

## BRIEF BIO-DATA

1. Name : **DR. DEVENDRA KUMAR**
2. Designation : **Associate Professor**
3. Discipline : **Processing & Agricultural Structure**
4. Division/ Section : **Post Harvest Processing & Food Engineering (Agril. Engg. Deptt.)**
5. Date of Birth : **01.02.1961**
6. Present Address : **Baba Sahab Dr. Bhim Rao Ambedkar College of Agricultural Engineering & Technology, Etawah-206001 U.P.**
7. Email & Mobile : **devendrachaturvedi2008@gmail.com  
09412395019**



### 8. Educational Qualification :

Sl. No.	Qualification	Year	Institution/Board
1.	High School	1975	U.P. Board Allahabad,UP
2.	Intermediate	1977	U.P. Board Allahabad,UP
3.	B. Tech. (Agril Engg.)	1982	G.B. Pant University of Agriculture & Technology, Pantnagar, Uttrakhand
4.	M.Tech. (Agril. Engg.) Process & Food Engg.	1993	G.B. Pant University of Agriculture & Technology, Pantnagar, Uttrakhand
5.	Ph.D. (Agri. Processing and Food Engg.)	2019	Sam Higgin Bottom University of Agriculture, Technology and Sciences, Prayagraj,UP

### 9. Working Experience

Sl. No.	Post held	Period	Employer
1.	Apprentice Trainee Engineer	05.01.1983 to 27.05.1983	Director, Central Farm Machinery Training and Testing Institute, Budni, (M.P.)
2.	Training Assistant	28.05.1983 to 25.04.1985	-do-
3.	Asstt. Professor (Agril. Engg.)	27.04.1985 to 26.04.1996	Vice Chancellor, NDUA&T, Ayodhya, U.P.
4.	Associate Professor (Agril. Engg.)	27.04.1996 to 26.06.2001	-do-
5.	Associate Professor (Processing and Agril Structure)	27.06.2001 to continue	Vice Chancellor, CSAUA&T, Kanpur, U.P.

## **10. Specific achievements Research / Teaching/ Extension:**

### **(a) Research:**

- **Study of machine parameters in milling of sodium bi carbonate treated and enzyme treated pigeonpea (Cajanus cajan L.) grain-M.Tech. Thesis.**
- **Development and Quality Evaluation of sugar and jaggery based papaya leather-Ph.D. Thesis**
- Published – 25 research papers in various journals.
- Presented – 84 research papers in various conferences/conventions/seminars.
- Thesis guided – 45 Nos
- Scientific Articles – 150 Nos.
- Adhoc ICAR research project entitled “**Ergonomic studies on farm workers of central UP for design of farm implements and machines**” as Co-PI and PI.
- UPCAR funded research project entitled "**Development of small and women friendly equipments**" as Co-PI.

### **(b) Patents applied / obtained or implemented/ Technology generated:**

**Various machines/implements demonstrated and technologies were generated at farmer's level**

- Implementation of zero seed cum ferti drill for sowing of wheat at farmer's field.
- Implementation of potato planter for sowing of potato seed at farmer's field.
- Implementation of self propelled rice transplanter at farmer's field.
- Implementation of garlic planter for sowing of garlic at farmer's field.
- Implementation of serrated sickle for harvesting of paddy and wheat crop.
- Development of potato slicer for preparation of potato slice.
- Development of zero energy cool chamber and onion storage structure at village level.

### **(c) Courses designed & taught:**

**Farm machinery, farm power, operation and maintenance of farm machinery, operation and maintenance of diesel engine/ tractor, seed processing, agro industrial processing, process equipment design, food engg., food industry management, post harvest technology of cereals, pulses and oil seeds, standardization and quality control, Engg. properties of biological materials and food quality, crop process engineering., Drying and storage engineering, Dairy**

**and food engineering, development of processed products and equipments , Unit operation in food process engg, engg. properties of food materials, drying and dehydration of foods, processing of cereals, pulses and oil seeds, post harvest processing of grains, advanced food process engg., transport phenomena in food processing and Farm structure & environmental control.**

**(d) Transfer of Technology:**

**Transferred the technology to practicing farmers, rural youth and in service personnel through conducting training, demonstrations, adoptive trials, field days, krishak goshies, kishan mela, TV talk etc.**

- Farmers-Scientist interaction programmes have been organized as a coordinator on 21-23 March, 2002 at Basrehar, 22-24 October, 2002 at Takha, and 28-30 October 2002 at Barpura of Etawah district.
- Farmers technical training programme have been organized as a coordinator on 18-20 March, 2002 at RIRD Bakewar, 24-26 March, 2004 at Jaswantnagar, 28-30 September, 2002 at Bharthana, 11-13 November 2002 at Ajitmal and 18-20 November at Bhagyanagar of Etawah District.
- Attended Kharif and Rabi-Kishan mela and exhibition and organized stall at CSAUAT, Kanpur during the year 2001-2019.
- Conducted adoptive trials on evaluation of varieties of arhar for sterility mozaic and high yield at village-Chuppepur and Jakhini of Varanasi District during the year 2000-2001 and use of rhizobium culture in gram by sowing seed cum ferti drill at village Rakhauna and Khajuri of Varanasi District during the Rabi-2001-02.
- Conducted adoptive trial on evaluation of hybrid rice varieties for high yielding ability and their suitability in Kharif 2002 at Ajitmal, Auraiya .
- Delivered radio talks on use and application of Agricultural Machinery at All India Radio Varanasi during 1996-2001.
- Delivered TV talks on potato planter: use and maintenance (20.12.2006), potato digger and its importance (2.01.2007), Krishi utpad prasanskaran and value addition (23.08.2021) under the Krishi Darshan Programme of Door Darshan, Lucknow.
- Delivered TV talks on use of arhar dill (23.01.2007) under the Annadata Programme of ETV.
- Participated in NSS campaign of B.Tech. Agril. Engg. students during 1-10 March 2003 (Sarai Bhupat), 20-29 March 2004 (Sarai Bhupat), 16-25 March, 2005 (Luhanna), 14-23 February, 2007 (Kandhani), 18-27 February, 2008

(Sarai Bhupat) and 17-23 March, 2009 (Kandhani) as a organizing committee member.

- Deliver talk in NSS campaign on post harvest technology and value addition, Organized by CAET, Etawah during 2010-2021.
- Organized and attended training programme on Agro-processing and value addition (7-20 March, 2008), Selection, operation and maintenance of agricultural machinery for drying land agriculture (7-20 March, 2008), Water management through sprinkler and drip irrigation and water saving devices (24-30 March, 2008), Utilization of non conventional energy sources in agriculture (24-30 March, 2008), Selection of operation and maintenance of plant protection equipments (25-31 March, 2008), Selection operation and maintenance of hand pumps (25-31 March, 2008) and Selection, operation, safety and maintenance of improved agricultural machinery (06 June – 17 July, 2008).
- Attended district level krishak goshties, training programmes and kisan mela organized by Agriculture Department, KVK, ATMA, Government food preservation and training centre, PNB Krishak Prashikshan Kendra, Etawah during 2001-2021.
- Attended Akhil Bharti Kisan Mela and Agricultural Exhibition at CSAUA&T, Kanpur every year and organize college stall.
- Attended training on quality control and hygiene awareness- Feb. 1-2, 2013, August 22-23, 2013, Nov. 12-13, 2014 and Nov. 15-16, 2014, Sept.19-20,2017 at Govt. Fruit Preservation and Training Centre, Etawah.
- Demonstrated agricultural machinery/implements/processing equipments at farmer's field.
- Delivered talk on fruit and vegetables preservation on 24.10.2018, 15.01.2019 and 20.03.2021 at Government food preservation and training centre, Etawah. .
- Organized Sangoshthi to small and women farmers on 25.05.2018 at CAET, Etawah .

**(e) Projects / proposals processed:**

- Adhoc ICAR research project entitled “Ergonomic studies on farm workers of central UP for design of farm implements and machines” worked as CO-PI and PI w.e.f. 15 May, 2003 to 14 August, 2006.

- UPCAR funded research project entitled” Development of small and women friendly equipment” working as Co-PI w.e.f. 15.06.2017 to continued.

#### **Submission of Projects proposal**

- Study of existing packaging technology of Mango and their refinement. Submitted to UPCAR during the year 2020-21.

#### **(f) Monitoring of Projects/Schemes/activities: including utilization of funds.**

- Adhoc ICAR research project entitled “**Ergonomic studies on farm workers of central UP for design of farm implements and machines**” worked as CO-PI and PI w.e.f. 15 May, 2003 to 14 August, 2006 (Budget allocation-18.27 lakh).
- UPCAR funded research project entitled "Development of small and women friendly equipments worked as Co-PI w.e.f.15.06.2017 to continued (Budget allocation 40.06 lakh).

### **11. Published work during the assessment period:**

#### **(i) Research Publications**

<b>S. No.</b>	<b>Name(s) of Authors in order (Sole/Sr./Co-author)</b>	<b>Title of the Paper (Vol. No. &amp; Issue No.)</b>	<b>Name of the Journal</b>	<b>NAAS Rating</b>
1.	Kumar, Devendra, Kumbhar ,B.k. and Mohd. Gufran	Optimization of machine parameters on milling of enzyme treated pigeon pea grain for higher percentage of finished product and hulling efficiency. 15 (1-2):101-106.	New Agriculturist, 2004 (ISSN 0971-0647)	4.54
2.	Chauhan, B.S. and Kumar, Devendra	Effect of spray dryer operating parameters on the quality of milk powder.16 (1-2) 107-111.	New Agriculturist, 2004 (ISSN 0971-0647)	4.54
3.	Maheshawari, T.K. and Kumar, Devendra	Design and development of new kind of plough by using triz and robust. 15 (1-2): 45-48.	New Agriculturist, 2004 (ISSN 0971-0647)	4.54
4.	Lal Mani and Kumar, Devendra	Performance evaluation of power operated potato grader. 16 (1-2):71-74.	New Agriculturist, 2005 (ISSN 0971-0647)	4.54

5.	Kumar, Devendra and Lal Mani	Physico-chemical, textural and sensory analysis of qualitative attributes of banana fruit and its products. 16(1-2) : 91-96	New Agriculturist, 2005 (ISSN 0971-0647)	4.54
6.	Maheshawari, T.K. and Kumar, Devendra	Utility of bio diesel as renewal fuel in engine. 16 (1-2) 97-100	New Agriculturist, 2005 (ISSN 0971-0647)	4.54
7.	Maheshawari, T.K., Varma, M.R. and Kumar, Devendra	Performance study of multicrop seed cum fertidril. 30 (1-2) 23-27.	Agril. Engg. Today, 2006 (ISSN 0970-2962)	5.30
8.	Kumar, Devendra and Sharma, Sanjay Kumar	Sodium bicarbonate pretreatment of pigeonpea grain and its interaction with milling. 29(1) :122-125.	Legume Research, 2006 (ISSN 0250-5371)	6.53
9.	Sharan, Y.P. Verma, M.R. and Kumar, Devendra	Statistical analysis of anthropometric data of female farm workers of Central U.P. 18 (1-2) : 95-98	BIOVED, 2007 (ISSN0971-0108)	4.54
10.	Kumar, Devendra	Performance evaluation of microwave heating system for milk pasteurization. 1(2): 121-122	Current Advances in Agricultural Sciences, 2009 (ISSN0975-2315)	3.96
11.	Kumar, Devendra and Gupta, Anoop Kumar	Post harvest losses of food grains in Etawah District of UP. 3(1): 70-71	Current Advances in Agricultural Sciences, 2011 (ISSN0975-2375)	3.96
12.	Kumar, Devendra and Lal Mani	Evaluation of Protein content of dhal and finished product during successive milling of pigeonpea grain under various treatment.. 22(2): 169-174	New Agriculturist, 2011 (ISSN 0971-0647)	4.54
13.	Lal Mani and Kumar, Devendra	Study of onion storages structure in Etawah district of UP. 22(2): 175-178	New Agriculturist, 2011 (ISSN 0971-0647)	4.54
14	Kumar, Devendra and Vijay Prakash	Effect of Pre-treatment on dehydration and quality characteristics of mushroom. 4(1):94-97	Current Advances in Agricultural Sciences 2012 (ISSN0975-2315)	3.96
15	Sharma, N.K., Singh, D, Kumar, Devendra, Bhadauria, P.K.S. and. Sharma, V.K.	Prospects of using electromagnetic energy in Agriculture: An overview. 5(2):175-183	Current Advances in Agricultural Sciences 2013 (ISSN0642-2315)	3.96

16	Kumar, Devendra, Lal Mani and Singh, Rajeev	Performance study regarding dehydration and quality characteristics of mushroom. (Pleurotus Ostreatus).4(2):39-43, 2014.	Agricultural Science Research Journal 2014 (ISSN:2026-6332)	4.54
17.	Kumar, Devendra and Shukla, R.N.	Evaluation of quality attributes of Papaya Leather, 11 (1):84-89., 2018.	International Journal of Agril Engg. 2018 (ISSN:0974-2662)	4.43
18.	Kumar, Devendra, Shukla, R.N. and Kumar, Sanjeev	Study on qualitative attributes of RTS beverage of mixed fruit using bael and orange under different storage conditions, 9(1): 79-84, 2018.	Food Science Research Journal 2018 (ISSN:0976-1276)	4.11
19.	Kumar, Devendra and Shukla, R.N.	Studies on colour kinetics and textural characteristics of sugar and jaggery based papaya leather, 9(2): 428-434, 2018.	Food Science Research journal 2018 (ISSN:0976-1276)	4.11
20.	Verma, Vipin Kumar and Kumar, Devendra	Evaluation of physico chemical, characteristics of cauliflower slices at different pretreatment and drying conditions, 12(2):243-250, Oct. 2019	International Journal of Agril Engg. 2019 (ISSN:0974-2662)	4.43
21.	Singh, Rupendra and Kumar, Devendra	Study of qualitative attributes of mixed juice using carrot, spinach and beet root, 10(2):176-180, Oct. 2019	Food Science Research journal 2019 (ISSN:0976-1276)	4.11
22.	Kumar, Jitendra and Kumar, Devendra	Development and quality evaluation of carrot and orange blend juice , 10(2): 28-34.Dec. 2019	International Journal of Processing and Post Harvest Technology 2019 (ISSN:0976-5638)	3.84
23	Maurya, R.K. and Kumar, Devendra	Studies on physico-chemical parameters of biscuits using wheat, sorghum and groundnut blend flour, 11(2):77-83.Oct.2020.	Food Science Research Journal 2020 (ISSN:0976-1276)	4.11
24	Maurya, R.K., Kumar, Devendra, Singh, D .and Verma, Vipin Kumar.	Studies on textural and sensory quality attributes of biscuits using wheat, sorghum and groundnut blend flour,11(2),Oct.2020: 151-157.	Food Science Research Journal 2020 (ISSN:0976-1276)	4.11

25	Verma, Vipin Kumar. ,Kumar, Devendra, Singh, R. ,Kumar, P. and Singh, D.	Evaluation of sensory attributes of cauliflower slices under various pre-treatments and drying and microwave condition, 11(2),Oct. 2020:195-201.	Food Science Research Journal 2020 (ISSN:0976-1276)	4.11
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**(ii) Other publications / Presentations in Conferences/ Seminars/Conventions etc:**

1. Kumar, Devendra, Saxena, R.P.; Kumbhar, B.K. and Agrawal, U.S. (2001). "Optimization of machine parameters for maximum percentage of finished product and hulling efficiency in milling of enzyme treated pigeon pea (*Cajanus cajan* L.) grain. proceeding of national seminar on" Emerging trends in processing, handling, storage and By-product utilization of pulse and soybean, held at GBPUA&T, Pantnagar w.e.f. Jan. 18-19, 2001. P. 88-98.
2. Sahu, A.K., Gufran,M. and Kumar, Devendra (2001). Mathematical modelling of rainfall run off process for a Himalayan watershed. Presented in Indian Geo-technical conference, held at MNNIT, Allahabad (UP) Dec. 20-22, 2002
3. Kumar; Devdra, Kumbhar, B.K. and Varma, M.R. (2002). Effect of machine parameters in milling of enzyme treated pigeon pea. Proceedings of XXXVI Annual convention of ISAE, held at IIT, Kharagpur (WB), Jan 28-30, 2002. P No. FP: 2001-1-24
4. Sahu, A.K.; Gufran,M. and Kumar, Devendra (2003). Quantification of micropores in granular material using IAM data in 'C' language. Published in Proceedings of ACEDEC, held at HBTI, Kanpur, Feb 15-16, 2003. P No. 355-362.
5. Kumar, Devendra and Chauhan, B.S. (2003), Strategies for post production processing, storage and biproduct utilization of pulses in India. Proceedings of National Science Day (Science and Engineering to Society), held at CAET, Etawah, Feb 2003 P No.19-20.
6. Chauhan, B.S. and Kumar, Devendra (2003). Conservation of energy for making better quality of milk powder by spray drying method. Proceedings of National Science Day (Science and Engineering to Society), held at CAET, Etawah, Feb 2003 P No.21-22.
7. Gufran, M., Sahu, A.K. and Kumar, Devendra (2003). Mathematical modeling of Rainfall-Runoff process for a Himalayan watershed. Published in Proceedings of the International conference on water and Environment (WE-2003), held at Resources Development centre, Regional Research Laboratory, CSIR, Bhopal (M.P.) Dec. 15-18, 2003, P141-145.
8. Kumar, Devendra and Prakash, Anand (2004). Study of milling performance of Sodium bicarbonate treated pigeonpea grain. Published in Proceeding of XXXVIII Annual convention of Indian society of Agril. Engineers held at CAET, BSKKV, Dapoli, Ratnagiri (Maharashtra), Jan. 16-18, 2004, Paper No. APE-2004-ACP23, P-239.
9. Chauhan, B.S. and Kumar, Devendra (2004). Effect of operating variables on the quality of milk powder. Proceeding of ISAE held at CAET, B.S.KKV Dapoli (Maharashtra) Jan. 16-18, 2004.
10. Sahu, A.K., Kumar, Devendra and Gufran,M. (2004). Environmental friendly utilization of fly-ash as industrial material. Proceedings of National seminar on

“Environmental Vision: Retrospect and Prospects” held at CAET, Etawah U.P, Feb. 28, 2004 P-43.

11. Kumar, Devendra (2004). Utilization of urban waste for energy production and pollution free environment. Proceeding of National Seminar on Environmental Vision: Retrospect and Prospects” held at CAET, Etawah U.P, Feb. 28, 2004 P-18.
12. Maheshwari, T.K. and Kumar, Devendra (2004). Environmental benefits of live stock manure management practices and technology by life cycle assessment. Proceedings of National Seminar on Environmental vision: Retrospect and Prospects” held at CAET, Etawah U.P., Feb. 28, 2004 P-31.
13. Maheshwari, T.K. and Kumar, Devendra (2004). Production and use of bio-diesel as renewal fuel in I.C. Engine. Paper presented in National conference on ‘Bio-diesel for I.C. Engine-Technologies and Strategies for rural application” held at CIAE, Bhopal (MP) during Decemer-3-4, 2004.
14. Kumar, Devendra (2004). Analytical study of qualitative attributes of Banana Fruit and its products. Published in proceeding of International Conference on “Emerging Technologies in Agricultural and Food Engineering” held at IIT Kharagpur (WB) during December 14-17, 2004 Paper No. FBPE 307/15:219.
15. Kumar, Devendra and Lalmani (2005). Textural analysis of qualitative attributes of Banana fruit and its products. Paper presented in 39<sup>th</sup> Annual convention of ISAE, held at Acharya R.N. Ranga Agril. University, Rajendra Nagar, Hyderabad during Feb 2-4, 2005.
16. Lalmani and Kumar, Devendra (2005). Post Harvest Technology for increasing income of fruits and vegetables growers. Paper presented in 39<sup>th</sup> conventional of ISAE, held at Acharya R.N. Ranga Agril. University, Rajendra Nagar, Hyderabad during Feb 2-4, 2005.
17. Saran, Y.P., Verma, M.R., Kumar, Devendra and Khobragade, H.M. (2006). Anthropometric Data of Farm Workers of Central U.P. for design of Farm Implements and Machines. Proceeding of 40<sup>th</sup> Annual convention of ISAE, held at Tamilnadu Agril. University of Coimbatore during Jan. 19-21, 2006. FMP-2006- ES-08:2.61.
18. Verma, M.R., Khobragade, H.M. and Chaturvedi, D.K. (2006). Anthropometric survey of Farm Workers of Central U.P. Proceeding of 40<sup>th</sup> Annual convention of ISAE, held at Tamilnadu Agril. University of Coimbatore during Jan. 19- 21, 2006. FMP-2006- ES-09:2.62.
19. Kumar, Devendra, Lalmani and Tripathi, Rahul (2006). Evaluation of protein losses during successive milling of pigeon pea grain. Proceeding of 40<sup>th</sup> Annual convention of ISAE, held at Tamilnadu Agril. University, Coimbatore during Jan. 19-21, 2006. APE-2006- ACP-22:3.9.
20. Lalmani, Kumar, Devendra and Patel, K.K. (2006). Onion Storage Structures in Central U.P. Proceeding of 40<sup>th</sup> Annual convention of ISAE, held at Tamilnadu Agril. University, Coimbatore during Jan. 19-21, 2006. APE-2006- HCP-38:3.34.
21. Kumar, Devendra and Lalmani (2006). Effect of Seed moisture content and instant moisture addition on mustard oil recovery. Paper presented in International conference on “Post Harvest Technology and Value Addition in Cereals, Pulses and Oil Seeds, held at C.S.AU.A&T, Kanpur during Nov.27-30, 2006. ORL 7.02 : 50.
22. Lalmani and Devendra Kumar (2006). Post Harvest Technology of Agril. produce: A new area for employment of rural women (A case study). Paper presented in

International conference on “Post Harvest Technology and Value Addition in Cereals, Pulses and Oil Seeds, held at C.S.AU.A&T, Kanpur during Nov.27-30, 2006. P11.91: 170.

23. Kumar, Devendra, Lalmani and Singh, Akhil Pratap (2007). Effect of moisture parameters on oil recovery percentage in mustard under three successive pressing. Proceeding of 41<sup>st</sup> Annual Convention of ISAE, held at Junagadh. Agril. University, Junagadh (Gujrat). During Jan. 29-31, 2007. APE-2007-ACP-19:3.9.
24. Lalmani, Kumar, Devendra and Kumar, Ravindra (2007). Performance evaluation of vegetable seed extractor. Proceedings of 41<sup>st</sup> Annual Convention of ISAE, held at Junagadh. Agril. University, Junagadh (Gujrat). During Jan. 29-31, 2007. APE-2007-HCP-33:3.81.
25. Maheshwari, T.K. and Kumar, Devendra (2007). Utility of biodiesel as renewal fuel in engine. Proceedings of 9<sup>th</sup> Agriculturist Scientist and Farmer’s Congress, held at VPU, Allahabad during January 29-30, 2007.
26. Kumar, Devendra and Maheshwari, T.K. (2007). Ergonomic studies on farm workers of Central Uttar Pradesh for design of farm implements/machines. Presented in 4<sup>th</sup> workshop of AICRP on ESA, held at OUAT, Bhubneshwar during Oct. 4-6, 2007
27. Maheshwari, T.K. and Kumar, Devendra (2007). Design of manually operated equipment and machines for farm workers of Central Uttar Pradesh: Anthropometric data study. Presented in International Ergonomic Conference on Humanizing Work and Work Environment (HWWE) held at CIAE, Bhopal (MP) during Dec. 10-12, 2007. P-24 and Published in book “Developments in Agriculture and Industrial Ergonomics,” Vol-I, P-375.
28. Maheshwari, T.K. and Kumar, Devendra (2007). Manually operated equipment for women farm workers-An ergonomic study. Paper presented in International Conference on Humanizing work and work environment held at CIAE, Bhopal (MP) during Dec. 10-12, 2007. P-42 and Published in book “Developments in Agriculture and Industrial Ergonomics,” Vol-II, P-188.
29. Kumar, Devendra and Lal Mani (2008). Analytical study of qualitative attributes of Apple Jam. Presented in 42<sup>nd</sup> Annual Convention of Indian Society of Agril. Engineers, held at Central Institute of Agril. Engg, Bhopal (MP) during 1-3 Feb. 2008 (APE 2008-HCP 01: 37-38).
30. Kumar, Devendra (2009). Study of milk pasteurization using microwave heating system. Proceeding of 43<sup>rd</sup> Annual Convention of Indian Society of Agril. Engineers, held at Brisa Agricultural University, Kanke, Ranchi during February 15-17, 2009 (ISAE 09/APE/DFE/01:273).
31. Kumar, Devendra (2009). Performance evaluation of microwave heating system for milk pasteurization. Paper Presented in International Conference on current trends in biotechnology and implications in agriculture, held at Sardar Vallabh Bhai Patel University of Agriculture and Technology, Merut U.P. during February 19-21, 2009.
32. Chaturvedi, D.K. (2009). Study of milk microwave heating system for milk pasteurization. Proceeding of International conference on “Food Security and environmental sustainability (FSES-2009) held at IIT, Kharagpur during Dec. 17-19, 2009.

33. Kumar, Devendra and Gupta, Anoop (2010). Study of post harvest losses of food grain in Etawah District. Paper presented in National Symposium on "Food Security in Context of Changing Climate" held at CSAUA&T, Kanpur during 30 Oct. to 01 Nov. 2010 (4.23 P) P-74.
34. Lal Mani and Kumar, Devendra (2010). Study on processing and preservation of garlic in Etawah District of UP. Paper presented in 44<sup>th</sup> Annual Convention of ISAE and Symposium on "Engineering interventions for food security" held of IARI, New Delhi during January 28-30, 2010 (HCP-2010-29) P-2.29.
35. 35 Kumar, Devendra and Lal Mani (2010). Study of qualitative attributes of garlic. Paper presented in 44<sup>th</sup> Annual Convention of ISAE and Symposium on "Engineering interventions for food security" held of IARI, New Delhi during January 28-30, 2010 (HCP-2010-30) P-2.29.
36. Kumar, Devendra and Lal Mani (2011). Evaluation of Post harvest losses of cereals, pulses and oil seed food grains. Paper presented in 45<sup>th</sup> Annual Convention of ISAE and International Symposium on "Water for agriculture" held at Dr. PDKV, Akola (MS) during Jan. 17-19, 2011 (ACP-1.40) P-206.
37. Kumar, Devendra and Kumar, Vipin (2011). Performance evaluation of potato dicing and cubing machine" Paper presented in 45<sup>th</sup> Annual Convention of ISAE and International Symposium on "Water for agriculture" held at Dr. PDKV, Akola (MS) during Jan. 17-19, 2011 (HCP-2.42) P-256.
38. Kumar, Devendra and Lal Mani (2011). Study of post harvest losses of food grains. Paper presented in GENESIS-2011, National Seminar on "Challenges and prospectus in bio energy and food security" held at HBTI, Kanpur on 9<sup>th</sup> March, 2011 (FSPP-26) P-47.
39. Kumar, Devendra, Yadav, J.P. and Rajput, P.K. (2012). Post harvest losses of cereals, pulses and oil seeds. Paper presented in National Seminar on "Emerging trends in input management for higher agricultural productivity" held at Janta College Bakewar, Etawah (UP) during Feb. 26-27, 2012.
40. Kumar, Devendra and Lal Mani (2012). Quality characteristics of dehydrated oyster mushroom. Paper presented in 46<sup>th</sup> Annual Convention of ISAE and International Symposium on "Grain storage" held at GBPUA&T, Pantnagar (Uttanchal) during Feb. 27-29, 2012 (PDFE-2012-DFE-35) P-109.
41. Kumar, Devendra, Lal Mani and Yadav, Mangal (2012). Study of qualitative attributes of germinated green gram flour" Paper presented in 46<sup>th</sup> Annual Convention of ISAE and International Symposium on "Grain storage" held at GBPUA&T, Pantnagar (Uttanchal) during Feb. 27-29, 2012 (PDFE-2012-ACP-48) P-45.
42. Kumar, Devendra, Lal Mani and Preety (2013). Fortification of packaging conditions of chapatti. Paper presented in 47<sup>th</sup> Annual Convention of ISAE and International Symposium on "Bio energy-Challenge and opportunities" held at Acharya N.G. Ranga Agril. University Rajendra Nagar, Hyderabad during Jan. 28-30, 2013.
43. Kumar, Devendra, Yadav, J.P., Rajput, P.K. and Singh, H.C. (2013). Study of qualitative attributes and packaging conditions for chapatti. paper presented in National Seminar on "Value added Functional Food-Prospects and Future" held at Janta College, Bakewar Etawah during 23-24, 2013.

44. Kumar, Devendra, Lal Mani and Singh, H.C. (2014). Physico-chemical and Textural study of qualitative attributes of apple jam. Proceeding of National Conference on "Emerging problems and recent advances in applied sciences" P279, Organized by CCS University Meerut w.e.f. Feb 8-9, 2014.
45. 45 Singh, H.C. Kumar, Vinod, Kumar, Rajesh and Kumar, Devendr (2014). A study about use of resource conserving technology in agriculture: Farmers perception in Etawah district. Proceeding of National Conference on "Emerging problems and recent advances in applied sciences" P217, Organized by CCS University Meerut w.e.f. Feb 8-9, 2014.
46. Sharma, N.K., Kumar, Devendra and Verma, V.K. (2014). Empowerment of women through agriculture mechanization. Proceeding of "Empowerment of women through agriculture mechanization" held at CSAUA&T, Kanpur w.e.f. December 20-21, 2014.
47. Singh, Rajveer, Singh, Mridulesh and Kumar, Devendra (2014). Impact of marketing on agricultural products in rural market of Uttar Pradesh. Proceeding of women empowerment during xii five year plan through agricultural mechanization held at CSAUA&T, Kanpur w.e.f. 24-25, 2014 (RP-28) P198-204.
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59. Kumar, Devendra, Shukla R.N. and Shakya, B.R. (2017). Evaluation of quality characteristics of sugar and jaggery based papaya leather. 51<sup>st</sup> Annual convention of Indian Society of Agricultural Engineers and National Symposium on "Agricultural Engineering for sustainable and climate smart agriculture" organized by C.C.S. Haryana Agricultural University, Hisar during 16-18 Feb. 2017, ISAE-2017/PDF/HCP-14, P. 106.
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83. Kumar, Devendra and Maurya, Rohit Kumar (2020). Evaluation of quality attributes of biscuits using wheat, sorghum and groundnut blend flour. Paper presented in International Virtual Conference on "Future food for sustainability and nutritional security" organized by Amity University, Noida on December, 21, 2020.

**(III) Thesis Guided:** The project/ thesis, guided to (B.Tech. Agril. Engg. & M.Tech. Agril. Engg.) students. The topics of the thesis guided are as follows:-

#### **A. B.Tech, Agricultural Engineering**

1. Analytical study of quantitative attributes of Bana fruit and its products as a Advisor during the year 2002-03
2. Study of milling performance of pretreated pigeon pea (*Cajanus cajan* L.) grain as a advisor during the year 2002-03.
3. Study of various grain storage structures in Etawah distt. as a Advisor during the year 2003-04.
4. Performance Evaluation power operated potato grader as a co-advisor during the year 2003-04.
5. Study of processing and preservation of garlic in Etawah Distt. as a co-advisor during the year 2003-04.
6. Study of cream separator in a dairy plant as a advisor during the year 2004-05.
7. Performance of evaluation of multipurpose grain mill for wheat milling as a advisor 2004-05.
8. Protein losses during successive milling of pigeon pea grain as a advisor during the year 2004-05.
9. Comparative study of the rice milling systems and their economics as a advisor during the year 2005-06.
10. Performance evaluation of oil expeller as a advisor during the year 2005-06.
11. Analytical study of qualitative attributes of apple fruit and apple jam as advisor during the year 2006-07.
12. Performance evaluation of fruit pulper as advisor during the year 2006-07.
13. Study of milling characteristics of pigeon pea grain as advisor during the year 2006-07.
14. Study of milk pasteurization using microwave heating system as advisor during the year 2007-08.
15. Study of qualitative attributes of garlic as advisor during the year 2007-08.

16. Study of quality parameters of milk powder in spray drying as advisor during the year 2007-08.
17. Microwave puffing of cereals as advisor during the year 2008-09.
18. Development of protein enriched ragi extrudates as co- advisor during the year 2008-09.
19. Study of modified atmospheric packaging of tomato as advisor during the year 2008-09.
20. Performance evaluation of dicing and cubing machine as advisor during the year 2009-10.
21. Study of post harvest losses of food grains in Etawah District as advisor during the year 2009-10.
22. Study of qualitative and quantitative attributes of germinated green gram flour as advisor during the year 2010-11.
23. Performance study of dehydrated mushroom as advisor during the year 2010-11.
24. Study of processing parameter of garlic paste as advisor during the year 2010-11.
25. Fortification of packaging condition for Chapati as advisor during the year 2011-12.
26. Study of grain parameters and milling characteristics of paddy as advisor during the year 2011-12.
27. Study on qualitative attributes of potato powder as advisor during the year 2012-13.
28. Evaluation of qualitative attributes of carrot and sugar beet beverage as advisor during the year 2012-13.
29. Design and development of automatic water level controller cum indicator for farm & processing water tank as advisor during the year 2013-14.
30. Evaluation of qualitative attributes of sugar and jaggery based papaya leather as advisor during the year 2013-14.
31. Study of qualitative attributes of fruits butter using apple & Bael as advisor during the year 2014-15.
32. Study of qualitative attributes of whey based pineapple beverage as advisor during the year 2014-15.
33. Study of qualitative attributes of sweet potato based snack food as advisor during the year 2015-16.
34. Study on qualitative attributes of RTS Beverage of mixed fruit using orange and bael as advisor during the year 2016-17
35. Performance evaluation of onion harvester as advisor during the year 2017-18
36. Evaluation of Qualitative attributes of instant rice and dhal mix as advisor during the year 2017-18
37. Development and evaluation of Jelly by extraction of pectin using apple and lemon peels as advisor during the year 2018-19.
38. Study on self life of plum –jinger leather as advisor during the year 2018-19.
39. Design and evaluation of solar photovoltaic pump with energy storage as advisor during the year 2018-19.
40. Study on process parameters of Ginger as advisor during the year 2019-20.
41. Development and performance evaluation of rotary type Groundnut decorticator as advisor during the year 2019-20.

### **B. M. Tech. Agricultural Engineering**

1. Quality evaluation of cauliflower using different drying techniques as advisor during the year 2018-19
2. Study of qualitative attributes of mixed juice using carrot, spinach and beet root as advisor during the year 2018-19
3. Development and quality evaluation of carrot and orange blended juice as advisor during the year 2018-19
4. Studies on quality attributes of biscuits using wheat, sorghum and groundnut blend flour during the year 2019-20.

### **12. Participation in Seminar / Symposia/ Conference/Workshop/ Virtual Webinar etc.**

<b>S. No .</b>	<b>Name of the Seminars / Symposia / Conference/Workshop</b>	<b>Organizing Institution</b>
1.	Emerging trends in processing and by product utilization of pulses and soybean. Jan. 18-19, 2001.	G.B. Pant University of Agric. & Tech. Pant Nagar.
2.	Workshop on Texture analysis - Sept. 5, 2001.	Scientific and Digital System, New Delhi.
3.	National Seminar on Science & Engg. to Society- Feb. 28, 2003.	College of Agril. Engg. & Tech. Etawah.
4.	National Seminar on Environment Vision : Retrospect & prospects- Feb. 28, 2004.	College of Agril. Engg. & Tech. Etawah.
5.	National Conference on bio-diesel as renewable fuel IC Engine- Dec.3-4, 2004.	Central Institute of Agril. Engg., Bhopal.
6.	Seminar on Ved and Vedas- Feb. 28, 2005.	College of Agril. Engg. & Tech. Etawah
7.	International Conference on Post Harvest Tech. & Value addition in Cereals, Pulses & Oil Seeds- Nov. 27-30, 2006.	C.S.Azad University of Agric. & Tech., Kanpur.
8.	International Ergonomics Conference on Humanitizing work and work environment-Dec, 10-12, 2007	Central Institute of Agril. Engg., Bhopal.
9.	International Conference on Current trends in biotechnology and implications in agriculture- Feb 19-21, 2009	S.V.B.P. University of Agri. & Tech. Meerut.
10.	National Symposium on Food Security in context of changing climate-30 Oct.-01 Nov. 2010	CSAUA&T, Kanpur
11.	44 <sup>th</sup> Annual Convention of ISAE and Symposium on Engineering interventions for food security-January 28-30, 2010.	IARI, New Delhi
12.	National Seminar on “Challenges and prospectus in bio energy and food security”- 9 <sup>th</sup> March, 2011	HBTI, Kanpur
13.	National Seminar on “Emerging trends in input management for higher agricultural productivity” Feb. 26-27, 2012.	Janta College Bakewar, Etawah (UP)

14.	National Seminar on "Value added functional food-Prospects and future" Feb 23-24, 2013.	Janta College Bakewar, Etawah (UP)
15.	National Seminar on "Managing Crop Productivity for Food Security in Changing climate scenario" March 28-29, 2015	Janta College Bakewar, Etawah (UP)
16.	National Seminar on "Bio-diversity and renewable energy 2016" Feb. 13-14, 2016	Dr. B.R.A. College of Agril. Engg. and Technology, Etawah
17.	Third national conference on " River basin: Ecosystem crises and water scarcity" April 23-24, 2016	IERT, Allahabad
18.	Workshop on "Entrepreneurship in MSME food industries" May 2, 2016.	SHUATS, Allahabad
19.	Workshop on " Statistical data analysis" Sept 01, 2016	SHUATS, Allahabad
20.	National Seminar on "Recent trends and future prospects in sustainable agriculture with reference to climate change" March 18-19, 2017.	Janta College Bakewar, Etawah (UP)
21.	National Conference on "Farmers Centric Agri Innovation for sustainable development" March 24-25, 2017.	CSAUA&T, Kanpur
22.	International Workshop on" Sustainable Agriculture Mechanization: Prospects and Challenges for Indian Agriculture", March 29,201	SHUATS, Allahabad
23.	National Conference on "Organic Farming for sustainable agriculture and livelihood security under changing climatic conditions" Dec. 12-13, 2017	CSAUA&T, Kanpur
24.	International Conference on "Sustainability of small holder agriculture in developing countries under changing climate scenario" Feb, 14-17, 2018	CSAUA&T, Kanpur
25.	Sensitization workshop on "NAHEP component 2 activities and implementation of academic management system (AMS)" November, 28-29, 2019.	CSAUA and T, Kanpur.
26.	International symposium on " Engineering Technologies for precision and climate smart agriculture and 53 <sup>rd</sup> Annual Convention of ISAE" Jan. 28-30, 2019	BHU, Varanasi
27.	Second National Conference on "Technological and emerging aspects in Agriculture and Community Science" Feb. 07 to 08, 2020.	International Buddhist Research Institute, Lucknow.
28.	National webinar on "Technological advances in crop production during COVID-19" June, 16, 2020.	SKRAU, Bikaner, Rajasthan.
28.	National Conference on "Recent trends and new frontiers in Bio-technology, Agriculture, Science and Environment" February, 22-23, 2020.	St. John's College, Agra.
29.	National webinar on "Bio-resources and technological tools for organic and eco-friendly farming" June,23,2020	Sri Guru Ram Rai University, Dehradun, Uttarakhand.

30.	National webinar on “Food waste management and importance of medicinal plants in food industry” June, 24, 2020.	Uttaranchal University, Dehradun.
31.	National webinar on “Food processing prospects and opportunities” June, 26, 2020.	MPUA and T, Udaipur, Rajasthan.
32.	National webinar on” Overview of management system standard certification: A niche for food technology professionals” June, 29, 2020.	National Institute of Technology, Rourkela.
33.	International students and faculty development programme on “Innovation Food Processing Technologies, Value addition, Food safety and security” June 29 to Jul 01, 2020.	Rajmata Vijayaraje Scindia Krishi Vishwavidhyala Gwalior.
34.	National Conference on “Role of Technology in dissemination of professional education learning programme” July, 02, 2020.(As Co-Patron)	Dr B R A College of Agril Engg and Technology, Etawah
35.	National webinar on “Intellectual property rights in Agriculture sector” July 17,2020.	SKR Agricultural University, Bikaner, Rajasthan.
36.	National webinar on “Integrated rural development opportunities, building competency for optimum employment and inclusive growth with sustainability” July, 28-30, 2020.	Gautam Buddha University, Greater Noida.
37.	National webinar on “Advanced Agricultural Engineering Technologies for sustainable Agriculture” August, 04-05, 2020.	University of Agricultural Sciences, Raichur
38.	International webinar on “Control mission of the corona pandemic: Role of Govt, NGOs and the masses” August 11,2020.	Paliwal P G College. Shikohabad, Firozabad.
39.	National webinar on “Entrepreneurial opportunities in food processing” August 13, 2020.	School of Agril Sciences and Technology,NMIMS, Shirpur.
40.	National webinar on “Developing entrepreneurial skills among AGRI- Graduates” August 21,2020.	School of Agril Sciences and Technology, NMIMS, Shirpur.
41.	National Webinar on “Role of Nanotechnology in Food and Agriculture” August 20 to 29, 2020.	University of Agricultural Sciences, Raichur, Karnataka.
42.	National webinar on “Reading and Decoding Food levels” August 29, 2020.	Bhaskaracharya College of Applied Sciences, University of Delhi, Delhi.
43.	National webinar on “Entrepreneurship opportunities in processing of fruit and vegetables of arid region” Sept. 02, 2020.	Sardarkrushinagar Dantiwada Agricultural University, Jagudan.
44.	National webinar on “Farm fresh produce processing: Challenges and interventions” Sept. 04, 2020.	ICAR-CIAE Regional Centre, Coimbatore.
45.	National webinar on “Empowering the central advisory board of education under the new education policy-2020” Sept. 05, 2020.	Paliwal P G College, Shikohabad, Firozabad.
46.	National webinar on “Virtual Training on “Recent	Chandra Shekhar Azad

	Technologies of Food Packaging (Harvest and Value addition and Bio-Fortification)” Sept. 07 to 13, 2020.	University of Agriculture and Technology, Kanpur.
47.	National E- Workshop on “Current Scenario of Post Graduation Research in Agriculture Sector” Sept. 09 to 11, 2020.	Swami Keshwanand Rajasthan Agricultural University, Bikaner, Rajasthan.
48	National webinar on “Mechanization in value addition of Banana and generation of wealth from Banana pseudostem waste” Sept. 18, 2020.	ICAR-CIAE, Regional Centre, Coimbatore.
49.	National Webinar on “Recent trends in non- thermal food processing technologies” Sept. 20 to 21, 2020.	National Institute of Technology, Rourkela, Odisha.
50.	International Webinar on “Nutrition and Health- Eat Right, Bite by Bite” Sept. 21 to 25, 2020.	Anand Agricultural University, Anand.
51.	National webinar on “Fortification of edible oil: From commitment to action” Sept. 25, 2020.	FSSAI and GAIN India
52.	National webinar on “Sustainable food production: Myths and realities” Sept. 26, 2020.	SAST,NMIMS, Shirpur
52.	International Training Programme on “Agriculture 4.0: Precision and Automated Agriculture Technologies” Sept. 28 to Oct, 02, 2020.	Mahatma Phulr Krishi Vidyapeeth, Rahuri, Maharashtra.
53.	National webinar on “Agricultural Processing, Supply Chain and Warehousing –Profitable Agriculture” Oct. 06, 2020.	Acharya N G Ranga Agricultural University, Lam, Guntur. A.P.
54.	National webinar on “Value addition of underutilized food crops” Oct. 08, 2020.	MPUAT, Udaipur, Rajasthan
55.	National webinar on “Increasing farmers’ income through modern Agriculture technology” Oct. 09, 2020.	A K (PG) College, Shikohabad, Firozabad.
56.	National webinar on “Gender and pandemic: Trackling the farm women issues for empowerment” Oct. 09, 2020.	ICAR CIAE, Coimbatore.
57.	National webinar on “Turmeric processing: A spice to boost immunity” Oct. 16,2o2o.	ICAR, CIAE, Coimbatore.
58.	National webinar on “Digital Agriculture: A way forward” Oct. 17, 2020.	SAST, NMIMS, Shirpur.
59..	International Webinar on “Nanotechnology in Agriculture and Biotechnology” Oct. 19 to 21, 2020.	Dr Rajendra Prasad Central Agricultural University, Pusa, Samastipur, Bihar
60..	Training Programme on “Post- Harvest Mamageent of Agricultural Produce during natural calamities/ disaster” Oct. 19 to 21, 2020.	National Institute of Mamageent, New Delhi.
61.	“National webinar on “Hydroinformatics for smart water management in Agriculture” Oct. 20, 2020.	Dr Rajendra Prasad Central Agricultural University, Pusa,Samastipur, Bihar.
62.	National webinar on “Automation in Agricultural Mechanization: An Overview” Oct. 23, 2020.	ICAR, CIAE, Coimbatore.

63.	National webinar on “Starts- ups ecosystem for Agri-entrepreneurship development in India” under education for Agriculture – Making a difference. Oct. 24, 2020.	School of Agril. Sciences and Technology, NMIMS, Shirpur.
64.	National webinar on “3 Farm Acts: Implications for Indian Farmers’ under Education for Agriculture- Making a difference” Oct, 31, 2020.	School of Agril. Sciences and Technology, NMIMS, Shirpur
65..	National webinar on “Management of root-rot disease of Horticultural crops “November, 24, 2020.	Dr Rajendra Prasad Central Agricultural University, Pusa, Samastipur, Bihar.
66.	National Webinar on “New Education Policy – 2020” Nov. 27, 2020.(As Convener )	Dr B R A College of Agril. Engg and Tech, Etawah, UP.
67.	National webinar on “Role of investing agencies in criminal justice system” Nov, 29, 2020.	Iuris Jura, Raipur.
68.	International Conference on “Recent trends in food process engineering sector” December 10 -11, 2020.	SRM Institute of Science and Technology, Kattankulathur, Kancheepuram, Tamilnadu.
69.	National webinar on “Entrepreneurship through value addition of Banana and its products” December 19, 2020.	Odisha University of Agriculture and Technology, Bhubaneswar.
70.	International Virtual Conference (fourth AMIFOST -2020) on Future food for sustainability and nutritional security” December 21, 2020	Amity University, Noida, UP.
71.	Virtual Interactive session on “Nurturing Entrepreneurship in food and Agro- Processing (NEFA-2021) January 16, 2021.	Anand Agricultural University, Anand, Gujrat.
72.	AICTE Training and Learning (ATAL) Academy online FDP on “Aqua- Food Technology (Emerging Food Processing Technologies: Prospects and Challenges” January 04 to 08, 2021.	Tejpur University, Tejpur
73.	National webinar on “Vivechana deliberation on food, processing and beyond” February,12-13, 2021.	MOP Vaishnav College for women, Chennai.
74.	National Webinar on “Technology available for commercialization...., Levering and idea.... And Importance of IPR startups.” February 25 to 27, 2021.	Anand Agricultural University, University ,Anand, Gujrat.
75.	Webinar on “Scope of mediation in arbitration “ February 27, 2021	Iuris Jura, Raipur.
76.	Webinar on “National Rail Plan- Fast track India towards atma nirbhar Bharat” March 10, 2021.	Assocham India, New Delhi.
77.	Webinar on “Rationalizing Tax Structure for capital market” April 09, 2021.	Assocham India, New Delhi.
78.	Webinar on “Direct selling distributors’ role in raising economic empowerment of Citizens” April 16, 2021.	Assocham India, New Delhi.
79.	National Webinar on “Trends in Processed Food in post	Central University of Haryana

	independence India” May 24, 2021.	
80.	National Webinar on “Mass awareness campaign on organic farming” May 24, 2021.	Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan.
81.	International Webinar on “Agricultural Entrepreneurship for Millennials Circles” May 29, 2021.	Kadiri University, Indonesia
82.	National Webinar on “Role and future of Renewable energy for sustainable Agriculture under COVID-19” may, 31, 2021.	Sri Karan Narendra Agriculture University, Jobner, Rajasthan.
83.	Workshop on “Impact of COVID-19 on real estate and foreign direct investment vis –a – vis share swap mergers” June 12, 2021	IURIS JURA, Raipur, Chhatisgarh.
84.	National webinar on “Increasing farmers’ income: Way forward” June 18, 2021.	MPUA and T, Udaipur, Rajasthan.
85	Faculty development programme on “Accelerating clean, green and sustainable innovation in India” May07,2021 to June 18,2021.	D Y Patil Institute of Technology, Pimpri, Pune.
85.	National webinar on “Sustainable strategies for enhancing productivity and profitability in dry-land Agriculture” June 29, 2021.	MPUAT, Udaipur, Rajasthan.
87.	National webinar on “Global summit on Food Fortification webinar on-Scaling-up innovation for a fortified future: Fortification quality digitization” June 30, 2021.	GAIN India

**13. Extension & Field outreach activities: -**

S. No.	Duties / Tasks assigned	Achievements
1.	Demonstration of Implements/Machines such as zero tillage seed cum ferti-drill, paddy transplanter, potato planter, potato grader, garlic planter etc. at farmer’s field.	Farmers were benefited & increased their production.
2.	Demonstration of processing machinery like Dal mill, multipurpose grain mill, potato slicer, cotton ginning machine etc. at farmer’s level.	Farmers adopted the technology & save money.
3.	Adoptive trials on “use of rhizobium culture in gram”, “evaluation of arhar varieties for sterility mozaic and high yield” and “evaluation of hybrid rice varieties for high yielding ability and their suitability at farmer’s field.”	Farmer adopted the technology and obtained higher production.
4.	Organisation of trainings, Kisan Goshthi./ Kisan Mela/ Exhibition to the farmers.	Farmers benefited & adopted the scientific technique / technology.
5.	Development of small and women friendly equipment viz garlic planter, paddy thresher and ground nut decorticator.	Farmers benefited & accepted the equipments

**14. Books /Bulletin / Articles published:**

Bulletin: “Seed cum fertidrill: Maintenance and precautions ”

**“Power thresher: Maintenance and precautions”**

Training/Practical Manual: **“Farm Implements/Equipments”**.  
**“Process Equipment Design.”**  
**“Farm structures and environmental control”**  
**“Renewable Power Sources”**

Scientific Articles: **Published 150 Articles in Magazines & News Papers.**

**15. Indicate best contributions made (Research/Teaching/Extension/Corporate life):**

**Research**

1. Optimization of machine parameters on milling of enzyme treated pigeon- pea grain for higher percentage of finished product and hulling efficiency.
2. Physico-chemical, textural and sensory analysis of qualitative attributes of banana fruit and its products.
3. Evaluation of quality attributes of Papaya leather.
4. Study of qualitative attributes of RTS beverage using bael and orange under different storage conditions.
5. Studies on colour kinetics and textural characteristics of sugar and jaggery based Papaya leather.
6. Evaluation of physico-chemical characteristics of cauliflower slices at different pretreatment and drying condition.
7. Study of qualitative attributes of mixed juice using carrot, beetroot and spinach.

**16. Awards/ Distinction received, if any:**

- Awarded by First prize in Poster presentation of paper entitled “Post harvest losses of cereals, pulses and oil seeds” in National Seminar on "Emerging trends in input management for higher agricultural productivity" held at Janta College, Bakewar, Etawah during Feb. 26-27, 2012.
- Awarded by First prize in Poster presentation of paper entitled “Post harvest losses of food grains” in National Seminar on "Emerging trends in input management for higher agricultural productivity" held at Janta College, Bakewar, Etawah during March 28-29, 2015.
- Awarded by “Fellow award” for the year 2019 for the best contribution in the field of Agril. Processing and Food Engineering by Society for World Environment, Food and Technology, New Delhi.

- Awarded by “Best paper presentation award” in Second National Conference on “Technological and emerging aspects in Agriculture and Community Science” organized by SWEFT, New Delhi and held at International Buddhist Research Institute, Lucknow. Lead paper presented on “Quality evaluation of Jelly using pectin from Apple and Lemon peels during February 07-08, 2020.

**17. Participation in refresher courses/Short term course / Summer Institutes, if any:**

- (i) Workshop Cum training course on “**Agro processing in value addition**” held at C.S. Azad University of Agrc. & Tech. Kanpur during Feb. 4-5, 2003.
- (ii) Short term training on “**Fruits and Vegetables Processing and Preservation**” organized by Govt. Food Preservation and Training Centre, Kanpur (Horticulture and Food Processing department, UP) and held at Dr. B.R.A. CAET, Etawah during Sept.01 to 15,2009, Sept 01 to 15, 2010, August 27 to Sept. 10, 2011, August 16-30, 2012, August 07-21, 2013 and August 04-18, 2014.
- (iii) Short term training on “**Fruits and Vegetables Processing and Preservation**” organized by Govt. Food Preservation and Training Centre, Kanpur (Horticulture and Food Processing department, UP) and held at Dr. B.R.A. CAET, Etawah during Aug. 07-21, 2015, August 05-19, 2016, August 10-24, 2017, August 06-20, 2018 ,August 26-Sept. 10, 2019 and January 16-30,2020.

**18. Additional Information: *Supervising the following Charges in addition to the Post.***

- Officer Incharge, Agril. Engg. Deptt. CAET, Etawah w.e.f. 18 July, 2001 to till date.
- Officer Incharge, Post- Harvest Processing and Food Engg. Department, CAET, Etawah w.e.f. 18 July, 2001 to till date.
- Officer Incharge, Transport Section., CAET, Etawah w.e.f. 18, July, 2001 to Sept. 08, 2011 and 02.01.2019 to till date.
- Officer Incharge, Advance Research Centre, CAET, Etawah w.e.f. Dec. 03,2004 to March, 21, 2009
- Hostel Superintendent, Visheshwaraya Bhawan, CAET, Etawah w.e.f. Oct. 29, 2005 to 30 June, 2009.
- Training and Placement Co-ordinator w.e.f. July 01, 2006 to March 21, 2009.
- Deputy Comptroller, CAET, Etawah w.e.f. 01 April, 2009 to 20 Sept. 2015.
- Asstt. Editor, The Prominence Magazine, CAET, Etawah.
- Supervise the College work in absence of Dean, CAET, Etawah.
- Incharge, Time Table w.e.f. July 01, 2006-21 March 2009 and 01 July 2011 to till date
- Coordinator, Cultural Activities, CAET, Etawah w.e.f. 01 Jan, 2006 to till date.
- Hostel Warden, Ladies Hostel, CAET, Etawah w.e.f. 11.06.2021.

**(Devendra Kumar)**  
**Associate Professor**

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