

RATTAN LAL

**Director, CFAES Rattan Lal Center for Carbon Management and Sequestration, School of Environment and Natural Resources,
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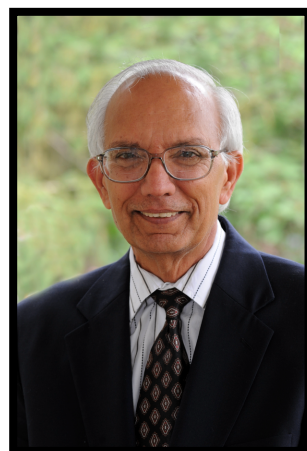
Citizenship U.S.A., O.C.I.

Education B.Sc. (Agric.), 1963, PAU, India; M. Sc. (Soils), 1965, IARI, India; Ph.D. (Soils), 1968, OSU, Columbus, OH, USA

Language Proficiency English, Hindi, Punjabi, Urdu, French (fair)

Professional Positions Held

- 2020 – Director, CFAES Rattan Lal Center for Carbon Management & Sequestration, OSU, Columbus, OH
- 2020 – 2021 Member, Science Committee and Action Track 1&3, United Nations Food Systems Summit (UNFSS), New York, USA
- 2020 – Member, Advisory Board, International Fertilizer Development Center (IFDC), Muscle Shoals, AL, USA
- 2020 – Member, Advisory Board, German Academic Exchange Service (DAAD), Bonn, Germany
- 2020 – Chair in Soil Science and Goodwill Ambassador for Sustainable Development Issues, IICA, San José, Costa Rica
- 2020 – Steering Committee, Project Drawdown, Global Council for Science and Environment, San Francisco, CA, USA
- 2020 – Adjunct Professor, Indian Agricultural Research Institute (IARI), New Delhi, India
- 2019 – 2020 International Science Council (ISC), Liaison Officer for IUSS, Paris, France
- 2018 – Member, Science Policy Interface, UNCCD, Bonn, Germany
- 2017 – Member, Founding Board, “Adaptation of African Agriculture” (AAA) Initiative, Rabat, Morocco
- 2016 – Member, Executive Committee of “4 per Thousand” Initiative, Paris, France
- 2014 – 2019 Chair, Advisory Committee, UNU-FLORES, Dresden, Germany
- 2013 – 2017 Member, Steering Committee, Global Soil Week (IASS), Potsdam, Germany
- 2013 – 2016 Member, Advisory Board, Food Agriculture and Climate Change (FACCE), E.C.
- 2011 – 2014 Member, FAC, 3rd Climate Assessment Report, NOAA, Washington, D.C., USA
- 2011 – 2018 Member, Scientific Advisory Board, SERDP, DOD, Washington, D.C., USA
- 2011 – Distinguished University Professor of Soil Science, Columbus, OH, USA
- 2011 – 2012 Sr. Science Advisor, Inst. Advanced Sustainability Studies (IASS), Potsdam, Germany
- 2009 – Adjunct Professor, University of Iceland, Reykjavik, Iceland
- 2001 – 2020 Director, Carbon Management and Sequestration Center, OSU, OH, USA
- 2000 – Director, South Asia Program, IPA, FAES, The Ohio State University, Columbus, OH
- 1989 – 2011 Prof. Soil Science, The Ohio State University, Columbus, OH, USA
- 1970 – 1987 Soil Physicist, International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria
- 1968 – 1969 Senior Research Fellow, University of Sydney, Australia
- 1966 – 1968 Research Assistant, OARDC, Wooster, OH, USA
- 1963 – 1965 Research Assistant, The Rockefeller Foundation, New Delhi, India



Major Scientific Contributions

1. Biological methods of soil erosion control (mulch farming, conservation agriculture, cover cropping) in the tropics (1970 – 1980)
2. Soil guide to adoption of conservation tillage based on soil and ecosystem characteristics (1980 – 1985)
3. Ecological methods of land development and deforestation in the tropics for protecting the fragile ecosystems (1975 – 1985)
4. Manual to assess sustainable management of soil in the tropics (1990 – 1995)
5. Soil carbon sequestration to mitigate climate change and enhance sustainable intensification of agroecosystems (1990 – 2018)
6. Restoring degraded/eroded soils through soil carbon management and restoration of soil health (1995 – 2018)
7. Sustainable soil management and global food security, and producing more from less by enhancing eco – efficiency (1970 – 2019)

Publications and Mentoring

Publications: ~2762 (as of 12/2021)

Refereed journal articles: 1036

(1st author: 317, 2nd author: 406, 3rd author: 152, other: 161)

Books written/edited: 102

Book chapters: 567

Keynote Presentations: 746

Mentoring: ~380 international professionals

Graduate students: 115

Undergraduate students: 14

Postdoctoral researchers: 58

Research Scientists: 11

Visiting scholars: 182 (2 wk.–2 yrs)

Citations Indices (as of 12/2021): [Google Scholar](https://scholar.google.com/citations?user=lal.1)

	All	Since 2016
Citations	129,861	62,461
h-index	172	114
i10-index	1055	763

Service to Professional Organizations

- 2014 – 2020 **President Elect, President, Past President, International Union of Soil Sciences, Vienna, Austria**
- 2018 – Editor-In-Chief, *Advances in Soil Science*, Taylor and Francis, Boca Raton, FL
- 2010 – 2018 Co-Editor-in-Chief, *Advances in Soil Science*, Taylor and Francis, Boca Raton, FL
- 2007 – 2008 Member, NRC/NAS Panel on Africa and Asia, NRC/NAS, Washington, D.C.

- 2006 – 2008 **President Elect, President, Past President, Soil Science Society of America, Madison, WI, USA**
- 2006 – 2016 Editor for the Americas, Land Degradation & Development, J. Wiley & Sons, U. K.
- 2004 – 2012 Co-Editor-in-Chief, Soil & Tillage Research, Elsevier, Holland
- 2003 – 2005 Lead Author, U.N. Millennium Ecosystem Assessment
- 2000 – Editor-in-Chief, Encyclopedia of Soil Science, Dekker, NY, Taylor and Francis
- 2000 – 2005 Member, Review Panel, Environ. Division, Los Alamos National Lab., New Mexico
- 1998 – 2002, 2008 – 2010, 2016 – 2020: Member, U.S. Nat'l Comm. on Soil Sci., Nat'l Acad. Sci., Washington, D.C.
- 1998 – 2000 Lead Author, IPCC Special Report, LULUCF, Geneva, Switzerland
- 1993 – 1996 Corresponding author, IPCC Working Group II: Geneva, Switzerland
- 1990 – 1993 Member NRC/NAS Panel on Sustainable Agric. and on Vetiveria (1990 – 92) NRC, Washington, D.C.
- 1988 – 1991 **President, Int'l Soil Tillage Research Organization**
- 1987 – 1990 **President, World Association of Soil and Water Conservation,**
- 1982 – 1987 Vice President, Int'l Commission on Continental Erosion, Exeter, U.K.

Current Funding Support and Collaboration (Total Grants Received Since 1982 US ~\$50 million)

- U.S. Government and Foundations: USDA (NRCS, ERS, CSREES), USAID, USDOE, US State Dept., US-EPA, The Rockefeller Foundation, TIE/CWC-OSU
- Industry: Monsanto, Corn Growers Assoc., Soybean Growers Assoc., AEP, Ohio Coal Development, Coal Mining Companies, Tata Trust, Dannon, The Herbert W. Hoover Foundation
- Natl. Laboratory: Oak Ridge Nat'l. Lab., Los Alamos Nat'l Lab., Pacific Northwest Nat'l. Lab., Battelle, Brookhaven Nat'l. Lab.

Awards and Honors

- **Padma Shri Award, bestowed on the 72nd Republic Day by the Government of India, New Delhi, India (2021)**
- Ranked #391 globally among Reuters "The Hot List" of top 1,000 climate scientists (2021)
- Ranked #1 in Agronomy & Agriculture; #34 (for 2020) & #73 (1996-2020) Globally among top 2% of scientists by Ioannidis et al. (2019-2021)
- Ohio No-Till Council Outstanding Educator-Researcher Award, Columbus, OH, USA (2020)
- **Arrell Global Food Innovation Award in the Research Category, Guelph, Ontario, Canada (2020)**
- Maharishi International University Award, Fairfield, IA, USA (2020)
- **World Food Prize, Des Moines, IA, USA (2020)**
- **Punjab Agricultural University Soil and Agronomy Building named as "Dr. Rattan Lal Laboratories," Ludhiana, India (2020)**
- **Japan Prize in "Biological Production, Ecology," Tokyo, Japan (2019)**
- **GCHERA World Agriculture Prize, Nanjing, China (2018)**
- **Glinka World Soil Prize, FAO, Rome, Italy (2018)**
- Doctor of Science, *Honoris Causa*: IARI, New Delhi, India (2021); Amity University, U.P. India (2020); PUCV, Chile (2019); Gustavus Adolphus College (2018); Univ. of Lleida, Lleida, Spain (2017); TUD, Germany (2015); Alecu Russo Balti State University, Moldova (2010); Norwegian University of Life Sciences, Norway (2005); PAU, Ludhiana, India (2001)
- U.S. Awasthi IFFCO Award, New Delhi, India (2019)
- Alumni Medalist, Commencement Medal, 422nd Commencement, Ohio State University (2019); Professional Achievement Award (2012); Medal of Honor, UIMP, Santander, Spain (2018); Distinguished Service Medal, IUSS, Rio, Brazil (2018)
- Rao Bahadur Dr. R.D. Singh, Memorial Lecture, HAU, Hisar, India (2018)
- Sustained Achievement Award, Renewable Natural Resources Foundation, Washington, DC, USA (2017)
- Atlas Award, The Best Paper Among 1800 Journals, Elsevier Science Publisher, Amsterdam, Netherlands (2016)
- INRA, Morocco Government Award for Strategic Development of Earth System Science Worldwide, Marrakesh, Morocco (2016)
- Clarivate-Thomson Reuters Highly Cited Researchers in Agricultural Sciences (top 1%), (2014, 2015, 2016, 2017, 2018, 2019, 2020)
- The Editor's Choice Award (2015); Honorable Mention (2015) Soil and Water Conservation Society, Ankeny, IA, USA
- Thomson Reuters: 2002 – 2013 World's Most Influential Scientific Minds (2014)
- Rothamsted Fellow, Rothamsted, UK (2013)
- Global Drylands Champion, UN Convention to Combat Desertification, Bonn, Germany (2013)
- Honorary Member, Indian Society of Soil Science (2012), WASWAC(2000), DBG: Korrespondierendes Mitglied (2020)
- M.S. Swaminathan Award, TAAS, New Delhi, India (2009)
- IPCC—Nobel Peace Prize Certificate, Geneva, Switzerland (2007)
- Presidential Lecture, Current Trends, 10th May, Chaired by President Grimsson of Iceland, Reykjavik, Iceland (2006)
- Liebig Award, International Union of Soil Sciences, Philadelphia, USA/Vienna, Austria (2006)
- Zayed Intl. Prize for the Environment, Millennium Ecosystem Assessment, Author Award (2005)
- Norman Borlaug Award, Coromandel, IARI, New Delhi, India (2005)
- Scroll of Honor, Haryana Agricultural University, Hisar, India (2001)
- Distinguished Lecture (2000), Distinguished Scholar Award, (1994), The Ohio State University, Columbus, OH, USA
- Sigma Xi International Award, Ohio Chapter, OH, USA (1998)
- Hugh Hammond Bennett Award (1998), Best Research Paper Honorable Mention Award (2020), JSWC, Ankeny, IA, USA
- Soil Sci. Res. Award (2002), Int'l Soil Sci. Award (1988); Soil Sci. Applied Res. Award (1992); of Soil Sci. Soc. of America
- Fellow: Am. Soc. Agronomy (1985), Soil Sci. Soc. Am. (1986), Third World Acad. Sci. (1992), Am. Association, Adv. Sci. (1996), Soil Water Cons. Soc. (1997) Nat'l Acad. Agric. India, (1998)
- Fellow: Am. Soc. Agronomy (1985), Soil Sci. Soc. Am. (1986), Third World Acad. Sci. (1992), Am. Association for Adv. Sci. (1996), Soil Water Cons. Soc. (1997) Nat'l Acad. Agric. India, (1998)
- Carl Sprengel Agron. Res. Award (2005), Environment Quality Award (2004), Int'l Agron. Award (1995), of Am. Soc. of Agro.
- Gold Medal, BSc, PAU, Ludhiana, (1963); Dist. Alum. Award (1998), Gold Medal M.Sc, IARI, New Delhi (1965)