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External Funded Projects

Evaluation and standardization of organic farming techniques for sugarcane production system	PI	10.83	UP Council of Agri. Research
Farmers' Participatory Action Research on Water use efficient technologies for improving productivity and sustainability of sugarcane	PI	50	Ministry of Water Resources, Government of India
Weed management in sugarcane based cropping systems	Co-PI	36	NATP (ICAR)

Assessment of impact of climate change on productivity and quality of sugarcane and opportunities of adoption	Co-PI/ PI	120.24	NICRA (ICAR)
Delivery and rolling out of conservation agriculture based resource conservation technologies. (Cereal System Initiative for South Asia -CSISA Project Objective -1)	Co-PI	13.54	Bill and Melinda Gates Foundation
Carbon Sequestration Potential of Sugarcane Based Cropping System for Sustaining Soil Health and Crop Productivity in Uttar Pradesh (DST)	Co-PI	67.20	DST

Publications

Research Papers

1. Srivastava, T.K., Hasan, S.S. & Verma, R.R. 2022. Mobile 'app' for Precise Irrigation Scheduling in Sugarcane Cultivation under Indian Subtropics. ***Sugar Tech*. 24**:822-831. https://doi.org/10.1007/s12355-021-01100-4

2. Ram Ratan Verma, Tapendra Kumar Srivastava, Pushpa Singh, B. L. Manjunath, Anil Kumar. 2021. Spatial mapping of soil properties in Konkan region of India experiencing anthropogenic onslaught. ***PLOS ONE***. https://doi.org/10.1371/journal.pone.0247177

3. Srivastava, T.K., Singh, P. & Verma, R.R. 2021. Weather variability trends in Gangetic plains of Uttar Pradesh, India: influence on cropping systems and adaptation strategies. ***Environ Dev Sustain***. https://doi.org/10.1007/s10668-021-01578-8

4. M Swapna, Raman Kapur, Sanjeev Kumar, Devender Kumar, Jyotsnendra Singh, Praveen Kumar Singh, Dinesh Kumar Pandey, Sanjeev Kumar, Tapendra Kumar Srivastava, Dinesh Singh, Ashwini Dutt Pathak. 2020. COLK 12209 (IKSHU-7): A new mid-late maturing sugarcane variety for north central and north east zone of sub-tropical India. ***Journal of Sugarcane Research* 10 (1)**: DOI: 10.37580/JSR.2020.1.10.43-53

5. Sanjeev Kumar*, J. Singh, P. K. Singh, D. K. Pandey, Devendra Kumar, Dinesh Singh, T. K. Srivastava, R. K. Singh, Sanjeev Kumar and A. D. Pathak. 2020. Sugarcane variety "CoLk 12209 (Ikshu-7). ***Indian Journal of Genetics and Plant Breeding* 80 (1)**: 119-120.

6. Ram Ratan Verma, Tapendra Kumar Srivastava and Pushpa Singh. 2019. Climate change impacts on rainfall and temperature in sugarcane growing Upper Gangetic Plains of India. ***Theoretical and Applied Climatology***. **135**: 279-292. doi.org/10.1007/s00704-018-2378-8

7. T K Srivastava, K P Singh, Pushpa Singh, Archna Suman, S R Singh, R R Verma, V K Singh and R K Singh. 2018. Effect of bio-manures on soil quality, cane productivity and soil carbon sequestration under long-term sugarcane (Saccharum officinarum) plant -ratoon system in Indian sub-tropics. ***Indian Journal of Agricultural* Sciences 88 (11)**: 1696–1703.

8. Ram Ratan Verma, Begur Lakshminarasimha Manjunath, Narendra Pratap Singh, |Anil Kumar, Trupti Asolkar, Virendra Chavan, Tapendra Kumar Srivastava and Pushpa Singh. 2018. Soil mapping and delineation of management zones in the Western Ghats of coastal India. ***Land Degradation & Development* 29**: 4313-4322 (DOI: 10.1002/ldr.3183)

9. Singh, Ishwar, Verma, R. R. and Srivastava, T. K. 2018. Growth, yield, irrigation water use efficiency, juice quality and economics of sugarcane in Pusa Hydrogel application under different irrigation scheduling. ***Sugar Tech*** **20 (1)**:29-35. DOI 10.1007/s12355-017-0515-9.

10. Srivastava T K and Yadav, R. L. 2017. Resource conservation technologies for input use efficiency and sustainable yield of sugarcane. ***Indian Journal of Sugarcane Technology*** **32(1)**:1-6.

11. Visha Kumari V., R. Kalpana Sastry, M. A. Sarath Chandran and T. K. Srivastava. 2017. Managing intellectual property in collaborative way to meet the agricultural challenges in India. ***Journal of Intellectual Property Rights*****. 22**: 55-64.

12. Meena, H. S, Dinehs Kumar, Srivastava, T. K. and S Rajendra Prasad. 2016. Stability of popular rice hybrids for important grain yield parameters. ***Indian Journal of Plant Genetic Resources.*** **29 (2)**: 144-150.

13. Verma, R. R., Srivastava, T. K. and Singh, K.P. 2016. Fertility status of major sugarcane growing soils of Punjab, India. ***Journal of the Indian Society of Soil Science*** **64 (4)**: 427-431.

14. Singh, Pushpa, Rai, R.K., A. Suman, Srivastava, T.K., Singh, K.P., Arya, N. and Yadav, R.L. 2015. Soil-root interface changes in sugarcane plant and ratoon crops under sub-tropical conditions for dry matter accumulation. ***Communications in Soil Science and Plant Analysis*** **46 (4)**: 454-75 (DOI: 10.1080/00103624.2014.997385)

15. Almubarak, Nadir F. and Srivastava T. K. 2015. Effect of weed control methods on growth and development of weeds in sugarcane (Saccharum officinarum L.) fields. ***International Journal of Applied Agricultural Sciences*** **1(3)**:49-54.

16. Rajendra Gupta, Srivastava T. K., Kamta Prasad, Sah A. K. and Singh, K.P. 2015. Farmers' participatory water saving research for enhanced sugarcane yields, water use efficiency and knowledge enhancement of growers in Indian sub-tropics. ***International Sugar Journal***. July (2015): 516-524.

17. Shrivastava, A. K., Singh, V. K., Srivastava, T. K., Vinod Kumar, Shukla, S.P. and Varucha Misra. 2015. Impact of climate change on sugarcane and its mitigation. ***Agricultural Engineering Today*** **39 (4)**: 31-40.

18. Tiwari, T. N., Srivastava, T. K., Mandal, A. B. and Dipti Kamal 2015. Effect of seed coating with Hoagland solution on seed quality and field performance in rice (Oryza sativa). ***Indian Journal of Agricultural Sciences*** **85 (9)**: 1153-7.

19. Tiwari, T.N., Srivastava, T.K., Mandal, A.B. and S. Rajendra Prasad. 2015. Influence of seed coating with fungicide, insecticide and Hoagland Solution in Soybean. ***Seed Research*** **43 (2)**:156-161.

20. Meena, H.S., Dinesh Kumar, Srivastava, T.K. and Rajendra Prasad, S. 2014. Stability for grain yield and its contributing traits in bread wheat (Triticum aestivum). ***Indian Journal of Agricultural Sciences*** **84 (12)**: 1486-95.

21. Verma, R.R., Singh, K.P. and Srivastava, T. K. 2014. Nutrient status in sugarcane growing soils of Haryana. ***Current advances in Agricultural Sciences*** **6(1)**: 20-23.

22. Srivastava, T. K., Singh, K. P. and Pushpa Singh. 2014. Organic sugarcane production systems for enhanced soil health and crop productivity. ***Indian Journal of Sugarcane Technology*** **29 (2)**: 41-50.

23. Verma, R. R, Srivastava, T. K. and Singh, K. P. 2014. Soil macro and micro nutrient status in sugarcane growing soils of Haridwar district, Uttarakhand (India). Indian Journal of Sugarcane Technology 29 (2): 72-76.

24. Singh Pushpa, Archna Suman, Rai, R.K., Singh, K.P., Srivastava, T.K., Arya, N., Gaur, A. and Yadav, R.L. 2013. Bio-organic amendment of Udic Ustochrept soil for minimizing yield decline in sugarcane ratoon crops under sub-tropical conditions. Communications in Soil Science and Plant Analysis 44: 1849-1861.

25. Pushpa Singh, Rama Kant Rai, Archna Suman, Srivastava, T K, Singh K P and Yadav, R L. 2013. Ratooning induced rhizospheric changes impede nutrient acquisition and growth in sugarcane ratoon crop during grand growth stage in sub-tropics. Sugar Tech 15 (1):52-64.

26. Srivastava, T. K., Venugopal Visha K. and Singh, A. K. 2013. Fertilizer Best Management Practices in Sugarcane. Indian Journal of Fertilizers 9 (4):96-107.

27. V. Visha Kumari, A.K. Mishra, S.S. Parihar, T.K. Srivastava and Khan Chand. 2013. Soil moisture dynamics and yield of wheat (Triticum aestivum L.) crop at New Delhi India conditions. American Eurasian Journal of Agriculture and Environmental Sciences. 13 (5): 713-722.

28. Srivastava, T.K., Singh, K P and Yadav, R. L. 2012. Sugarcane productivity, soil health and nitrogen use dynamics in as bio-nutrition based multi-ratooning system under Indian sub-tropics. International Sugar Journal 114: 584-589.

29. Srivastava T.K., Menhi Lal and Shukla S. K. 2012. Agronomic research in sugar crops: An overview. Indian Journal of Agronomy 57(3rd IAC special Issue):83-91.

30. Singh, K. P., Srivastava, T. K. 2011. Sugarcane productivity and soil fertility in plant-ratoon system under integrated and organic nutrient management in sub tropics. Indian Journal of Sugarcane Technology 26 (1): 10-13.

31. Singh, S.N., Srivastava, T.K, Singh, A.K., Yadav, R.L. and Todi Singh 2011. Managing initial planting density for enhanced productivity of sugarcane plant-ratoon system in sub-tropical India. Indian Journal of Sugarcane Technology 26 (2): 56-58.

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35. Singh A. K., Menhi Lal, S. R. Prasad and T. K. Srivastava. 2007. Productivity and profitability of winter-initiated sugarcane (*Saccharum* spp complex hybrid) ratoon through intercropping of forage legumes and nitrogen nutrition. Indian Journal of Agronomy 52 (3): 208-211.

36. Singh K.P., Archna Suman, Singh P.N. and Srivastava T.K. 2007.Improving quality of sugarcane-growing soils by organic amendments under sub-tropical climatic conditions of India. ***Biology and Fertility of Soils*** **44**: 367-376

37. Singh K.P., Srivastava T.K., Singh P.N. and Archna Suman. 2007. Enhancing soil fertility, microbial activity and sugarcane (*Saccharum officinarum*) productivity through organics in sub-tropical conditions. Indian Journal of Agricultural Sciences 77 (2): 84-87.

38. Srivastava T. K., Pandey M. B. and Awasthi S.K.2006. Effect of planting materials and nutrient management on growth, yield and rejuvenation of declined sugarcane. Indian Journal of Agricultural Sciences 76 (2): 103-107.

39. Srivastava T. K. and Chauhan R. S.2006. Weed dynamics and control of weeds in relation to management practices under sugarcane (*Saccharum* species complex hybrid) multi-ratooning system. Indian Journal of Agronomy 51 (3): 228-231

40. Singh A.K., Menhi Lal and Srivastava T.K. 2005. Enhancing productivity and sustainability of sugarcane plant-ratoon system through planting geometry, dual purpose legume intercrops and nitrogen nutrition. Indian Journal of Agronomy 50 (4): 285-288.

41. Srivastava T. K., Chauhan R.S. and Menhi Lal. 2005. Weed dynamics and their management in sugarcane under different preceding crops and tillage systems. Indian Journal of Agricultural Sciences 75 (9): 254 – 260.

42. Shahi HN, Srivastava T. K., Ramakant Rai and Archna Suman. 2003. Soil behaviour and growth and productivity of sugarcane ratoon as influenced by trash management and preceding intercrops. ***Indian Journal of Agronomy*** **48 (4)**: 271-273.

43. Shahi H. N., Srivastava T K., Ramakant Rai and Archna Suman. 2003. Effect of intercropping blackgram (*Vigna mungo*) on sugarcane growth and yield and its rhizosphere. Sugarcane International (International Sugar Journal) 23(September/ October):14-17.

44. Srivastava T. K. 2003. Bio-efficacy of sulfentrazone against nut-sedge (*Cyperus rotundus*) and other weeds in sugarcane. Indian Journal of Weed Science 35 (1&2): 83-86.

45. Srivastava, T. K., Shahi, H. N. and Menhi Lal 2003. Agro-techniques for effective weed control with glyphosate in spring planted sugarcane. Indian Journal of Sugarcane Technology 18 (1&2): 27-30.

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48. Chauhan, R .S. and Srivastava, T. K. 2002. Herbicidal –cum- integrated weed management in spring planted sugarcane. Indian Journal of Sugarcane Technology 17 (1&2): 29-31.

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53. Chauhan, R. S., Srivastava, T.K. and Srivastava, S. N. 1999. Evaluation of ametryn for weed control in sugarcane. Indian Journal of Sugarcane Technology 14 (1&2): 38-40.

54. Srivastava T. K., Ahlawat I.P.S. and Panwar J.D.S. 1998. Effect of phosphorus molybdenum and bio-fertilizers on productivity of pea. Indian Journal of Plant Physiology 35 (3): 237-239.

55. Menhi Lal, Singh A. K. and Srivastava, T. K. 1997. Balanced fertilizer use in alluvial soils. Fertilizer News (Indian Journal of Fertilizers) 42 (2): 31-37.

56. Pandey, M.B. and Srivastava, T. K. 1996. Effect of time of initiation and earthing-up on growth and yield of sugarcane ratoon. Indian Journal of Sugarcane Technology 12 (1): 81-83.

57. Srivastava T. K. and Pandey M. B. 1996. Managing weeds in spring planted sugarcane: an integrated approach. Indian Journal of Sugarcane Technology 12 (1): 71-74.

58. Srivastava T. K. and Ahlawat I.P.S. 1995. Response of pea to phosphorus molybdenum and bio-fertilizers. ***Indian Journal of Agronomy*** **40 (4)**: 630-635.

Books or Chapter Published

Books

1. Khan, A. R., Singh, S. S., Bharati, R. C., Srivastava, T. K., Khan, M. A. (Ed). 2010. Resource Conservation Technologies for Food Security and Rural Livelihood, Agro-tech Publishing Academy, Udaipur. 516p. ISBN: 978-81-8321-202-1
2. Shukla, SK., Srivastava, T.K., Singh, G.K. (2013) Sugarcane Ratoon (Problems and Prospects), IISR, Lucknow. p120.
3. Shrivastava, A. K., Srivastava, T. K., Arun K Srivastava, Varucha Mishra, Sangeeta Srivastava, Singh V. K. and S.P. Shukla. 2016. Climate change-induced abiotic stresses affecting sugarcane and their mitigation. IISR, Lucknow. 108p.
4. Shrivastava, A. K., Srivastava, T. K., Arun K. Srivastava, Varucha Misra, Sangeeta Srivastava, V. K. Singh and S. P. Shukla. 2016. Climate change induced abiotic stresses affecting sugarcane and their mitigation. ICAR-Indian Institute of Sugarcane Research, Lucknow. 108p. (ISBN No. 978-93-5265-983-8)
5. Ashok Kumar Srivastava, Ashwini Datta Pathak, Varucha Mishra, Tapendra Kumar Srivastava, Maharam Singh and Somendra Prasad Shukla.2016. Ganna aur Sharkara: Paribhashik Nidhi. ICAR-Indian Institute of Sugarcane Research, Lucknow. 118p.
6. Sigh YP, Srivastava TK, Arora S and Singh AK (Eds). 2021. Souvenir cum Abstracts: National Web Seminar on Natural Resource Conservation and Management, Academy of Natural Resource Conservation and Management, March 20-22, 2021, Lucknow. Pp. 205.
7. Singh S N, Srivastava T K, Pathak A D, Singh P. 2022. Sugarcane Crop Management Practices in India. DKMA, ICAR, New Delhi, pp. 551, ISBN: 978-81-7164-242-7, ICAR DKMA, New Delhi
8. Pushpa Singh, Anam, Srivastava T K, Ram Ratan Verma. 2022. Nanoparticles applications in Agriculture, 2022, Scientific Publishers. ISBN 978-93-91518-22-9, pp 180.

Book Chapters

1. Srivastava, T.K. and V. Visha Kumari 2012. Improving sugarcane productivity in sub-tropical India: a research perspective, pp 105-118. Perspectives in Sugarcane Agriculture (Ed: Nair. N.V., D. Puthira Prathap, R. Viswanathan, J. Srikanth, A. Bhaskaran, Bakshi Ram), Society for Sugarcane Research and Development, SBI, Coimbatore.278p.
2. Srivastava, T. K., Singh, A. K. and Singh Ishwar 2013. Sugarcane. In. Textbook of Field Crops Production: Commercial Crops (Vol. II). Indian Council of Agricultural Research, New Delhi, pp
3. Singh, S. S. and Srivastava, T. K. 2013. Agriculture management strategies for flood affected regions. In. Water Management in Agriculture (Eds: Meena, M.S., Singh, K. M. and Bhatt B.P.), Jaya Publishing House, pp. 241-258.

4. Shiv Ram Singh, Deeksha Joshi, Nidhi Tripathi, Pushpa Singh, and Tapendra Kumar Srivastava. 2017. Plant Growth-Promoting Bacteria: An Emerging Tool for Sustainable Crop Production under Salt Stress. In. S. Arora et al. (eds.), Bioremediation of Salt Affected Soils: An Indian Perspective, DOI 10.1007/978-3-319-48257-6_6 © Springer International Publishing AG 2017 101. Pp 101-131.
5. Menhi Lal and Srivastava, T K. 2017. Optimizing water use in cultivated fodder crops, pp 77-100. Approaches towards Fodder Security in India (Editors: Ghosh P K et al), Studera Press, New Delhi, 650pp.
6. Sugarcane – A Sweat to Sweet Commodity' write-up submitted to Committee on Doubling Farmers' Income by 2022 for inclusion in its report. Published as Vol VIII B of the Report.

Technology Bulletin

1. Shukla, S K., Srivastava, T K., Sushil, S N., Solomon, S (2013) **Bio-resource management in sugarcane cultivation**, published from IISR, Lucknow. p 48.
2. Shukla, S K., Srivastava, T K., Singh, G K. (2013) ***Pedi Ganne ki Unnat Taknik***, IISR, Lucknow. p54
3. Shukla, S K., Srivastava, T K., Sushil, S N., Solomon, S. (2013) ***Ganna utpadan Mein Upyogi Jaiv Taknik***, IISR, Lucknow. p44.
4. Shah A. K., Srivastava, T. K., Sharma, A. K., Shrivastava, A.K., Shrivastava, Sangeeta and Visha Kumari 2012. ***Ganna kheti mahvar margdarshika***. ICAR- IISR, Lucknow. 15p.
5. Sahab Din, Kamta Prasad and Srivastava, T. K. 2012. ***Ganna Alha***. ICAR- IISR, Lucknow. 77p.
6. Singh S N, Pathak A D, Srivastava, T K, Sah A K and Gupta C. 2020. Cane node technology for sugarcane planting. ICAR – Indian Institute of Sugarcane Research, Lucknow. 44p.

Awards

- Fellow Indian Society of Agronomy 2012
- Kirti Puraskar for Official Rajbhasha Publication of ICAR-IISR, Lucknow, 'Ikshu' 2014-15 , Ministry of Home Affairs, Govt. of India (Editor)
- Hindi Griha Patrika Puraskar (Dwittiya Puraskar) for Ikshu, 2013-14 ,Ministry of Home Affairs, Govt. of India (Editor)
- Indira Gandhi Rajbhasha Puraskar for Ikshu, 2012-13, Ministry of Home Affairs, Govt. of India (Editor)
- Editor, Indian Journal of Agronomy (2013-2014)