


**ICAR –INDIAN INSTITUTE of SUGARCANE RESEARCH  
LUCKNOW 226002, UTTAR PRADESH**

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**Personal Information**

Name	<b>Dr. Lal Singh Gangwar</b> 
Designation	Pr. Scientist (Agricultural Economics.)
Division/Section	AKMU
Research Area	Agricultural Economics (Production Economics, Sustainable sugarcane system, Poultry-Livestock Economics and products trade, Marketing and price policy, Sugar International trade and Technology policy analysis)

**Patent Details**

- Two patent application filed with the IPO, New Delhi on behalf of the Institute (as in-charge of PME Cell & ICAR-IISR, Lucknow).
- Registered Institute Logo as a Trademark under class 07 & 31
- One copyright granted for Image database of sugarcane insect, pests and diseases and other application filed for mobile app entitled 'Ikshu Kedar' mobile app for precise irrigation scheduling for sugarcane cultivation in sub-tropical India.

**External Funded Projects**

**Role as PI**

- Economics, Marketing and Production constraints of Mandarin Production in India during 1995-1998 Institute funded No project-based budgeting, ICAR-CCRI, Nagpur.
- Economic Efficiency of Irrigation water in Sugarcane based farming system during 1998-2001 Institute funded, ICAR-IISR, Lucknow.
- Studies on Consumers' Preferences and Marketing of Poultry Products in North India during 2007-2011, Institute funded, ICAR-CARI, Bareilly.
- Economic analysis of poultry production in Kumaon Hills during 2010-2013, Institute funded, ICAR-CARI, Bareilly, Rs. 11.98.
- Strengthening of socio-economic research at IISR Lucknow during 2013- 2016,

Institute funded, ICAR-IISR, Lucknow.

- Factors contributing economic viability of sugar mills and energy production complexes in India during 2015-2020, Institute funded, ICAR-IISR, Lucknow, Rs. 34 lakhs.
- International Sugar Trade and Export Opportunities for Indian Sweeteners during 2020-2023, Institute funded, ICAR-IISR, Lucknow, Rs. 22 lakhs.

#### **Role as Co-PI**

- Production and Marketing Management of Sugarcane in U.P. and Maharashtra during 1998-2001, Institute funded, ICAR-IISR, Lucknow.
- Role as Sr. Sci. PC Unit, All India Coordinated Research Project on Post-harvest Technology (AICRP on PHT), during 2001-2006, ICAR-CIPHET, Ludhiana, ICAR Funded, Rs. 2650 lakhs
- Development of scale and knowledge test to assess the impact of training, during 2003-2006, Institute funded, ICAR-CIPHET, Ludhiana.
- Location model for agro-processing plants in view of diversification of agriculture in Punjab, during 2002-2005, Institute funded, ICAR-CIPHET, Ludhiana.
- Supply Response Analysis of Maize and Soybean as Major Agro-Ingredients of Poultry Feed in India, during 2006-2009, Institute funded, ICAR-CARI, Bareilly.
- International Trade and Export Opportunities for Indian Poultry Sector, during 2009-2012, Institute funded, ICAR-CARI, Bareilly.
- Development of Project Formulation Software for Poultry, during 2008-2011, Institute funded, ICAR-CARI, Bareilly.
- Development of data mining and presentation tools in sugarcane, during 2014-2020, Institute funded, ICAR-IISR, Lucknow.
- Technology and information utilization pattern among the sugarcane growers, during 2018-2022, Institute funded, ICAR-IISR, Lucknow.
- Development of district level database on sugarcane growth and sustainability, during, 2018-2022, Institute funded, ICAR-IISR, Lucknow
- Diagnostic survey for study of sugarcane-based production system constraints, during 1998-2001, NATP/Institute funded, ICAR-IISR, Lucknow.
- Institutionalization of Research Priority Setting, Monitoring, Evaluation (PME Cell) NATP Project, during 2001-2006, NATP funded, ICAR-CIPHET, Ludhiana, Rs. 95 lakhs.
- Recycling of Animal and Farm Waste and Application of their Value-added products in Sustainable Crop Production and Animal Husbandry ***Inter-Institutional Collaborative Project (CARI-IVRI-IARI-IIT(R)*** Hazard Analysis of poultry waste & Techno-economic Evaluation of its Alternative uses (Component-B) ***C-2/2007/1-IAV/E00/6100-4200***, during 2009-2012, Inter Institutional funded by ICAR-CARI, Bareilly, Rs. 175 lakhs

- National Agricultural Innovation Fund Project (NAIF Component -I), during 2017-January 25, 2023, ICAR/NAIF funded, ICAR-IISR, Lucknow, Rs. 57 lakhs,
- Doubling Farmers Income with DCM sugar mills commands areas in PPP mode, during 2016 -2024, DCM Shriram / Institute funded, ICAR-IISR, Lucknow.

### Publications

#### A. Sugarcane R&D

- Gangwar, L.S., Hasan, S.S., Brahm Prakash, Sharma, A.K., Singh, Kamini and Pathak, A.D. (2022), Farmer producer organizations and innovative policy options for enhancing farmers' income in India. *Indian Journal of Agricultural Marketing* 36 (2): 51-63.
- A. K. Sharma, Rajesh Kumar, L. S. Gangwar and Brahm Prakash (2022), Procedures and Terms used in Global Sugar Trade & Logistics. *Indian Sugar* 73(3): 14-31
- A. K. Sharma, L. S. Gangwar, Rajesh Kumar, and A.D. Pathak (2022), Future Sources of Sugarcane Growth in India and need for reoriented District level development strategies. *Indian Sugar* 73(8): 19-31
- Gangwar, L.S., A. Baitha, S. N. Singh and Hasan, S.S., (2022), Technological interventions for sustaining productivity and profitability – A Case study of sugarcane farmers in Nimar region of Madhya Pradesh. *Indian Journal of Agricultural Economics*. Vol.77(3): 411-412
- Gangwar, L.S., Hasan, S.S., Sharma, A.K., Pathak, A.D, Brahm Prakash and Kamini Singh. (2022), Application of Information Communication Technology tools for sugarcane marketing and product supply chain management in India. *Indian Journal of Agricultural Marketing* 37 (2):
- Sharma A.K., Brahm Prakash, **Gangwar L.S.**, Singh, Rajesh K and Pathak A.D. (2021) Agricultural credit and produce marketing in Uttar Pradesh: Challenges and way forward. *Indian Journal of Agricultural Marketing* 35 (1): 204-241.
- Gangwar, L.S., Brahm Prakash, Sharma, A.K., Singh Kamini and Pathak, A.D. (2021) Quality jaggery production and its marketing for enhancing sugarcane farmers income in Uttar Pradesh- Issues and Challenges. *Indian Journal of Agricultural Marketing* 35 (1): 242-252.
- Gangwar, L. S, Chandra Sen and Pathak, A.D., (2021) Developing Optimal Cropping Plan for small and marginal farms in Central Uttar Pradesh. *International. Journal for Modern Trends in Science & Technology*, 7(4):127-131
- Rajesh Kumar, A. K. Sharma, L. S. Gangwar, R., Gupta, A.D. Pathak and N.K. Singh (2021), Impact of Global Sugar Price Volatility on Domestic Sugar Markets in India. *Asian Sugar Journal*, 1(1), 27-31.
- Hasan S.S., Pathak A.D., Shukla S.K., Gangwar L.S. and Kumar R., (2020), Web-based Data management Technique for Coordinated Trials of Sugarcane Technologies. ***Sugar Tech.*** Vol. 22 (6): 1158-1165
- Gangwar L.S., and Pathak A.D., (2019), Impact of Jaggery Entrepreneurship on Enhancing Sugarcane Farmers' Income: a Study of Uttar Pradesh. *Agricultural Economics Research Review* Vol. 32

- Gangwar L.S. and Pathak A.D., (2019), Integration of Farm and Non-Farm Activities for Farmers' Welfare and Enhancing Farm Income in Sugarcane based Farming System-An Approach in Public- Private Partnership Mode. *Indian Journal of Agricultural Economics* Vol. 74(3):
- L.S. Gangwar., A.D Pathak, Rajesh Kumar, S.S. Hasan and A,K Sharma (2018), Transforming sugar mills into sugar processing complex for enhancing profitability and sustainability of sugar sector: strategies and road map. **In Souvenir**. NISSTA 3<sup>rd</sup> Annual Convention 2018 and Asian Conclave of sugar millers vision -2022"
- L.S. Gangwar, A.K Singh and A.D Pathak, (2018), Potential of mechanization in improving productivity, farmer's income and reduction of sugarcane production cost in India- An Ex-ante Evaluation. *Agricultural Economics Research Review* Vol. 31:
- L.S. Gangwar, S.S. Hasan and A.D. Pathak, (2017), Strategy and Policy Options for Doubling Sugarcane Farmers Income in Uttar Pradesh. *Agricultural Economics Research Review* Vol. 30 (Conf.):
- L.S. Gangwar, A.D. Pathak and Rajesh Kumar (2017), Economic Evaluation of Sugarcane Processing for Sugar-energy Production in Sub-Tropical India. *Indian Farming*. Vol.67(2): 9-11
- L.S. Gangwar, S.S. Hasan and M. R. Verma, (2016), Economic Analysis of Innovative Sugarcane Production Techniques for Realizing Food and Nutritional Security in Subtropical India. *Agricultural Economics Research Review* Vol. 29 (Conf.):
- L.S. Gangwar, S.S. Hasan and M. R. Verma, (2015), Inter-sectoral dynamics of sugarcane production and product diversification for food and energy security in India –An Economic analysis. *Agricultural Economics Research Review* Vol. 28 (Conf.)
- Hasan S.S., Isaac R.K., Gupta A, Kumar, R and Gangwar L.S.(2015), An optimization strategy for developing web-based expert system in sugarcane with usability concern. *International Journal of Agricultural and Statistical Sciences*. Vol.11(1): 181-188
- L.S. Gangwar, S.S. Hasan and S. Solomon, (2014), Economic benefits of CaneDES: An ICT-based software for sugarcane diseases and disorders diagnosis in India –An Ex ante Evaluation. *Agricultural Economics Research Review* Vol. 27 (Conf.):
- S. Solomon, and L.S. Gangwar., (2014), Policy Initiatives and Technological Options for Revival of Jaggery and Khandsari Processing Sector in India. In Proc. National Meet on *Modernization of Jaggery Industry in India*, IISR, Lucknow. pp. 6-12
- L.S. Gangwar, Sandeep Saran, Sarvesh Kumar and Maya Awase (2013), Working Model to ensure Food, Nutritional Security and Employment in Kumaon hills through Poultry Rearing. *Indian Journal of Poultry Science* 48(1):96-100
- L.S. Gangwar, S. Solomon, M.R. Verma, S.S. Hasan and P.K. Bajpai (2013), Analysis of Growth and Instability of Sugarcane Production in India. *Indian Journal of Sugarcane Technology* Vol. 28 (1): 28-32
- L.S. Gangwar, Sandeep Saran and Sarvesh Kumar (2013), Integrated Poultry-Fish Farming Systems for Sustainable Rural Livelihood Security in Kumaon hills of Uttarakhand. *Agricultural Economics Research Review* Vol. 26(Conf.):181-188

- L.S. Gangwar, Sandeep Saran and Sarvesh Kumar (2012), Marketing of Poultry Products in Organized and Unorganized Sectors in Uttar Pradesh: A Study of High end elite and Semi-urban Markets. *LMA Convention Journal* Vol. **8**(1): 58-65
- Gangwar, L. S., Saran Sandeep and Sarvesh Kumar (2010), Broilers' Supply Value Chain in the National Capital Region Delhi: A Case Study of Ghazipur Poultry Market. *Agricultural Economics Research Review* Vol. **23**(Conf.): 461-468
- Gangwar, L.S., Singh Dinesh and Goutam Mandal (2008), Economic Evaluation of Peach Cultivation in North Indian Plains. *Agricultural Economics Research Review* Vol. **21**(1): 123-129

#### **B. Policy paper:**

- **L.S. Gangwar, S. Solomon, Pushpa Singh, S.S. Hasan and A.K. Sah., (2014), *Socio-economic Impact of Sugarcane Production and Diversification in India* (ICAR-IISR/ 01/ Policy Paper): pp.1-85**

#### **Policy brief:**

- L.S. Gangwar, S. Solomon and S.I. Anwar (2015), *Technological and Policy Options for Modernization of Jaggery Industry in India* (ICAR-IISR/Policy brief): pp. 1- 6

### **Books or Chapters Published**

- Gangwar L.S., et.al., (2021), *A manual on Intellectual Property Rights: Transforming Knowledge to Prosperity*. pp: 1-104
- Gangwar L.S., et.al., (2020), IISR- at a glance pp:1-16
- Gangwar L.S., et.al., (2022), Seven decades of sugarcane research at ICAR-IISR
- Gangwar L.S., et.al., (2004), Impact assessment of Post-harvest Technologies developed under NATP and AICRP on PHT, CIPHET/Pub./01/2004
- Gangwar L.S., et.al., (2009), Background information and status report 2003-2007, CARI Bareilly
- Gangwar L.S., et.al., (2014), Socio-economic impact of sugarcane and diversification in India. ICAR IISR/Policy Paper/01/ 2014
- Gangwar L.S., et.al., (2015), Technological and policy options for modernization of Jaggery industry in India. ICAR IISR/Policy Brief /01/ 2015
- Gangwar L.S., et.al., (2008), Model Project Report: Quail farming under deep liter system Publication No. 169/03/2008

#### **Research papers and book chapters:**

- Research papers: 119
- Invited, Lead papers and Book Chapters: 40
- Books:4
- Teaching Manuals: 6
- Technical Bulletins: 7
- Popular Articles: 29
- Thesis evaluated: 17

Awards
<ul style="list-style-type: none"><li>• Graduate Research Assist ship during 1986-1987 by G.B. Pant University of Agriculture &amp; Technology Pantnagar (Uttarakhand).</li><li>• UGC Junior /Senior Research Fellowship during 1991-1994 University Grant Commission, New Delhi.</li></ul>