


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

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**Personal Information**

<b>Name</b>	Dr Ashwani Kumar Sharma 
<b>Designation</b>	Pr. Scientist (Ag.Econ.)
<b>Division/Section</b>	AKMU
<b>Research Area</b>	<ul style="list-style-type: none"><li>• Sugarcane Production Economics</li><li>• Sugarcane Marketing &amp; Trade Economics</li></ul>
<b>Patent Details</b>	
<ul style="list-style-type: none"><li>• One patent application filed with the IPO, New Delhi on behalf of the Institute (as in-charge of PME Cell, ICAR-IISR, Lucknow).</li><li>• Institute Logo was designed and the application for grant of Trade Mark was filed with the Indian Patent Office, New Delhi.</li></ul>	
<b>External Funded Projects</b>	
<p>1. ICAR-ACIAR Research Project (As Co-PI at ICAR-IISS Bhopal) on Survey of potential of manure for meeting crop nutrient needs with Integrated Nutrient Management in Madhya Pradesh, India" during 2001-02 (1.5 years), financed by Australian Center for International Agricultural Research, Queensland Aus\$. 267.808.</p> <p>2. ICAR-ACIAR Research Project (As Co-PI at ICAR-IISS Bhopal) on Integrated manure nutrient management through participatory approach in soybean/ wheat cropping system on Vertisol in Madhya Pradesh and Queensland during 2004 and 2005, financed by Australian Center for International Agricultural Research, Queensland Aus\$ 950288</p> <p>3. AP Cess project (as Co-PI at ICAR-IISS Bhopal) Environment Impact of the use of Polluted Ground water as irrigation on productivity and quality of crops in Ratlam-Nagda Industrial Area during 2002-05. A.P. Cess Fund, Indian Council of Agricultural</p>	

<p>research, New Delhi; Rs. 18.14 lacs.</p> <p>4 A study on Culturable Waste and Fallow Lands in U.P (at UPCAR, Lucknow during 1995-96); Financed by Govt. of Uttar Pradesh, Rs. 5.78 lacs.</p> <p>5. The study on Impact of Economic Reforms in Agricultural Development (with special reference to U.P.); (at UPCAR Lucknow as coordinator during Apr.95 –Nov 96; 18 months), Financed by APC, Govt of UP.; Rs. 2.25 lacs.</p> <p>6. A study on Price Spread of Seasonal Vegetables from Farm Gate upto Secondary Market Level in U.P. (at UPCAR Lucknow as coordinator during Apr.96. –Mar.99; 3 years); Financed by State Planning Commission, Govt. of U.P.; Rs. 4.5 lacs.</p> <p>An Evaluation Study of Agriculture Farms of State Agricultural Universities (at UPCAR Lucknow as coordinator during Apr.96. –Mar.99; 3 years), Financed by APC, Govt of UP.; Rs. 1.50 lacs</p> <p><small>*Abbrs: ICAR (Indian Council of Agricultural Research, New Delhi); IISR (Indian Institute of Sugarcane Research, Lucknow); IISS (Indian Institute of Soil Science, Bhopal); UPCAR (Uttar Pradesh Council of Agricultural Research, Lucknow).</small></p>
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## Publications

### A. Sugarcane R&D

1. Sharma, A.K., Pathak, A.D. Singh, Rakesh, K., Singh, Y.P, and Sumit Kumar (2022) Sustainability of commercial crop profitability and enhanced farm income levels on smallholder farming in closed sugar mill command area in Bihar State. Jn. Community Mobilization and Sustainable Dev. 17 (1) January-March, 2022: 45-53.
2. 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 Jn Agric. Mktg. 36 (2): 51-63.
3. Sharma, AK; Brahm Prakash; Rajesh Kumar and Pathak, AD (2022) Sugarcane Growth in India: Source Assessment and Development Strategies, Indian Jn. Agric. Econ. 77 (Conf. no. 3), pp. 419.
4. Sharma, A.K., Pathak, A.D., Kumar, Rajesh, Singh AK and Brahm Prakash. 2021. Pattern and trend in casualization of agriculture labour absorption in sugarcane cultivation in India. An analysis across states agro-climatic zones and farm sciences. Indian Journal of Agricultural Economics 75 (4) : 538-539.
5. Sharma AK, Rajesh Kumar and Pathak, AD (2021) Trends in Labour absorption in Sugarcane Cultivation in India in Indian Journal of Sugarcane Technology. Indian Journal of sugarcane Technology 35 (02): 74-82, December 2020.
6. Gangwar, L.S., Brahm Prakash, Sharma, A.K., Singh Kamini and Pathak, A.D. (2021) Quality jaggery production and its marketing for enhanceing sugarcane farmers income in Uttar Pradesh- Issues and Challenges. Indian Journal of Agricultural Marketing 35 (1) : 242-252.
7. Sharma, A.K., Yadav, R.L., Rajesh Kumar, and Pathak, A. D. (2018) Ensuring remunerative price to sugarcane growers: Institutional innovations and way ahead, Indian Journal of Sugarcane Technology 33(01) June 2018: 1-7.
8. Sharma, A.K., and Pathak, A.D. (2017) Sugarcane production and productivity

- growth scenario in India. *Indian Farming* 67 (2), February, 2017: 64-68.
9. Sharma, AK, Srivastava, TK and Pathak, AD. (2017) Technological Options and the Extent of Increase in Income of Sugarcane Growers in India, *Agricultural Economics Research Review*. 2017 Conference Number, 30 (2). p296.
  10. Sharma, AK. Brahm Prakash, Jain, Radha, Pathak, AD and S.N. Singh (2017) Policy Issues and Constraints in realising the Business Potential of Sugarcane based Agriculture in Odisha State. Abstract. *Indian J Agril marketing* (Conf. Spl.) 31 (3), p. 134.
  11. Sharma, A.K., Brahm Prakash, Atul Sachan and Mohd. Ashfaq (2015). Inter- and intra-sectoral linkages and priorities for transforming sugar sector of India. *Agricultural Economics Research Review* 28 (Conference Number) : 55-67.
  12. Brahm Prakash, A.K. Sharma and Mohd. Ashfaq (2014) Immense scope for women employment in sugarcane based cottage industries. *Indian Journal of Agricultural Marketing* 28 (3): 100.
  13. A.K. Sharma and Brahm Prakash (2014) Extent of Women Participation in Sugarcane Production and Marketing in India. *Indian Journal of Agricultural Marketing*. 28 (3): 99.
  14. Sharma, A.K. and Brahm Prakash (2014) Problems and prospects of mechanization in labour intensive sugarcane crop in India. *Indian Journal of Agricultural Economics* 69 (3): 368-369.
  15. Sharma, A.K. and Brahm Prakash (2013) Challenges and opportunities of sugar business in India. *Indian Journal of Agricultural Economics* 68 (3): 484-485.
  16. Sharma, A.K., Solomon, S. and Brahm Prakash (2012) Role of ICT in sugarcane marketing development : A case of sugarcane marketing in Uttar Pradesh. *Indian Journal of Agricultural Marketing* 26 (3) : 123-135.
  17. Sharma, A.K. and Brahm Prakash (2012) Export potential of sugarcane based products in India. *Indian Journal of Agricultural Marketing* 26 (3) : 212. .
  18. Sharma, A.K. and Brahm Prakash (2012) Adoption of innovations in rural credit supply and implications for sugarcane development. *Indian Journal of Agricultural Marketing* 26 (3) : 85-86.
  19. Sharma, A.K., Solomon, S., Rizvi, K. and Brahm Prakash (2012). Socio-economic benefits of innovations in sugarcane procurement system in Uttar Pradesh. Abstract in *Agricultural Economic Research Review* Vol. 25 (Conference Issue) : 548.
  20. Sharma, Ashwani K. and Prakash, Brahm (2011) Causes and Consequences of Supply-Demand Gap for Labour in Sugarcane in India by Ashwani K. Sharma and Brahm Prakash, *Agricultural Economics Research Review*, 24 (Conference Number) 2011:401-407.
  21. Sharma, A.K., Brahm Prakash and Singh, Rakesh K. (2011). Impact of kisan credit card innovation on improving Uttar Pradesh cane growers' access to institutional credit. *Indian Journal of Agricultural Economics*, 66 (3): 475-476.
  22. Sharma, A.K., Yadav, R.L., Yadav, D.V. Brahm Prakash and Singh, M. (2011). Problems and prospects of new ICT interventions in sugarcane extension in Uttar Pradesh. Abstract in *Indian Journal of Agricultural Economics* 66 (3): 537.
  23. R.L.Yadav, D.V.Yadav, A.K.Sharma and G.K.Singh (2009) *Indian Institute of Sugarcane Research, Lucknow: Envisioning improved sugarcane production*

- technology for high yields and high sugar recovery in India. *Sugar tech.* 11(1): 1-11.
24. Sharma, A. K., Yadav, D.V. and Prasad, Kamta (2009). Research and extension needs of sugarcane cultivation in North East Region of India. *Agricultural Situation in India*, Nov. 2009: 467-475.
  25. Sharma, A. K., Yadav, D.V. and Prasad, Kamta (2009). Strategies for revival of sugarcane cultivation in North East Region of India. *J. Hill Res.* 22 (1), p. 29-36.
  26. Yadav, R.L., Yadav, D.V. and Sharma, Ashwani K. (2008) Agro-economic Analysis of Sugarcane -based cropping systems in India. *Indian J. Fert.*, 4(4): pp 71-86 & 89-92.
  27. Yadav, R.L. and Sharma, A. K. (2007). Sugarcane: High density planting. *The Hindu Survey of Indian Agriculture 2007*, pp. 69-75.
  28. Sharma, Ashwani Kumar and Yadav, D.V. (2006) Trends and Growth Analysis of Sugarcane Cultivation and Processing in North East Region of India. *Summaries. Indian. J. Agri. Econ.* 61 (3): 357-58.

## **B. Soil, Water and Nutrient Management R&D**

29. Sharma, A.K., K.D. Sharma and Brahm Prakash (2015) Death of kuhl irrigation system of Kangra valley of Himachal Pradesh : Institutional arrangements and technological options for revival. *Indian Journal of Agricultural Economics* 70 (3): 350-364.
30. Saha J.K., Sharma, A.K. and Srivastava, A. (2014) Impact of different types of polluted irrigation water on soil fertility and wheat grain yield in clayey black soils of central India. *Environ Monit Assess.* Apr;186(4):2349-56. doi: 10.1007/s10661-013-3542-3. Epub 2013 Nov 23.
31. Sharma, A.K. and Saha, J.K.(2008) Impact of ground water pollution on agricultural productivity and farm income, and responses to pollution prevention near Ratlam-Nagda Industrial Area. *Indian. J. Agri. Econ.* . 63(3): 455.
32. Reddy, K.S., Kumar, N., Sharma, A.K., Acharya, C.L. and Dalal, R.C. (2005). Biophysical and sociological impacts of farmyard manure and its potential role in meeting crop nutrient needs: a farmers' survey in Madhya Pradesh, India. *Australian J. Experimental Agric.* 45, pp. 357-367.
33. Sharma, A. K. (2003) Ground Water Use, Recharge and Regulation Scenario in Malwa Plateau Agriculture of Madhya Pradesh. *Summaries: The Indian J. agril. Econ.* 58(3): 240
34. Acharya, C.L and Sharma, A.K. (2002). Nutrient Management Strategies in Agriculture- A Future Outlook. *Indian Fertilizer Scene Annual-2002*, pp35 – 45.
35. Mishra, J.P. and Sharma, Ashwani Kumar (1995). Regional Imbalances in U.P. Canal Irrigation Rates. *Third Concept*, 9 (97), pp31- 36.
36. Sharma, Ashwani Kumar; Sharma, R.K. and Moorti, T.V. (1994). Regional Planning of Irrigation Water vis-a-vis Crop mix in Kangra Valley of Himachal Pradesh. *J.Agril.Develop.Policy*, 2(1,2), pp7-16.
37. Sharma, Ashwani; Moorti, T.V. and Sharma, R.K.(1994). Kangra Irrigation Networks - A Great Potential for Fresh Water Aquaculture. *Indian Farming*, 43(11), pp22-25.
38. Sharma, Ashwani; Moorti, T.V. and Sharma, R.K. (1992). Water-use Management on Cultivator's field - A study of Kangra Farms of Himachal Pradesh. *Agri. Econ. Res. Rev.*, 5(1), pp60-71.

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### **C. R&D on other socio-economic aspects**

40. Sharma A.K., Brahm Prakash, Gangwar L.S., Singh, Rakesh 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.
41. Sharma A.K., Sumit Kumar and Brahm Prakash (2021) Agricultural roadmaps and the sustainability of commercial crop profitability and enhanced farm income levels on smallholder farming in Bihar, Agril. Econ. Res. Rev. 34 (Conf. no.) 2021: 217-218.
42. Singh, Rakesh Kumar; Sharma, Ashwani Kumar; Singh YP and Tripathi, SC (2020) Dairy Sector Development in Sugarcane Based Cropping System of Uttar Pradesh (UP): Challenges and Opportunities. Journal of Community Mobilization and Sustainable Development. 15 (1), Jan. – April, 2020: 17-31.
43. Singh, Rakesh Kumar; Sharma, Ashwani Kumar, Tripathi, S.C. Singh, Y.P. (2021) Nature, extent and determinants of mortality of buffalo calves in central region of Uttar Pradesh. Journal of Community Mobilization and Sustainable Development. Vol. 16(1), 1-8, January-April, 2021.
44. Singh, Rakesh K., Sharma, A.K., Singh, Y.P. and Singh, V.K. (2019) Dynamics of Grazing Land 2019 Resource Availability and Utilization in Central Region of Uttar Pradesh. Journal of Community Mobilization and Sustainable Development. 14 (2) May-August, 2019: 318-324.
45. Singh, Rakesh K., Singh, Y.P., Sharma, A.K. and Brahm Prakash (2018) Animal trade practices and opportunities for small dairy units in central region of Uttar Pradesh. Journal of Community Mobilization and Sustainable Development 13 (3) : 410-418.
46. Brahm Prakash and Sharma, A.K. (2013) Technological, institutional, infrastructural and policy imperatives for chickpea production under dryland agriculture. Indian Journal of Agricultural Economics 68 (3): 364-365.
47. Sharma, A.K. and Brahm Prakash (2013) Chickpea research and extension in India : Achievements, failures and directions for future. Indian Journal of Agricultural Economics 68 (3): 415-416.
48. Sharma, A.K. and Brahm Prakash (2012) Governance of technology dissemination system for increasing chickpea supply to meet India's nutritional security concerns. Abstract. Indian Journal of Agricultural Economics 67 (3): 522.
49. Brahm Prakash, Sharma, A.K., Mohd. Ashfaq and Singh, Rakesh K. (2011). Revamping MGNREGES in the twelfth plan : Implications from village level implementation status in the Central Uttar Pradesh. Abstract: Indian Journal of Agricultural Economics 66 (3): 317-318.
50. Sharma, Ashwani Kumar, Singh Rakesh K. and Tripathi, S.C. (2008): Nature, Extent and Determinants of milch animal trade in Mid Plain Zone of Uttar Pradesh . Indian J. Agri. marketing. 22(2): 45-57.
51. Sharma A.K., Verma M.R., Singh, Rakesh K. and Singh, R. K. (2008) Potential and Prospects of Mentha cultivation in Socio-Economic Development of small

- landholders in Indo-Gangetic plains of India. Indian. J. Agri. Econ. 63(3): 390-391.
52. Tripathi, S.C., Saraswat, B.L., Singh, A.K. and Sharma, A.K. (2003). Composition of Milch and Young Animals in Dairies of Central Plain Zone of Uttar Pradesh. Indian J. Anim. Hlth. 42(2), pp124-128.
  53. Sharma, Ashwani Kumar (2000). Implications of Contractual Arrangements in Land and Labour Market at a village level in Palampur valley of Himachal Pradesh. Summaries. Indian. Jn. Agric. Econ., 55(3), p353.
  54. Sharma, Ashwani Kumar (1995). Role of Co-operative Dairying and its Impact on Resource-poor Milk Producers in Uttar Pradesh. Ind. Jn. Agric. Econ., 50(3), p386
  55. Sharma, Ashwani Kumar (1995). Village Development Programmes - Organisational Considerations. Third Concept, 8 (96), pp44-45.
  56. Sharma, Ashwani and Sharma, Sanjeev (1994). Commercial Cultivation of Rose. Yojna, 38(7), pp26-27.
  57. Mishra, J.P. and Sharma, Ashwani Kumar (1994). Revival of Tea Industry in Weak Tea States. Yojna; 38 (23), pp25-28.
  58. Mishra, J.P. and Sharma, Ashwani (1992). Bundelkhand - A Green Pasture for Citrus. Yojna, 36(19), pp17-19&23.
  59. Verma, P. Sharma, A.K., Brahm Prakash and Gangwar, L.S. (2018) Establishment of mini dal mills for value addition and price spread reduction in pulse crops in rural India. Indian Journal of Agricultural Economics 73 (3): 364.
  60. Sharma, A.K. and Brahm Prakash (2014) Informal livestock trade and opportunities for small dairy units in Central Uttar Pradesh. Indian Journal of Agricultural Economics 69 (3): 314-315.

## Books or Chapters Published

### Books/Reports

1. Solomon, S, **Sharma, A.K.** and Shukla, S.K (2014) Technorama IISR, ICAR-Indian Institute of Sugarcane Research, Lucknow, p. 60.
2. Solomon, S, **Sharma, Ashwani Kumar**, Chandra, A., Srivastava, T.K., Sushil, S.N., Sah, A.K., and Hasan, S,S (2012) An Impact Assessment Study on Sugarcane Information System (SIS) developed by the UP State Sugarcane Department (India), ICAR-Indian Institute of Sugarcane Research, Lucknow, p.30.
3. Duttamajumder, SK, **Sharma, AK** and Brahm Prakash (2011) IISR Vision 2030, ICAR-Indian Institute of Sugarcane Research, Lucknow, p. 37.
4. **Sharma, AK**, Duttamajumder, S.K, and Brahm Prakash (2012) IISR at a Glance (Bilingual), ICAR-Indian Institute of Sugarcane Research, Lucknow, p. 24.
5. Rao, A. Subba, Reddy, K. Sammi., Srivastava, Sanjay and **Sharma, A.K.** (2007) IISS Perspective Plan, Vision-2025, Indian Institute of Soil Science, Bhopal, p. 64.
6. Rao, A. Subba, Singh, Muneshwar, **Sharma, A.K.**, Srivastava, Sanjay and Rathore, Abhishek (2005) Proceedings and Recommendations of National Seminar on Soil Testing, Indian Institute of Soil Science, Bhopal, p. 12.
7. Saha, J.K. and **Sharma, A.K.** (2006) Impact of the use of polluted irrigation water on soil quality and crop productivity near Ratlam-Nagda Industrial Area.

- Agriculture Bulletin No. IISS-1. Indian Institute of Soil Science, Bhopal, pp. 26.
8. Acharya, C.L., Reddy, K.S., and **Sharma, A.K.** (2003) (Eds.) Proceedings of the ICAR-ACIAR Workshop on Farmyard Manure: Life Cycle Analysis and Management, 2003, Indian Institute of Soil Science, Bhopal, pp.192.
  9. Dalal, R.C., Acharya, C.L., Reddy, K.S., Redding, M., **Sharma, A.K.**, John Ritchie, Eisner, R., Kumar, N., Casey, K., Skerman, A. and Thomas, G. (2002). Survey of potential of manure for meeting crop nutrient needs with integrated nutrient management in Madhya Pradesh, India. Final Report, ACIAR Project LWR2/1998/136. Indian Institute of Soil Science, Bhopal, pp.59
  10. Mishra, A.K., Ghosh, P.K., Biswas, A.K., Tripathi, A.K. and **Sharma, A.K.** (2003) Technologies at a Glance, Bulletin No.4, Indian Institute of Soil Science, Bhopal (in English), p. 10.
  11. Acharya, C. L., Rao, A. Subba, Biswas, A.K., Saha, J.K. and **Sharma, Ashwani Kumar** (2001). IISS - A Profile, Indian Institute of Soil Science, Bhopal.
  12. Moorti, T.V.; Vashist, G.D. and **Sharma, Ashwani Kumar** (1988); Impact of Different Sources of Irrigation on Crop Patterns, Yield, Incomes and Cost of Irrigation in Sunder Nagar Block of Mandi District. Agricultural Economics Publication No. 43, Department of Agricultural Economics, HPKV- Palampur.

#### Chapters in Books

1. **A.K. Sharma** (2020) Economics of Improved Sugarcane Machinery Use in India (pp130-139). *In*.(Eds.) Singh Sukhbir, Singh, A.K. and Pathak A.D. Improved Sugarcane Mechanization Technologies. ICAR-Indian Institute of Sugarcane Research, Lucknow. p.177.
2. Kumar, Rajesh, **Sharma, A.K.**, Gangwar, L.S., Hasan, S.S., Brahm Prakash and Sachan, Atul Kumar (2022) Seventy Years of Sugarcane Research Work in Agricultural Knowledge Management. In: Seven Decades of Sugarcane Research at ICAR-IISR, Lucknow edited by A.D. Pathak, L.S. Gangwar, Brahm Prakash and Anita Sawnani. ICAR-Indian Institute of Sugarcane Research, Lucknow. ISBN: 978-81-954349-5-4. Pp. 87-100.
3. Gangwar, L.S., **Sharma, A.K.**, Brahm Prakash, Sawnani, Anita, Singh, Kamini, Kumar, Mukund and Yadav, Ashish Singh. (2022) Seventy Years of Activities of Technical Cell/Research, Coordination and Management Unit/Priority Setting, Monitoring and Evaluation Cell. In: Seven Decades of Sugarcane Research at ICAR-IISR, Lucknow edited by A.D. Pathak, L.S. Gangwar, Brahm Prakash and Anita Sawnani. ICAR-Indian Institute of Sugarcane Research, Lucknow. ISBN: 978-81-954349-5-4. Pp. 111-118.
4. Yadav, Ashish Singh; **Sharma, Ashwani Kumar**; Brahm Prakash and Singh, Kamini (2022) Library Information System: Transitions and Need for Digital Libraries in India. *In* (Eds.) DD Lal, Yogita Talwar and Manoj Kumar Sinha, The Changing Landscape for the Libraries and Librarians: Issue and Challenges, BFC publications, Lucknow, ISBN: 978-93-5509-747-7. Pp. 46-75.
5. Yadav, R.L. and **Sharma, A.K.** (2011) R&D Roadmap for Enhancing Sugarcane Production. In. Balancing sugar and Energy Production in Developing Countries : Sustainable Technologies and Marketing Strategies (Eds), Yang-Rui Li, M.K. Srivastava, G.P. Rao, Priyanka Singh, and S. Solomon: p. 3-10.

6. **Sharma, Ashwani Kumar** and Yadav, D. V. (2008) Issues in growth and sustainability of sugar sector development in North-east Region of India In: Agricultural Development in Northeast India: Issues and Options; Ed. K.K Bagchi. Abhijeet Publications, Delhi.p 398. ISBN 81-89886-44-8. 11.
7. Acharya, C.L. and **Sharma, A.K.** (2003). Sustainable Land use for Foodgrain Production and Environmental Protection. In: The Challenge of Sustainable Development: The Indian Dynamics (Eds.) RamprasadSengupta and Anup K. Sinha, Centre for Development and Environment Policy, Indian Institute of Management, Calcutta. pp.133-162.
8. **Sharma, A.K.**, Reddy, K.S., Kumar, N. and Acharya, C.L.(2003) Economics of FYM use in Crop Production in M.P. In: Proceedings of the ICAR-ACIAR Workshop on Farmyard Manure: Life Cycle Analysis and Management, Indian Institute of Soil Science, Bhopal, pp.137-148.
9. Reddy, K.S., **Sharma, A.K.**, Kumar, N. and Acharya, C.L.(2003) Perceived Biophysical and Sociological Impacts of Farm Yard Manure by Farmers and its potential role in Meeting Crop Nutrient Needs in Madhya Pradesh. In: Proceedings of the ICAR-ACIAR Workshop on Farmyard Manure: Life Cycle Analysis and Management, Indian Institute of Soil Science, Bhopal, pp.114-136.
10. Acharya, C.L and **Sharma, A.K.** (2003) "Alternative Land Use System for Sustainable Agricultural Production in Malwa Plateau of Madhya Pradesh" In: Alternative Land Use System for Sustainable Agricultural Production (Ed.) Mittal, S.P., Oriental Enterprises, Dehra Dun, pp105 – 116.
11. **Sharma, A.K.** and Singh, L.R. (2000). Agriculture Research Extension Linkage System of U.P.: Policies and strategies for the Next Millennium. In: Rural Prosperity and Agriculture, Policies and Strategies (Technological Options). (Ed). Choudhary, R.C. and Singh, R.P., National Institute of Rural Development, Hyderabad, Foundation Day Series, pp. 273-307.
12. Mishra, J.P. and **Sharma, Ashwani Kumar** (1996); An Approach to Constraint Analysis for Development of Agriculture in the Hills of Uttar Pradesh. In: Agricultural Development in Hilly Areas, Constraints and Potential. (ed). S.L. Shah. Chapter-III; p. 35-39. Indian Society of Agricultural Economics, Bombay.
13. Moorti, T.V.; **Sharma, Ashwani Kumar** and Sharma, R.K. (1996) Production Constraints in Hill Agriculture with special reference to Irrigation in Himachal Pradesh. In: Agricultural Development in Hilly Areas, Constraints and Potential. (ed). S.L. Shah; Chapter VI; p. 52-61. Indian Society of Agricultural Economics, Bombay.

## Awards

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