

## Profile of Scientist



1. **Name of the Scientist:** Dr. S. K. Duttamajumder
2. **Personal biodata:**
  - a) **Designation:** Head, Division of Crop Protection
  - b) **Joining date in ICAR:** 30.12.1985
  - c) **Discipline and specialization:** Plant Pathology, sugarcane pathology
  - d) **Training / advance exposure in the area of work:**
    - One month training on *Integrated Pest Management* at Louisiana State University, Louisiana, USA in 1992.
    - Two weeks training on *Molecular markers: Tools for genetic variability analysis* at NBFGR, Lucknow in 2003.
    - One week training on *Management Development Programme* at IIM, Lucknow in 2010.
  - e) **Contribution to the scientific advancement:**
    - Discovered hitherto unknown mode of transmission of *Xanthomonas albilineans* that the fluff (true seed of sugarcane) carry the bacterium along with and thus, the disease has spread in all the cane research stations of India engaged in sugarcane Improvement.
    - Established that under waterlogged /submerged condition conidia of *Colletotrichum falcatum* anastomose en-masse to form fusion aggregate. From fusion aggregates new crop of conidia fortified with accumulated variability emerges.
    - Developed the Parafilm method of inoculation for red rot. It is superior to nodal methods with high success rate (>90%) and evaluation time is reduced to 15-20 days as compared to 60 days in plug method. Moreover period of inoculation is extended to four months.
    - Developed an inoculation technique of sugarcane smut with high success rate of infection (83%) in comparison to standard sett-dip inoculation (36%).
    - Developed grading system for evaluating cane genotype against red rot by introducing area concept and nodal rotting as the important criteria for evaluation and accordingly modified the red rot evaluation scale of Srinivasan and Bhat (1961) for assessing red rot resistance.

### **3. Future Planning of research:**

- Generation of variability in *Colletotrichum falcatum* and identification of genes governing virulence in *C. falcatum*.
- The actual causal organism(s) of wilt.
- Integrated pests management of sugarcane

### **4. Publications:**

1. Duttamajumder, S. K. and Verma, J. P. 1994. Population dynamics of pathogenicity genes of *Xanthomonas campestris* pv. *malvacearum* in nature. *J. Phytopathology*, **140**: 145-152.
2. Duttamajumder, S. K. 1990. Fluff transmission of *Xanthomonas albilineans* - the incitant of leaf scald disease of sugarcane. *Current Science*, **59**: 744-745.
3. Duttamajumder, S. K., Singh, N. and Agnihotri, V. P. 1990. Behaviour of *Colletotrichum falcatum* under waterlogged condition. *Indian Phytopathology*, **43**: 227-229.
4. Duttamajumder, S. K. 2001. Surreptitious spread of sugarcane ratoon stunting disease pathogen *Leifsonia xyli* subsp. *xyli* in the sub-tropical India. *Indian Phytopathology*, **54**: 481-483.
5. Duttamajumder, S. K., Srivastava, B. L. and Kapur, R. 2004. Wilt disease: a major deterrent in breeding sugarcane genotypes for high sugar accumulation potential in subtropical India. *Indian Journal Agril. Sci.*, **74**: 80-83.

### **5. Other relevant activities of Scientist:**

- Chairman, IISR Newsletter Committee
- Chairman, IISR Purchase Advisory Committee
- Member in different committees of IISR
- Resource person for farmers and sugar mill staff training programmes (on campus and off campus) organized by IISR, Lucknow
- Referee for National and International Journals
- External examiner for M.Sc. and Ph.D. students.