolkata (2020-23), ICAR-DORG, Pune (2020-23) and ICAR-CTCRI (2021-24)
- Member, Quinquennial Review Team of ICAR-CITH, Srinagar (2026-21)
- Member, Peer review Team for accreditation to the CCS Haryana Agricultural University during 2018
- Member, Quinquennial Review Team of the ICAR-CIPHET, Ludhiana and AICRP on PHET (2012-17).
- Member, Quinquennial Review Team of the ICAR-CIAE and Agricultural Engineering schemes (2018-23).
- Member, BoS of Dr. RPCAU, Pusa (2019-21), ANGRAU, Andhra Pradesh (2020-22) and BPUT, Odisha
- Member for Course Curriculum Development and academic audit of National Institute of Technology, Rourkela
- Director, Processing, Dairy and Food Engineering of Indian Society of Agricultural Engineers since 2019
- Chairman, Technology Management Cell of OUAT since 2020
- Dean, Industry and Academia Affairs, OUAT since July, 2023
- Nodal Officer, OUAT- Alumni Coordination Committee since June, 2021
- District Nodal Officer, Boudh for monitoring of agriculture and farmers’ empowerment activities
- Nodal Officer, State Level Technical Institute, PMFME, Odisha
- Chief Nodal Officer, REWARD project, OUAT

- Coordinator, BPCL-OUAT Biofuel project, OUAT
- Member in several important technical committees of the State government and other agencies

Courses taught

- Dairy and Food Engineering
- Food Packaging
- Unit Operations in Food Process Engineering
- Advanced Food Process Engineering
- Post Harvest Engg. of Horticultural Produce

Students guided

Guided three Ph. D. and 18 M. Tech. research

Awards and recognitions

- Samanta Chandra Sekhar Award of Govt of Odisha during 2018
- Fellow, Indian Society of Agricultural Engineers (ISAE), 2018
- Senior Professional Engineer, Engineering Council of India
- Commendation medal, 2014 of the Indian Society of Agricultural Engineers for significant contributions in the field of processing, dairy and food engineering.
- Best Teacher Award, 2008-09, Orissa University of Agriculture and Technology
- Distinguished Services Award, 2006 from ISAE, New Delhi
- Best book award, Indian Society of Agricultural Engineers (ISAE), 2019
- Many awards for papers/ presentations

Publications

Authored 8 books with ISBN numbers, 12 books/ course manuals (without ISBN), four book chapters, more than 80 research papers in peer reviewed journals and more than 150 popular technical articles.

Books with ISBN

1. **Dash, S K**, Chandra, P, Kar A. 2024. Food Engineering: Principles and Practices. CRC Press (Taylor and Francis)- USA (ISBN 978-103-223-1853)
2. Swain, S, **Dash, S K**, Mangaraj, S, Ali, N. 2017. Agricultural Process Engineering Vol I (Properties and Heat and Mass Transfer Applications). Kalyani Publ, New Delhi. 428 p.
3. Mangaraj, S, **Dash, S K**, Swain S. and Ali, N. 2017. Agricultural Process Engineering Vol II (Post Harvest Unit Operations). Kalyani Publishers, New Delhi. 428 p.
4. Mangaraj, S, Ali, N. Swain S. and **Dash, S K** 2017. Agricultural Process Engineering Vol III (Storage Engineering and Technology). Kalyani Publishers, New Delhi. 348 p.
5. Swain, S, Ali, N., Mangaraj, S, **Dash, S K**. 2017. Agricultural Process Engineering Vol IV (Process Machinery, Standards and Research Management). Kalyani Publishers, New Delhi. 526 p.
6. **Dash, S K**, Sahoo, N R. 2014. Concepts of Food Process Engineering. Kalyani Publishers, New Delhi. 404 p. (ISBN 978-93-272-3923-2)

7. **Dash, S K**, Bebarta, J P, Kar A. 2012. Rice processing and allied operations. Kalyani Publishers, New Delhi. 310 p (ISBN 978-93-272-1902-9)
8. **Dash, S K**. 2004. Food Processing and Engineering. Block 4- Plant layout, equipment and mechanization (Nath, N Ed.). IGNOU, New Delhi, 64 p. (ISBN-81-266-1895-7).

Selected Research Publications (last 7 years)

1. Jyoti, J. Dash S K, Rayaguru K, Pal US, Mishra N, Ananth PN, Khandai S. 2023. Enhancement of thermal and techno-economic performance and prediction of drying kinetics of paddy dried in a solar bubble dryer. *Energy Nexus (Elsevier)* 11. 110224
2. Priyadarshini S, Rayaguru K, Routray, W, Dash S K. 2023. Study of functional, biochemical and sensory qualities of jackfruit pulp powder produced through optimized foam-mat drying parameters. *Journal of Food Science (Wiley)* 88-926-941. [https://doi.org/ 10.1111/1750-3841.16465](https://doi.org/10.1111/1750-3841.16465)
3. Manisha, Rayaguru K, Bal L M, Das S, Dash S K, Swain S C. 2023. Comparative evaluation of the drying characteristics and quality attributes of Sarpagandha roots of various maturity stages using hot air, solar, sun and shade drying. *Journal of Food Safety and Food Quality* 74: 56-65. DOI 10.53194/0003-925X-74-56
4. Nagar, C, Dash, S K, Rayaguru K. 2022. Tamarind seed: Composition, applications, and value addition: A comprehensive review. *Journal of Food Processing and Preservation*. DOI: 10.1111/jfpp.16872
5. Misra S, Rayaguru K, Dash S K, Mohanty, S., Panigrahi, C. 2022. Efficacy of microwave irradiation in enhancing the shelf life of groundnut (*Arachis hypogaea* L.). *Journal of Stored Products Research (Elsevier)* 97-101957
6. Mohapatra M, Biswal S, Nayak R N, Panda M K, Dash S K. 2022. Effect of modified atmosphere packaging on physical, bio-chemical and functional properties of Jamun (*Syzygium cumini*) during storage. *Indian Journal of Traditional Knowledge* 21(4): 865-875
7. Nagar C K, Dash S K and Rayaguru K. 2022. Optimization of peeling process parameters for taro (*Colocasia Esculenta* var. *Antiquorum*) corms. *Scientist* 1(3): 3642-3656. DOI: <https://doi.org/10.5281/zenodo.7498546>
8. Priyadarsini D, Rayaguru K, Misra S, Dash, S K. 2022. Effect of drying techniques on physicochemical properties of oyster mushroom (*Pleurotus sajor-caju*). *Journal of Food Processing and Preservation (Wiley)* DOI: 10.1111/jfpp.16598.
9. Fasake V, Dash S K, Dhalsamant K, Sahoo N R, Pal U S. 2021. Effect of ozone and antimicrobial treatments on the shelf life of cauliflower under modified atmosphere packaging. *Journal of Food Science and Technology (Springer)* <https://doi.org/10.1007/s13197-021-05326-8>.
10. Nayak P, Rayaguru K, Brahma S, Routray W, Dash S K. 2021. Standardization of process protocol for isolation of starch from mango kernel and its characterization" *Journal of the Science of Food and Agriculture (Wiley)* DOI 10.1002/jsfa.11622
11. Nagar C, Dash S K, Rayaguru K, Pal U S, Nedunchezhiyan M. 2021. Isolation, characterization, modification and uses of taro starch: a review. *International J. of Biological Macromolecules (Elsevier)*, 192: 574-589.
12. Sudhagar, A., Dash, S K, Bal L M, Sahoo N R, Rayaguru K. 2021. Extrudate snacks from rice flour and oyster mushroom powder: physico-chemical and functional properties characterization and storability evaluation. *Journal of the Indian Chemical Society (Elsevier)* 98: <https://doi.org/10.1016/j.jics.2021.100160>
13. Nayak P, Rayaguru K, Bal L M, Dash S K. 2021. Artificial Neural Network Modeling of Hot-air Drying Kinetics of Mango Kernel. *Journal of Scientific and Industrial Research* 80: 730-758

14. Nayak P, Rayaguru, K, Pal, U S, Dash S K. 2021. Development and performance evaluation of hand operated mango seed decorticator. *Journal of Food Science and Technology* (Springer) <https://doi.org/10.1007/s13197-021-05256-5>.
15. Prava V, Dash S K, Rayaguru K, Panda M K, Nedunchezhiyan M. 2020. Optimization of starch isolation process of sweet potato and characterization of the prepared starch. *Journal of Food Measurement and Characterization* (Springer) 14:1520–1532
16. Prava V, Dash S K and Rayaguru, K. 2019. Post-harvest Processing and Utilization of Sweet Potato: A Review. *Food Reviews International*. DOI: [org/10.1080/87559129.2019.1600540](https://doi.org/10.1080/87559129.2019.1600540)
17. Patel A S, Kar A, Dash S, Dash S K. 2019. Supercritical fluid extraction of β -carotene from ripe bitter melon pericarp. *Scientific Reports* DOI: [10.1038/s41598-019-55481-4](https://doi.org/10.1038/s41598-019-55481-4)
18. Pal U S, Das M, Nayak R N, Sahoo N R, Panda M K, Dash S K. 2018. Development and evaluation of retort pouch processed chhenapoda (cheese based baked sweet). *Journal of Food Science and Technology* (Springer). 56(9), DOI: [10.1007/s13197-018-3490-6](https://doi.org/10.1007/s13197-018-3490-6)
19. Dhalsamant K, Dash S K, Bal L M, Sahoo N R. 2018. Effect of Natural Antimicrobials (Clove and Garlic) on Shelf Life and Quality of Mushroom (*Volvariella volvacea*) Under Modified Atmosphere. *Journal of Packaging Technology and Research* (Springer) 2(1):1-7
20. Dawange S P, Dash S K, Bal L M and Panda M K. 2016. Quality of minimally processed carrots in perforation-mediated modified-atmosphere packaging (PM-MAP). *Journal of Food Measurement and Characterization* (Taylor and Francis). DOI [10.1007/s11694-016-9359-3](https://doi.org/10.1007/s11694-016-9359-3).
21. Devi T B, Dash S K, Bal L M and Sahoo N R. 2016. Physicochemical and microbiological characteristics of ginger paste (Cv. *Suprabha*) during storage in different packaging and temperature conditions. *Cogent Food and Agriculture* (Taylor and Francis) 2: 1223261.

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