

Profile

Dr Somasundaram Jayaraman



Designation: Principal Scientist
Division of Soil Physics

☎ [+91-755-2730970 (112),
Fax: +91-755-2733310]

✉ [somajayaraman@gmail.com;
Somasundaram.J@icar.gov.in]

Research specialization: Soil Physics-Soil & Water Conservation

- No-till farming on soil properties and carbon sequestration
- Soil processes: Soil Carbon and Nitrogen / aggregate dynamics
- Sustainable soil management practices
- Greenhouse gas (GHG) emission under no-tillage/conservation agriculture
- Climate change mitigation/ Ecosystem Services
- Vertisols Management

Professional Experience:

I have more than 19 years of experience in research and training in the field of natural resource management/conservation agriculture on soil properties and carbon sequestration supported by publication in peer reviewed journals (60), review papers (5), edited books (5) and book chapters (25). I have good experience in guiding students as well as handling 12 projects (8 institute projects + 2 externally funded projects+ 2 consultancy projects) in the semi-arid regions of western and central India. I have published more than 65 research papers of national and international repute; Mentored 4 MSc students, 1 PhD scholar, and 2 Young Scientists.

Awards and Honours:

- **The Scientist Award** – for Commendable contribution to Soil Science by Dr. B. Vasantharaj David Foundation, Tamil Nadu, India during 2019.
- **Endeavour Research Fellowship** sponsored by Australian Government during 2015.
- **Best Thesis award:** Awarded by TNAU, Coimbatore (Tamil Nadu) during 2001.
- **Best Research Award:** Awarded by TNAU, Coimbatore (Tamil Nadu) during 2001.
- **Senior Research Fellowship** awarded by TNAU Student Fellowship, Coimbatore.
- **Junior Research Fellowship** awarded under NRSA funded scheme for 'Integrated Mission for Sustainable Development Using Remote Sensing techniques, Dept of Space, GOI.

Top Ten publications:

1. **Somasundaram' J**, M Salikram, , N. K. Sinha, M. Mohanty, R. S. Chaudhary, Dalal, R.C, Mitra, N.G., Blaise, D., Coumar, M.V., Hati K.M., Thakur, J.K., Neenu, S, Biswas, A.K., Patra, P.K. and Chaudhari, S.K. (2019). Conservation agriculture effects on soil properties and crop productivity in a semiarid region of India. **Soil Research**, **57(2)**: 187-199;doi: <https://doi.org/10.1071/SR18145>.
2. **Somasundaram**, J., Rattan Lal, N.K.Sinha, Ram Dalal,, Chitralekha, A. R.S.Chaudhary and A.K.Patra (2018). Cracks and Pot-holes in Vertisols: Characteristics, Occurrence and Management. **Advances in Agronomy Vol. 149**; 93-159, DOI: **10.1016/bs.agron.2018.01.001**.
3. Reeves, S.H., **Somasundaram, J***, W.J. Wang, M.A. Heenan, R.C. Dalal. (2019). Fluxes of CO₂ as influenced by soil aggregate size and long-term contrasting tillage, stubble and nitrogen management regimes. **Geoderma 337**: 1086-1096, doi: 10.1016/j.geoderma.2018.11.022 **(Corresponding Author)**.
4. **Somasundaram J**, Chaudhary, R S, Awanish Kumar, Biswas A.K., Sinha N.K., Mohanty M, Hati K. M., Jha P, Sankar, M, Patra, A.K and Chaudhari, S.K. (2018).). Effect of contrasting tillage and cropping systems on soil aggregation, aggregate-associated carbon and carbon pools under in Rainfed Vertisols **European Journal of Soil Science: DOI**: 10.1111/ejss.12692.
5. **Somasundaram, J.**, S.H. Reeves, W.J. Wang, M.A. Heenan, R.C. Dalal. (2017). Impact of 47 years of no-tillage and stubble retention on soil aggregation and carbon distribution in a Vertisol. **Land Degradation & Development** 28 (5), 1589-1602, DOI: 10.1002/ldr.2689.
6. **Somasundaram, J.**, Sinha, N.K., Patra, A.K. and R. Lal. (2017). Managing Surface Cracks of Vertisols. **Encyclopedia of Soil Science**, Third Edition DOI: 10.1081/E-ESS3-120052915.
7. **Somasundaram, J.**, Singh, R.K., Prasad, S.N., Sethy, B.K., Kumar, A., Ramesh, K. and Lakaria B.L. (2011) Management of black Vertisols characterized by pot-holes in the Chambal region, India, **Soil Use and Management**, Vol 27, 124–127 (doi:10.1111/j.1475-2743.2010.00321.x).
8. **Somasundaram, J.**, R.S. Chaudhary, Brij Lal Lakaria, R. Saha, N. K. Sinha, R.K. Singh, Pramod Jha, R. K. Singh and A. Subba Rao (2014). Pothole formation and occurrence in black Vertisols of central and western India. **Agricultural Research**, DOI: 10.1007/s40003-014-0098-6). (Springer publication).
9. **Somasundaram, J.**, Meena, H.R. Singh, R. K., Prasad, S.N and Parandiyal A K. (2011). Diagnosis of Micronutrient imbalance in Lime crop in semi-arid region of Rajasthan. **Communication in Soil Science and Plant Analysis**, Vol 42: 858–869 (doi: 10.1080/00103624.2011.552658).
10. **Somasundaram, J.**, Krishnasamy, R., Savithri, P., Satish Kumar, B., Behera, S.K., Arun Kumar, V., Chitdeswari, T and Vassanda Coumar, M. (2011). Effect of sewage sludge application on accumulation of Cd, Cr, Ni and Pb in forage maize (*Zea mays* L.) **Agrochimica**, Vol. LV - No. 6: (November-December 2011), 332-354.