

**Sagar Chandra Senapati, Ph.D.**

**Professor, Department of Soil and Water Conservation Engineering and  
Head, Department of Agricultural Structure, Civil & Environmental Engineering**

**Education**

- Ph.D. (Agril. Engg.) in Soil and Water Conservation Engineering, Orissa University of Agriculture and Technology, Bhubaneswar, Odisha (India) - 2006
- M. Tech.(Agril. Engg.) in Soil and Water Conservation Engineering, Indian Institute of Technology, Kharagpur, West Bengal (India) -1981.
- B.Sc. (Ag. Engg. & Tech.), Orissa University of Agriculture and Technology, Bhubaneswar, Odisha (India) - 1979.

**Experience**

Working in OUAT Bhubaneswar since December, 1983 in different teaching, research and extension capacities such as Senior Scientist & Officer-in-Charge, Regional Research and Technology Transfer Sub-Station, Kirei, Sundargarh since 1990, Training Organizer, Krishi Vigyan Kendra, Sundargarh since March 2004 up to September 2005, Professor, Deptt. of Soil and Water Conservation Engineering since November, 2006, Head, Department of Soil and Water Conservation Engineering, and Deptt. of Agril. Structure, Civil & Environmental Engineering from March, 2006 to September 2008, and Head, Department of Agricultural Structure, Civil & Environmental Engineering from October 2008 and continuing.

**Externally Funded Projects / schemes****Investigator**

- **NWDPR**A research project (World Bank) , 1986-88
- Agriculture Intensification Programme (World Bank), 1999 - 2002
- Pilot Project on Waste Land Development (World Bank), 1998 - 20001

**The following projects have been approved by the ICAR and are awaited for implementation**

**Project Investigator of:**

- “Urban Agriculture through Rooftop Rainwater Harvesting and its Effect on Energy Efficiency of the Buildings”. Approved by the ICAR, New Delhi under special grant to OUAT, Bhubaneswar.

**Project Partner of:**

- “Application of G.I.S. and Remote Sensing Techniques for adoption of Precision Agriculture for maximizing Crop Production in Rainfed Areas of Orissa”. Approved by the ICAR, New Delhi under special grant to OUAT, Bhubaneswar Advanced centre for Research and Education on Climate Resilient Agriculture (ACRECRA)”. Approved by the ICAR, New Delhi under component-2 of NAEP
- “Advanced centre for Research and Education on Climate Resilient Agriculture (ACRECRA)”. Submitted to the ICAR, New Delhi under component-2 of NAEP.

**Other Important Assignments**

- Programme I/C of NWDPPRA Training Project (World Bank), 1994

**Courses taught**

- Open Channel flow (P.G. & Ph.D.)
- Design of micro and sprinkler irrigation systems (P.G. & Ph.D.)
- Micro-irrigation systems design (U.G.)
- Advanced soil and water conservation Engineering (U.G.)
- Groundwater Wells and Pumps (U.G.)
- Simulation and modeling (P.G. & Ph.D.)
- Irrigation Engineering (U.G.)

**(Please give the courses taught in last 10 years)**

**Students guided**

Guided 03 M. Tech. students and Guiding two Ph.D. students.

**Significant research contributions**

- Standardized the vertiveria bund interval in rainfed *up* lands for slopes (i) less than 2.5%, (ii) equal to 2.5% and less than 4.5% and (iii) equal to 4.5% and less than 6.0%.
- Strip widths of red gram and green gram in rainfed sloppy up lands have been worked out for slopes less than 2.5% and for slopes equal to and greater than 2.5%.
- Standardized the optimum sand : soil composition of earthen pitchers for water application to fruit plants planted in red lateritic soil at early stages.
- Management of ponded water in rice field during *kharif* and *rabi/summer* seasons has been worked out for water saving and yield increase.
- Rice based cropping sequences have been evaluated in irrigation command on economic view point.
- Developed a multifaceted objectives in watershed management programme for Panderpalli-I micro-watershed of Sundargarh district, Odisha.

- Developed a mathematical model as well as co-axial graph to select the optimum pipe size in pressurized pipe irrigation system for a particular flow rate.
- The optimum emitters capacity in pulse drip irrigated brinjal crop has been worked out.

### **Present research interests**

- Land and Water management
- Drip Irrigation
- Operational Research (Modeling)

### **Honours and Awards**

- “Rajiv Gandhi Sadbhavana Award – 2010” from the “Rajiv Gandhi Forum” Orissa State.

### **International trainings/ visits**

Nil

### **Peer recognition**

- Referee of two national journals
- Expert member in two national level institutions, ICAR institutions and OPSC
- Resource as training personnel to different Govt. organizations
- Member of Education Council Cell of the University O.U.A.T., Bhubaneswar Since 2008 – 09 & Continuing
- Member, Screening Committee (Professor, Assoc. Professor and Asst. Professor and equivalent) of the University O.U.A.T., Bhubaneswar Since 2010-11 to continuing
- Technical member of the Agricultural Consultancy and Support Service Cell, O.U.A.T. Directorate of Extension Education (OUAT), Bhubaneswar Since 2010-11 to Continuing

### **Publications**

04 books/ practical manuals (without ISBN), 02 book chapters (national), 04 Technical Bulletins, 40 research papers in peer reviewed journals and 01 technical article.

### **Selected publications**

- S. C. Senapati and M. M. Panda (2007). Effect of lister crops on runoff and soil loss in red soils of north western plateau agroclimatic zone of Orissa. Indian J. of Soil Cons., Vol. 35 (2), pp. 139-141.

- S. C. Senapati and S. D. Sharma (2007). Effect of buffer strips on soil erosion and yield of maize (*Zea mays* L.) in rainfed sloppy uplands in north western plateau zone of Orissa. *Indian J. Soil Cons.*, Vol. 35 (1), pp. 47-
- S.C.Senapati, J.M.L.Gularti, P.Pradhan, S.S.Mishra, K.Pradhan and M.M.Panda. (2009). Effect of deep ploughing and land leveling on yield of rice(*Oryza Sativa*) in canal commands of western Orissa. *Oryza*. Vol. 46 (1): PP. 26-31.
- C.R.Subudhi and S.C.Senapati (2012). Effect of cropping system on runoff, soil loss and crop productivity. *Indian J. Dryland Res. & Dev.* Vol. 27(1), pp. 74-77.
- C. R. Subudhi & S. Senapati (2013). Water harvesting through farm pond and utilization of conserved water for vegetable crops *International journal of Elixir Advanced Engineering Informatics*. 57: pp. 13901-13905
- P. Sahu, N. Sahoo, M. Srinivasulu and S. C. Senapati (2014). Hydraulics of micro tube emitter through perforated tube in gravel- soil medium. *Progress in Science and Engineering Research Journal, Bimonthly International Journal PISER* 15, Vol.02 (05/06): pp. 060-066.

### Book Chapters

- S.K.Sahu, S.C.Senapati and A.P.Sahu (2012). Optimum dyke height for rainwater conservation and rice yield improvement in rainfed medium land ecosystem of Odisha” *Satish Serial Publishing House, 403, Express Tower, Commercial Complex, Azadpur, Delhi-110033 (India)*
- S.C.Senapati, S.K.Sahu, and A.P.Sahu (2012). Design and Development of Suitable Technology by Rice-Fish Integration in Medium Land Rainfed Ecosystem” in *Natural Resource Conservation Emerging Issues & Future Challenges*. *Satish Serial Publishing House, 403, Express Tower, Commercial Complex, Azadpur, Delhi-110033 (India)*

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