

DAIRY ENGINEERING

Goal

- To achieve excellence in the three mandate areas of the university, i.e. Teaching, Research and Extension.

Mission

- To acquire and disseminate quality knowledge in the area of Dairy and Food Engineering.
- To develop manpower with excellence in Dairy Engineering knowledge at B.Tech.(D.T.), M.Tech. (Dairy Engineering) and Ph.D. (Dairy Engineering) level.
- To conduct need base research in the area of development of equipment for the manufacture of indigenous dairy products, energy conservation and analysis of various unit operations through mathematical modeling.
- To organize training programmes, seminars, workshops etc. on the various topics of Dairy and Food Engineering for strengthening knowledge, HRD and rapport with the dairy plants.
- To explore possibilities of inter-institutional collaboration in education and research.
- To participate in krushi melas, krushi mahotsavs, science exhibition and other programmes organized by the university and other agencies.

HRD

- Dairy Engineering Department is one of the major departments of Faculty of Dairy Science since the inception of the college in the year 1960 and involved in teaching, research and extension activities. The department offers various basic and applied subjects to students who have obtained their degree from the college. The college so far has produced 192 Indian Dairy Diploma (IDD), 1420 B. Sc.(Dairy Technology)/B. Tech.(Dairy Technology) graduates.
- Total 20 P.G. Students earned M. Sc/M. Tech or Ph. D. degree in Dairy Engineering subject who have proven themselves as gem professionals / academicians not only in India but also in other countries like USA, UK, Canada, New Zealand, Australia, Arabian countries, etc.

- The department was instrumental in training number of employees from dairy plants through the Training Programmes/ seminars/ refresher courses etc. organized in association with ICAR, Alumni Association and Vidya Dairy.

Research Achievements

The R&D activities of Dairy Engineering Department are directed towards process mechanization of Indigenous Dairy products, mathematical modelling for many unit operations and many need based research projects. Some of the important Technologies/equipments developed are indicated below.

- Development of batch type khoa making machine.
- Design and development of continuous Basundi making machine.
- Development and performance evaluation of scraped surface heat exchanger.
- Design and Development of inert spouted bed dryer for drying of milk.
- Development of mathematical model and its utility in design of laminar air flow systems.
- Analysis of various unit operations through mathematical modeling and energy conservations in dairy processing operations.
- A research scheme entitled “Evaluation and Reduction of energy losses in Dairy Processing operations” funded by Indian council of Agricultural Research, New Delhi handled during 1993 to 1998.
- Mahuda drying and utilization of Mahuda
- Efficiency of irrigation pumps
- Development of prototype vacuum operated bottle filling machine
- Development of pilot model for Development of pilot model for Sandesh making machine
- Design and development of Laminar air flow unit.

Extension

- Organized a national seminar on “Revamping Dairy Engineering: Education and Industry in global context” during April 11-12, 2007 in collaboration with Indian Dairy Engineers Association.
- Organized short training course for industry personnel and academic staff on “Energy conservation in Dairy Processing operations” during April 23rd to May 2nd, 1998.

- Participating as resource persons in several seminars and training programs organized through Faculty of Dairy Science/Alumni Association/Vidya Dairy/ Gujarat Co-Operative Milk Marketing Federation Ltd. etc.
- Providing technical guidance to dairy plants for solving the technical problems especially in the area of energy conservation.
- Participation in various seminars, symposiums and conferences organized by different institutes in India.
- To participate in krishi melas, Krishi Mahotsav (Krishi rath), science exhibition and other programmes organized by the university and other agencies.
- Several research paper and technical paper published in different journals and periodicals related to Dairy Engineering.

Awards

Name of Award/Position	Awarded by	Awarded for	Year
Chancellor's Gold Medal to Dr. Sunil Patel	Gujarat Agril. University.	For being the best post graduate student during the year 1991	1991
1 st prize of Gujarat Science Academy, Ahmedabad to Dr. B. P. Shah	Sardar Patel University.	For Research Paper Competition held on 16 th Feb, 1997	1997
Best Paper Award from "Hari Ohm Ashram Prerit Bhaikaka Inter Univ. Smarak Trust" to Dr. B. P. Shah	Hari Ohm Ashram	A paper entitled "Effect of SSHE Shape on Heat Transfer Coefficient in Basundi Making" published in Indian Journal of Dairy Science	2003
First Best Paper Award to Dr. B. P. Shah	Indian Dairy Association.	A research article on "Effect of SSHE Shape on Heat Transfer Coefficient in Basundi Making" published in Indian Journal of Dairy Science	2003
First Best Paper Award to Dr. B. P. Shah	GAAS, Ahmedabad	A paper entitled "Conservation of Energy by Cogeneration in Dairy Industry" presented in paper competition	2005

Awarded Consolation prize to Dr. B. P. Shah	NDRI, Karnal	A research paper entitled “Sandesh Making- An Innovative Approach” presented in 3 rd National Convention of Dairy Engineers	2005
Third prize for the Best Poster Presentation Award to Dhotre, A.V.; Bhadania, A. G. and Sunil Patel	NDRI, Karnal	A poster Presentations “Biosensors for quality Milk Processing. 3 rd National Convention on Engineering Interventions – Quality milk Processing”	2005
First prize for the Best Poster Presentation Award to Sunil Patel; Bhadania, A. G. and Suneeta Pinto	Indian Dairy Engineers Association, Chandigarh	Poster presented in 4 th National Convention of Indian Dairy Engineers Association and National Seminar on “Revamping Dairy Engineering: Education and Industry in Global Context”	2007
Second prize for the Best Poster Presentation Award to Dhotre, A.V., A.G.Bhadania	Indian Dairy Engineers Association, Chandigarh	Poster presented in 4 th National Convention of Indian Dairy Engineers Association and National Seminar on “Revamping Dairy Engineering: Education and Industry in Global Context”	2007

Publications

Sr No.	Details of publication	Number of publication
1	Research Paper Published	63
2	Technical/ Review articles Published	124
3	Paper presented in Seminar/Workshop/Convention	34
4	Poster presented in Seminar/Workshop/Convention	27
5	Chapter in Books	04

Contact

Dr. S.M. Patel

Professor & Head

Dairy Engineering Department

SMC College of Dairy Science

Kamdhenu University

Anand – 388110, Gujarat, India

Ph. 02692 225850(O)

Email: drsnilpatel.de.dsc@kamdhenuuni.edu.in

