

**Division of Crop Production  
Indian Institute of Sugarcane Research, Lucknow – 226002**

**1. Name of the Scientist:** Dr TAPENDRA KUMAR SRIVASTAVA

**2. Bio-data:**

**(a) Position/designation:** Principal Scientist (Agronomy) &  
In-Charge Agro-Met Unit

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**(d) Date of Birth:** 21<sup>st</sup> December 1966

**(e) Joining date in ICAR:** 11.11.1992

**(f) Discipline & Specialization:** Agronomy with specialization in weed management, organic farming and soil health & nutrient management.

**(g) Training and advance exposure in the area of work:**

Participated in three Summer/ Winter Schools on aspects covering organic farming of crops and advances in sugarcane production and multiplication technologies. Attended a week-long training course on Performance Assessment of Agricultural Research Organizations at NAARM, Hyderabad. Got trained in the areas of information processing and networking in agriculture at IASRI, New Delhi. Also attended a training at Indian Institute of Foreign Trade organized for promoting skills to facilitate export of agricultural goods from India.

**3. Contribution to the Scientific advancement (5-6 bullets)**

- Developed weed control and management package for sugarcane plant and ratoon crops.
- A complete package for organic cultivation of sugarcane has been developed for sub-tropical conditions.
- Management of weeds in sugarcane production systems through crop diversification and tillage options has been devised.
- Technology for trash management in relation to soil health maintenance has been developed.
- A new sugarcane planting method called 'Cane-node Technology' with promise to save cost on seed and enhance yield was developed.



#### 4. Current area of research

- Soil test crop response correlation studies to recommend management of nutrients based on soil fertility status and targeted yield of sugarcane in different production systems.
- Carbon sequestration in soil through bio-manures and soil health improvement.
- Management of binding weeds in sugarcane through integrated approach.

#### 5. Future planning of research

- Development of yield forecasting models for sugarcane crop mainly to assess the effect of climatic change on sugarcane and sugar yield in India. The work will be taken up in collaboration with IARI, New Delhi.
- Efficient water management in sugarcane system through technology up scaling of field application parameters and also micro-irrigation techniques.
- Studies on nutrient interactions for balanced nutrient management in sugarcane plant-ratoon cropping system.

#### 6. Publications (Best five)

1. 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. (NAAS Ranking 6.34)
2. **Srivastava, T.K.**, Singh, K P and Yadav, R. L. 2012. Sugarcane productivity, soil health and nitrogen use dynamics in a bio-nutrition based multi-ratooning system under Indian sub-tropics. *International Sugar Journal* **114**: 584-589. (6.13)
3. Singh, K. P., **Srivastava, T. K.**, Archna Suman and Singh, P. N. 2010. Sugarcane productivity and soil health in a bio-nutrition based multi-ratooning system under sub-tropics. *Indian Journal of Agricultural Sciences* **80** (8): 746-748. (6.14)
4. **Srivastava T. K.**, Menhi Lal, Singh K. P., Archna Suman and Pradip Kumar. 2009. Enhancing soil health and sugarcane productivity in a plant-ratoon system through organic nutrition modules in sub-tropics. *Indian Journal of Agricultural Sciences* **79** (5): 346-350. (6.14)
5. 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 (9.40)

#### 7. Awards and Fellowship

- Received Silver Medal in B.Sc. Ag & A.H. for academic performance at GB Pant University of Agriculture and Technology.
- Conferred with Fellow Ship of Indian Society of Agronomy during 2014 in recognition of outstanding contribution.
- Recognised as Principal Investigator, Crop Production under the All India Coordinated Research Project on Sugarcane.