

Curriculum Vitae of Professor Rattan Lal

Rattan Lal, Distinguished University Professor of Soil Science
 Director, CFAES Rattan Lal Center Carbon Management and Sequestration (C-MASC)
 The Ohio State University: College of Food, Agricultural and Environmental Science
 422B Kottman Hall, 2021 Coffey Road, Columbus, OH 43210

E-mail: lal.1@osu.edu
Phone: 614/292-9069
Fax: 614/292-7432
Website: cmasc.osu.edu

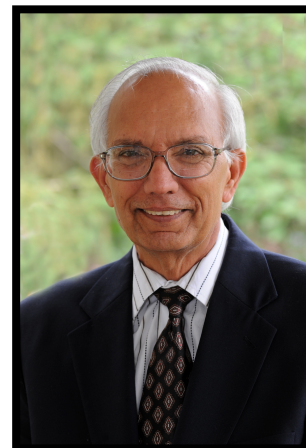
Biographical Information

Place of Birth: Karyal, Gujranwala, West Punjab, India

Education: 1968 Ph.D. (Soils), The Ohio State University, Columbus, Ohio, USA
 1965 M.Sc. (Soils), Indian Agricultural Research Institute, New Delhi, India
 1963 B.Sc. (Agriculture) Punjab Agricultural University, Ludhiana, Punjab, India
 1959 Matriculation, Government High School, Rajaund, District Kaithal, Haryana, India

Positions Held:

2020 – Director, CFAES Rattan Lal Center for Carbon Mgt. & Sequestration, The Ohio State University, Columbus, OH
 2023-2026 Member, SERDP-SAB Department of Defense, Washington, DC
 2023- Member, Coordination Hub, U.N. Food System Summit, FAO, Rome, Italy
 2023- Member, SAC, AgriTech Center of Excellence, UM6P, Ben Guerir, Morocco
 2023- Member, SAC, African Plant Nutrition Institute, UM6P, Ben Guerir, Morocco
 2021-2025. Member, Board for International Food and Agriculture Development, USAID, Washington, DC
 2021- Member, U.S. Farmers and Ranchers Association, Chesterfield, Missouri, USA
 2021- Member, Board of Director, International Fertilizer Development Center, Muscle Shoals, AL, USA
 2021 – Member, Advisory Board, Ecosystem Services Market Consortium (ESMC), Falls Church, VA, USA
 2020 – 2021 Member, Science Committee & Action Track 1&3, United Nations Food Systems Summit (UNFSS), NY, NY, 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
 2019 – 2020 Member, Science Advisory Group, Leonardo DiCaprio Foundation, CA, USA
 2018 – Member, Science Policy Interface, UNCCD, Bonn, Germany
 2017 – 2022 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 Professor of Soil Science, The Ohio State University, Columbus, OH, USA
 1987 – 1989 Associate Professor of 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



PROFESSIONAL AFFILIATIONS

- American Geophysical Union (1999-)
- American Association for Advancement of Science (1992-)
- Soil and Water Conservation Society (1987-)
- World Association of Soil and Water Conservation (1982-)
- Society for Promotion of Wasteland Development in India (Founding member 1980-)

- International Soil and Tillage Research Organization (1976-)
- International Union of Soil Sciences (1971-)
- Soil Science Society of America (1966-)
- American Society of Agronomy (1966 -)

HONORS AND AWARDS

University Student Awards

- Member, Sigma Xi, Ohio Chapter, Columbus, Ohio, USA (1968)
- Biswas-Desai Gold Medal, and IARI Gold Medal for the highest GPA, IARI, New Delhi, India (1965)
- Gold Medal, for highest GPA, Punjab Agricultural University, Ludhiana, India (1963)
- Academic Roll of Honor, Punjab Agricultural University, Ludhiana, India (1963)
- Highest GPA in Government High School Rajaund, District Jind, Haryana, India (1959)

Professional Awards

- Ranked #1 in the world and in U.S.A with Plant Sci. & Agronomy Leader Award, 2023 Ranking of Best Scientists by Res.Com
- Presidential Award, Soil Sci. Soc. Am. (2022)
- **Padma Shri Award, bestowed on the 72nd Republic Day by the Government of India, New Delhi, India (2021)**
- **Ranked #1 in Agronomy and Agriculture, Environmental Sciences, and at The Ohio State University; #34 Globally for the year 2020 and #73 Globally for career from 1973-2020 among the top 2% of scientists (out of total 8 million scientists) in peer reviewed research article *A standardized citation metrics author database annotated for scientific field* by Dr. John P. A. Ioannidis of Stanford University (2019, 2020, 2021) (see table p. 5)**
- **Ranked #391 globally among Reuters “The Hot List” of top 1,000 climate scientists (2021) (see table p. 5)**
- 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, Iowa, 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)**
- U.S. Awasthi IFFCO Award, New Delhi, India (2019)
- Medalist, Alumni Association, Ohio State University (2019)
- Medal of Honor, UIMP, Santander, Spain (2018)
- Distinguished Service Medal, International Union of Soil Science (IUSS) (2018)
- Rao Bahadur Dr. Ram Dhan Singh, Memorial Lecture, HAU, Hisar, India (2018)
- Best Research Paper for Impact and Quality Honorable Mention Award, Soil and Water Conservation Society, Ankeny, IA (2020)
- EPI Scholar, 2258 Highly Cited Researchers from all science disciplines, and ranked #650 globally (h>100) (2018)
- Highly Cited Researcher, Clarivate Analytics, Web of Science (2017, 2018, 2019, 2020) (see table)
- Sustained Achievement Award, Renewable Natural Resources Foundation (2017). Washington, D.C.
- Atlas Award, The Best Paper Among 1800 Journals, Elsevier Science Publisher (2016), Amsterdam, Holland
- USDA-NIFA, Partnership Award: Multistate Effort (2016), Washington, D.C.
- INRA, Morocco Government Award for Strategic Development of Earth System Science Worldwide, Marrakesh, Morocco (2016)
- Thomson Reuters: 2002-2013 World’s Most Influential Scientific Minds, Highly Cited Research (top 1%) (2014 to 2019)
- The Editor’s Choice Award (2015); Honorable Mention (2015) Soil and Water Conservation Society, Ankeny, IA, US
- Global Drylands Champion, UN Convention to Combat Desertification, Bonn, Germany (2013)
- Honorary Member, Indian Society of Soil Science (2012)
- Honorary Member, World Association of Soil and Water Conservation (2000)
- Korrespondierendes Mitglied of German Soil Science Society, DBG (Honorary Member) (2020)
- Professional Achievement Award, Alumni Association, The Ohio State University (2012)
- Distinguished Achievement in Agriculture Award, Gamma Sigma Delta International (2012)
- Editors’ Choice Award, JSWC for the article authored by Jorge Delgado et al., June (2012)
- Author Award, S-6 Division, Soil Science Society of America, October (2012)
- Member, De Tao Masters Academy, Beijing/Shanghai, China June (2012)
- COMLAND Award, Commission on Land Degradation & Desertification, Helmholtz Ctr. for Env. Res., Leipzig, Germany (2009)
- **Swaminathan Award, TAAS, New Delhi, India, 12 August (2009)**

- Cordban Award, University of Cordoba, Spain (2008)
- **2007 Nobel Peace Prize Certificate from IPCC (2007)**
- Presidential Lecture, 10 May, Current Trends, Chaired by President Grimsson of Iceland, Reykjavik, Iceland (2006)
- **Liebig Award, International Union of Soil Sciences, Philadelphia, USA (2006)**
- Zayed Intl. Prize for the Environment, Millennium Ecosystem Assessment, Author Award (2005)
- **Norman Borlaug Award, Coromandel, New Delhi, India (2005)**
- Carl Sprengel Agronomic Research Award, American Society of Agronomy (2005)
- Certificate of Appreciation, Los Alamos National Lab, Los Alamos, NM (2005)
- Environment Quality Research Award, American Society of Agronomy (2004)
- William E. Larson and Ray R. Allmaras Inaugural Lecture, Univ. of Minnesota (2003)
- Soil Science Research Award (2002), Soil Science Applied Research Award (1992), International Soil Science Award (1988), Soil Science Society of America
- Scroll of Honor, Haryana Agricultural University, Hisar, India (2001)
- **University Distinguished Lecture, The Ohio State University (2000)**
- Outstanding Publication Award, Soil and Water Conservation Society-Ohio Chapter (2000)
- Sigma Xi International Award, Ohio Chapter (1998)
- Distinguished Alumni Award, Punjab Agricultural University, Ludhiana, India (1999)
- **Hugh Hammond Bennett Award, Soil and Water Conservation Society (1998), Ankeny, IA, USA**
- The President's Citation, Soil and Water Conservation Society (1997), Ankeny, IA, USA
- The President's Citation, Soil and Water Conservation Society (1996), Ankeny, IA, USA
- International Agronomy Award, American Society of Agronomy (1995), Madison, WI, USA
- **Distinguished University Scholar Award, The Ohio State University (1994)**
- **Professional Service Award, The Ohio State University (1994)**
- Member, The Honor Society of Phi Kappa Phi (1991)
- Member, Phi Beta Delta, Honor Society for International Scholars (1990)
- Distinguished Scientist, Association of Scientists of Indian Origin (1990)

Honorary Degrees

- Doctor of Science, *Honoris Causa*, Indian Agricultural Research Institute (IARI), New Delhi, India (2021)
- Doctor of Science, *Honoris Causa*, Amity University, Noida, Uttar Pradesh, India (2020)
- Doctor of Science, *Honoris Causa*, Pontifical Catholic University of Valparaíso, Valparaíso, Chile (2019)
- Doctor of Science, *Honoris Causa*, Gustavus Adolphus College, Saint Peter, MN, USA (2018)
- Doctor of Science, *Honoris Causa*, University of Lleida, Lleida, Spain (2017)
- Doctor of Science, *Honoris Causa*, Technical University of Dresden, Germany (2015)
- Doctor of Science, *Honoris Causa*, Alecu Russo Balti State University, Republic of Moldova (2010)
- Doctor of Science, *Honoris Causa*, Norwegian Univ. of Life Sciences, Ås, Norway (2005)
- Doctor of Science, *Honoris Causa*, Punjab Agricultural University, Ludhiana, India (2001)

Fellow of Professional Societies and Institution

- Member, Academia Europea (2022)
- Member, Moldova Academy of Sciences (2022)
- Fellow, Rothamsted Research (2013)
- Fellow, National Academy of Agricultural Sciences, India (1998)
- Fellow, Soil and Water Conservation Society (1997)
- Fellow, American Association for the Advancement of Science (1996)
- Fellow, Third World Academy of Sciences, Trieste, Italy (1992)
- Fellow, Soil Science Society of America (1986)
- Fellow, American Society of Agronomy (1985)

Honorary Membership

- Indian Society of Soil Science, PAU, Ludhiana, India (2012)
- World Assoc. Soil Water Conservation, Buenos Aires, Argentina (2000)

Institutional/Employment Awards

- The OARDC 35-Year Service Award, The Ohio State University, Columbus, OH (2022)
- The OARDC 30-year Service Award, The Ohio State University, Columbus, OH (2017)
- Professional Achievement Award, Alumni Association, The Ohio State University, Columbus, OH (2012)
- The OARDC 25-Year Service Award, The Ohio State University, Columbus, OH (2012)

- Winter College, Invited lecture “Solution Underfoot”, The Ohio State University, 16-18 February 2012, Naples, FL (2012)
- **Distinguished University Professor of Soil Science, The Ohio State University, Columbus, OH (2011)**
- Certificate of Appreciation, College of Food, Agricultural & Environmental Sciences, OSU (2002)
- Distinguished Senior Faculty Research Award, OARDC, The Ohio State University, Columbus, OH (2001)
- Certificate of Appreciation for 15 years of distinguished service, OARDC, The Ohio State University, Columbus, OH (2001)
- Certificate of Appreciation, College of FAES, The Ohio State University, Columbus, OH (2000)
- Department Research Award, OARDC, The Ohio State University, Columbus, OH (1999)
- Certificate of Appreciation, USDA-NRCS, Washington, DC (1999)
- Outstanding International Award, Gamma Sigma Delta, Ohio Chapter, The Ohio State University, Columbus, OH (1998)
- Department Research Award, OARDC, The Ohio State University, Columbus, OH (1997)
- Department Research Award, OARDC, The Ohio State University, Columbus, OH (1996)
- Member, Gamma Sigma Delta, Ohio Chapter, The Ohio State University, Columbus, OH (1995)
- Research Award of Merit, Gamma Sigma Delta, Ohio Chapter, The Ohio State University, Columbus, OH (1995)
- IITA Dedicated Service Award (1987)

Biographical Listings

- Who's Who in the World (1998)
- Distinguished Leadership (1998)
- Citation, American Men and Women of Science (1991)
- Citation, Who's Who in Science and Engineering (1991)

Offices Held in Professional and Honorary Societies

- **President-Elect, President, Past President, Member Executive Committee of IUSS, Vienna, Austria (2014-2020)**
- **Member, U.S. National Committee for Soil Science, National Academy of Sciences, Washington, D.C. (1998-2002, 2008 2010, 2016-2018)**
- Member, Steering Committee, IASS, Potsdam, Germany (2013)
- **Member, Federal Advisory Committee, U.S. Global Change Research Program, Washington D.C. (2010-2013)**
- Member, Foresight Project Team, Office of Science, Prime Minister, U.K. (2009)
- Member, Scientific Advisory Committee “Climate Recovery Group”, Sierra Club (2009-2012)
- Member, Strategy Advisory Board, Institute for Advanced Sustainability Studies, Germany (2009-2012)
- **President, Soil Science Society of America (2006- 2007)**
- Coordinator, Latin American Soil Carbon Network (LASCANet) (2004-2010)
- Leader, International Year of the Planet Earth Team on “Desertification”, International Geo Unions (2004)
- Member, NRC Steering Committee on Direct and Indirect Human Contributions to Terrestrial Greenhouse Gas Fluxes (2003)
- Advisor, Chicago Climate Exchange, Carbon Trading (2002- 2006)
- **IPCC 2001, Planning Meeting, Revised Guidelines for Practice Guidance, Geneva, Switzerland, (2001)**
- **IPCC 2001, Reviewer of IPCC 2000 Report (Working Group II), Geneva, Switzerland (2000-2001)**
- Member, SSSA Committee to develop position paper on C sequestration, (2000-2001)
- Member, Task Force of CAST on “Agricultural Mitigation of Greenhouse Gases” (2000-2004)
- **Millennium Ecosystem Assessment, Lead Author, Condition Working Group Assessment (2003)**
- **IPCC, Lead author, Special Report on LULUCF, (1998-2000)**
- Vice Chair, ISTRO-2000 Organizing Committee (1997-2000)
- Member, ISCO-1999 (International Soil Conservation Organization) Task Force, SWCS, (1999)
- Vice Chair, Committee on “International Network for Soil and Water Conservation”, SWCS, (1998-2000)
- Organizing Committee of special symposia in Keystone, Co. (1996) and Toronto, Canada (1997), Calgary, Canada (1998)
- Member, Search Committee, Director General, UNU-Natural Resources Program in Africa, Accra, Ghana (1997)
- Vice Chair, Global Activities Committee, Soil and Water Conservation Society, (1997-2000), Ankeny, IA
- Member, International Affairs Committee, Soil and Water Conservation Society, (1996-1997), Ankeny, IA
- Task Force, GREAN Consortium Team Visit to India, (1996)
- Coordinator, GREAN-India Program, (1996-1997)
- Rapporteur, Commission for Agric. Met., WMO, Geneva, Switzerland, (1995-1998)
- Chair, Working Group “Techniques of Characterizing Physical Properties of Clayey Soils”, ISTRO (1995)
- Chair, Working Group “Methods of Assessment of Soil Degradation”, ISSS, Vienna, Austria (1995-1997)
- Member, Program Committee, 50th Anniversary Meeting Soil Water Conservation Society, Ankeny, Iowa (1995)
- Member, ASA Committee on Agronomic Service Award (1994-1995), Madison, WI
- Member, Task Force on "Collaboration between U.S. Universities and CGIAR system" (1993-1994), Washington, D.C.

- SSSA Liaison to Consortium of Affiliates for International Program of AAAS (1993-2005), Madison, WI
- IPCC/OECD Member of Workgroup Inter-Governmental Panel on Climate Change, (1993-1996), Geneva, Switzerland
- **Scientific liaison officer for USAID to CGIAR on Natural Resources Management (1991-1997)**
- Chairman, SSSA Committee on International Soil Science Award (1991-1992), Madison, WI
- National Academy of Sciences, Washington, D.C. (1990-1993)
- Member, NRC Panel on “Vetiveria” Washington, D.C. (1990-1992)
- Member, SSSA Committee on International Soil Science Award (1990-1991), Madison, WI
- Member, working Group of ASA (A-6) on "Methodologies for Sustainable Agriculture in the Tropics" (1990-1991)
- Advisor to "Committee on Agricultural Sustainability for Developing Countries," World Resources Institute, Washington, D.C. (1990-2000)
- Board Member, Org. for Trop. Studies, Durham, N.C./San Pedro de Montes de Oca, Costa Rica (1989-1994)
- **President, International Soil Tillage Research Organization (ISTRO) (1988-1991)**
- Cooperating Scientist: USAID-PL480 Cooperative Project in India (1988-1990)
- **President, World Association of Soil and Water Conservation (WASWC) (1987-1991)**
- Member, NRC's Committee on "Sustainable Agriculture and Environment," NRC, Washington D.C. (1987-1990)
- Member, Working Group on World Soil Erosion, Intl. Union for Conservation of Nature and Natural Resources (1987-1989)
- Board Member, International Soil Tillage Research Organization (ISTRO) (1984-1988)
- Chairman, Working Group on Soil Erosion Research Methodology of ISSS, Vienna, Austria (1983-1988)
- Vice President, World Association of Soil and Water Conservation (WASWC) (1983-1987) Vice President, International Commission for Continental Erosion, Int'l Assoc. Hydrol. Sciences (1982-1987)
- Network coordinator, Land Clearing and Development, Intl. Board of Soil Research and Management, Thailand (1982-1986)

MEMBER EDITORIAL BOARD OF INTERNATIONAL SCIENTIFIC JOURNALS

- **Editor-In-Chief, Advances in Soil Science (2018-)**
- **Co-Editor-In-Chief, Advances in Soil Science (2010-2018)**
- Editorial Board, J. Spices and Aromatic Crops, ICAR, Kerala, India (2012)
- Editorial Board, Agricultural Research, Springer, New Delhi, India (2011-2016)
- Editor, Agricultural Research, Springer, Germany, (2011-2016)
- **Lead Author “Global Energy Assessment Report: Trade Offs - Land and Water”, UNEP, IIASA, Vienna, Austria (2010)**
- Editor, Int. J. Food Security, Springer (2009-2013)
- Editorial Advisory Board, J. Sci. of Food & Agric., SCI Publications, London, U.K. (2006-2007)
- Editor for the Americas, Land Degradation & Development, J. Wiley & Sons, U.K. (2006 - 2016)
- Associate Editor, J. Arid Environment, Academic Press, London, UK; New York, USA (2005)
- **Editor-In-Chief, Soil & Tillage Research, Elsevier, Netherlands (2004-2013)**
- **Editor-In-Chief, Encyclopedia of Soil Science, Marcel Dekker/Taylor and Francis 3rd Edition, Dec. 2016 (1998-)**
- Soil Science Reviews, Elsevier, Netherlands (2002-2016)
- Soil Systems: The Scientific World, U.K. (2001)
- Environmental International, Elsevier Science, U.K. (2001)
- Geoderma, Elsevier, Holland (2001-2018)
- Critical Reviews in Plant Sciences, CRC (2001-2010)
- The West African J. Applied Ecology, Accra, Ghana (1999)
- Environment, Development and Sustainability, Kluwer Press, Holland (1998-2001)
- Progress in Environmental Science, Arnold, London (1998)
- Pedosphere, Science Press, Beijing, China (1998)
- Soil Science, Williams and Wilkins, Baltimore, MD (1996-2018)
- Editorial Board on Sustainable Agriculture, The Oxford University Press (1994-2010)
- Advances in Soil Science, CRC/ Lewis Publishers, Boca Raton, FL (1992-1998)
- The Encyclopedia of Soil Science & Technology, Von Nostrand Reinhold, New York, N.Y. (1992-1994)
- Land Degradation and Rehabilitation, Wiley, U.K. (1989-2016)
- Journal of Sustainable Agriculture, The Haworth Press, Inc., New York (1989-)
- J. of Agroethics, Taylor & Francis, N.Y. (1987)
- Advances in Soil Science, Springer Verlag, N.Y. (1986-1992)
- International J. Tropical Agriculture, Hisar, India (1982)
- Soil & Tillage Research, Elsevier, Holland (1980-2012)
- Field Crops Research, Elsevier, Holland (1978-1990)

Professional Category	Ranking		Scope	Reference Source
<i>A standardized citation metrics author database annotated for scientific field and Updated science-wide author databases of standardized citation indicators</i>	2023 (single year) ¹¹	1	Agronomy & Agriculture	<i>Ioannidis et al. 2019¹, 2020², 2021⁵</i>
	2022 (single year) ¹⁰	1	Agronomy & Agriculture	
	2020 (single year) ⁷	1	Agronomy & Agriculture	
	2019 (single year) ³	1	Agronomy & Agriculture	
	1973 – 2020 (career) ⁶	1	Agronomy & Agriculture	
“Stanford study ranks top 2% of scientists globally by citation indicators”	2020 (single year) ⁷	1	The Ohio State University	
	2019 (single year) ³	1	The Ohio State University	
	1973 – 2020 (career) ⁶	1	The Ohio State University	
	2020 (single year) ⁷	1	Environmental Sciences	
	2019 (single year) ³	2	Environmental Sciences	
	1973 – 2020 (career) ⁶	1	Environmental Sciences	
	1973 – 2019 (career) ⁴	3	Environmental Sciences	
	2020 (single year) ⁷	2	Agriculture, Fisheries, & Forestry	
	2019 (single year) ³	2	Agriculture, Fisheries, & Forestry	
	1973 – 2020 (career) ⁶	1	Agriculture, Fisheries, & Forestry	
	1973 – 2019 (career) ⁴	1	Agriculture, Fisheries, & Forestry	
	2020 (single year) ⁷	34	Globally	
	2019 (single year) ³	45	Globally	
	1973 – 2020 (career) ⁶	73	Globally	
	1973 – 2019 (career) ⁴	97	Globally	
The Reuters Hot List	Top Climate Scientists	391	Globally	Reuters.com ⁸
Highly Cited Researchers	Top 1% by citations	On List	Globally (2014-2021)	Clarivate-Thompson ⁹

¹ Ioannidis JPA, Baas J, Klavans R, Boyack KW (2019) *A standardized citation metrics author database annotated for scientific field*. PLOS Biology 17(8): e3000384. <https://doi.org/10.1371/journal.pbio.3000384>

² Baas, Jeroen; Boyack, Kevin; Ioannidis, John P.A. (2020), “Data for “Updated science-wide author databases of standardized citation indicators””, Mendeley Data, V2, doi: 10.17632/btchxktzyw.2. <http://dx.doi.org/10.17632/btchxktzyw.2>

³ Table-S6-career-2019.xlsx <https://data.mendeley.com/datasets/btchxktzyw/2>

⁴ Table-S7-singleyr-2019.xlsx <https://data.mendeley.com/datasets/btchxktzyw/2>

⁵ Baas, Jeroen; Boyack, Kevin; Ioannidis, John P.A. (2021), “August 2021 data-update for “Updated science-wide author databases of standardized citation indicators””, Mendeley Data, V3, <https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/3>

⁶ Table_1_Authors_career_2020_wopp_extracted_202108.xlsx, <https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/3>

⁷ Table_1_Authors_singleyr_2020_wopp_extracted_202108.xlsx, <https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/3>

⁸ The Reuters Hot List (2020, 2021). <https://www.reuters.com/investigates/special-report/climate-change-scientists-list/>

⁹ Clarivate Web of Science. Highly Cited Researchers (2021). <https://recognition.webofscience.com/awards/highly-cited/2021/>

¹⁰ Referenced in New Yorker Poem <https://www.newyorker.com/magazine/2022/12/26/greetings-friends>

¹¹ Ranked #1 Globally and in the USA in Plant Science and Agronomy <https://research.com/scientists-rankings/plant-science-and-agronomy>

INTERNATIONAL CONFERENCES ORGANIZED

1. Capacity Building for Managing Climate Change Among Smallholder Farmers and Agro-pastoral in East Africa, Malawi, 15-18 October (2018)
2. International Conference on Ecosystem Resilience and Agricultural Productivity, Kampala, Uganda, 22-24 November (2017)
3. International Conference on Climate Change and Multi-Dimensional Sustainability in African Agriculture, SUA, Morogoro Tanzania, 3-5 June (2015)
4. Sustainable intensification to mitigate climate change and advance food security in Sub-Saharan Africa, SUA, Morogoro Tanzania, 13-16 November (2013)
5. Carbon Sequestration in the Terrestrial Biosphere and Ecosystem Services, IASS, Potsdam, Germany, November (2011)
6. Re-carbonization of the Biosphere, IASS, Potsdam, Germany, 20-22 March (2011)
7. Co-Chair International Workshop on Soil Carbon Sequestration and Climate Change, 27-30 June, Beijing, China (2010)
8. Regional Symposium on Climate Change, Food Security, Sea Level Rise and Environment in South Asia, Dhaka, Bangladesh, 25-29 August (2008)
9. Soil Carbon Sequestration in Central Asia, Columbus, OH, 2-4 November (2005)
10. The Potential of Soils of Latin America to Sequester Carbon & Mitigate Climate Change, OSU/USP/IRD, Piracicaba, São Paulo, Brazil, 2-5 June (2004)
11. Climate Change and Global Food Security, Columbus, OH, 9-10 June (2003)
12. Effect of Land Use and Management on Erosion and Carbon Sequestration, Montpellier, France, 23-28 September (2002)
13. The Potential of U.S. Forest Lands to Sequester Carbon & Mitigate the Greenhouse Effect, Charleston, SC, 17-19 April (2001)
14. Reconciling Food Security and Environment Quality in Industrializing India, Columbus, OH, 7-8 March (2001)
15. No-till Farming in South Asia's Rice-Wheat System, Columbus, OH, 20-21 February (2001)
16. Agricultural Practices and Policies for C Sequestration in Soils, Columbus, OH, 19-23 July (1999)
17. Carbon Sequestration in Soils: Science, Monitoring and Beyond, St. Michaels, Baltimore, Pacific Northwest National Lab., Washington, D.C., 3-5 December (1998)
18. Methods of Assessment of Soil Carbon, Columbus, OH, November (1998)
19. World soils and the greenhouse effect, SSSA, Baltimore, USA, October (1998)
20. Rangeland Management for Carbon Sequestration, NMSU, NM, 17-19 September (1998)
21. Carbon Pools and Dynamics in Tundra and Boreal Ecosystems, Columbus, OH, March (1998)
22. Carbon Pools and Dynamics in Tropical Ecosystems, Belem, Brazil, 1-5 December (1997)
23. Global Climate Change and Pedogenic Carbonates, Tunis, Tunisia, 13-17 October (1997)
24. Global Challenges in Ecosystem Mgt. in Watershed Context, SWCS, Toronto, Canada, 25-26 July (1997)
25. Soil Quality and Agricultural Sustainability, Columbus, OH, 26-27 July (1996)
26. Soil Quality and Erosion Interaction, SWCS, Keystone, CO, 7-8 July (1996)
27. Carbon Sequestration in Soils, NRCS/FS, Columbus, Ohio, 22-26 July (1996)
28. Conservation Tillage for Agricultural Sustainability And Water Quality, Hungarian Acad. Budapest, Hungary (1994)
29. Managing Acid Soils in Latin America, CIAT, Colombia (Chairperson) (1993)
30. Soil Management and Agric. Sustainability, USAID, Columbus, OH (1993)
31. Soil Processes and Greenhouse Gas Emission, USDA/EPA, Columbus, OH (1993)
32. Twelfth Conference of ISTRO, Ibadan, Nigeria (1991)
33. Myths and Sci. of Soils of the Tropics, ASA, Las Vegas, NV (1989)
34. Soil Management for Sustainability, WASWC, Edmonton, Canada (1989)
35. Sustainable Agriculture, Columbus, OH (1988)
36. Tropical Deforestation, IBSRAM (Bangkok), Sumatra, Indonesia (1986)
37. Land Clearing and Development in the Tropics, Ibadan, Nigeria (1982)
38. Tropical Agricultural Hydrology, Ibadan, Nigeria (1979)
39. Soil Physics and Crop Production in the Tropics, Ibadan, Nigeria (1977)
40. Soil and Water Conservation and Management in the Humid Tropics, Ibadan, Nigeria (1975)

International Thematic Conferences Organized by Prof. Rattan Lal

	Theme	Period	Venue	Number
1	Soil degradation, erosion	1975-1987	Nigeria, Indonesia, Thailand	5
2	Sustainable agriculture	1988-1993	USA, Nigeria	6
3	Tropical Soils	1989-1993	USA, Columbia	4
4	Soil and water quality	1995-1996	USA, Canada	2
5	Soil carbon dynamics and climate change	1995-2010	USA, Brazil, Morocco, France, C. Asia, Bangladesh, India, Germany, China	15
6	Global food security	1995-2018	USA, Tanzania, Uganda, Malawi	8

Total**40****GRANT PROPOSAL REVIEWER SINCE 1990**

- National Oceanic and Atmospheric Administration (NASA), USA
- National Science Foundation, NAS, USA
- US-DOE, Washington, D.C.
- USDA-CSREES, Washington, D.C.
- USDA-NRI, Washington, D.C.
- National Geographic Society, USA
- The Royal Society, London, U.K.
- Natural Environmental Research Council, Swindon, U.K.
- The Rockefeller Foundation, East Africa Program, Nairobi, Kenya
- Third World Academy of Sciences, Trieste, Italy
- Sustainable Agricultural Research & Education (SARE), Lincoln, NE
- National Aeronautics and Space Administration, Washington, D.C.
- International Foundation for Science, Stockholm, Sweden
- BARD, Israel
- USDOD, Washington, D.C.

RESEARCH GRANTS SINCE 1982 (TOTAL TO DATE ~\$65 MILLION)

1. Foundation for Food and Agriculture Research and matching sponsors, C-FARM Project 2022-2027 (\$15 million)
2. Inter-American Institute for Cooperation on Agriculture (IICA) (\$265,692, renewable through 2023)
3. Microsoft, 2021-2023 (\$65,550/yr)
4. Corteva Agrosiences, 2021 (\$258,851)
5. The Herbert W. Hoover Foundation, 2020 (\$83,728.00 for one year, subcontracted with Kent State)
6. The Herbert W. Hoover Foundation, 2019 (\$100,000/year for 5 years)
7. Ohio State Sustainability Fund, 2019 – 2021 (\$66,131)
8. Alfred P. Sloan Foundation 2020 – 2022 (\$150,333)
9. Danone, 2018 (\$241,000)
10. OSMRE, 2016-2018 (\$200,000)
11. V. Kann Rasmussen Foundation, 4/2015- 3/2017 (\$250,000)
12. ESGP-Seed Grant, 2013 (\$50,000)
13. USDA –BRDI, 2013-2016(\$448,697)
14. USDA-AFRI, 2012-2015, (\$482,000)
15. IASS, Potsdam, Germany to organize two conferences 2011, \$92,687 (€70,000)
16. USDA-NIFA grant (multi-institutional) \$25 million over 5 years (Co-PD)
17. OCDO, Carbon sequestration in mine soils, \$405,000 over 3 years (2008-2010)
18. Targeted Investment in Excellence (TIE), Climate, Water and Carbon Project, OSU, \$12 million over 5 years (2006-2010)
19. DOE, Midwestern Regional Carbon Sequestration Partnership, 2005-2009 (\$14 million for four years, co-PI with Battelle for OSU share of \$1.2 million)
20. Bush/Singh Agriculture Knowledge Initiative Grant, 2005 (\$60,000)
21. C-Site grant with ORNL, 2004-2006 (\$56,000/year for 3 years)
22. C-Site grant with PNNL, 2004-2005 (\$32,000/year for 3 years)
23. U.S. Army Corp of Engineers, 2004 (\$20,000)
24. National Energy Tech Lab, 2003-2006 (\$600,000)
25. DOE, Midwestern Regional Carbon Sequestration Partnership, 2003-2005 (\$2.4 million for two years; co-PI with Battelle as PI)
26. American Electric Power in collaboration with LANL, 2003-2005 (\$220,000 for three years, Co-PI)
27. LANL grant, 2003-2004 (\$70,000)
28. C-Site grant with PNNL, 2002-2003 (\$60,000)
29. USDA-NRCS, 2002-2004 (\$20,000)
30. CASMGs 2-year grant, 2002-2004 (\$800,000)
31. Office of International Affairs, OSU, 2001-2004 (\$40,000/year)
32. Ohio Coal Development Office, 2002-2004 (\$600,000)
33. Los Alamos National Lab, 2002-2003 (\$60,000)
34. Office of Research, OSU, 2002-2003 (\$50,000)
35. Center for Development of Agriculture and Forestry, D.R., \$594,000 (Co-PI)

36. The Mershon Center, 2002-2003 (\$37,000)
37. USDA-NRCS, Soils and Greenhouse Effect, 2002-2003 (\$80,000)
38. JRD Tata Trust, India Program, 2000-2003 (\$467,000 for 3 years)
39. USDA-NRCS funds for Soils and Greenhouse Effect 2001-2002 (\$120,000)
40. Office of Research, OSU, 2001-2002 (\$50,000)
41. Los Alamos National Laboratory, 2001 (\$50,000)
42. OARDC-Multidisciplinary Research Award, 2001 (\$100,000)
43. USDA-NRCS: Soils and Greenhouse Effect, 2000-2001 (\$120,000)
44. USDA-NRCS: Land Use and Carbon Dynamics, 2000 (\$25,000)
45. The Nature Conservancy, Soil C Dynamics in Fish Creek Watershed, Phase I, 2000 (\$37,000)
46. DOE, Soil Carbon on Disturbed Lands, 2000 (\$20,000)
47. CAS MGS, 2000 (\$23,000)
48. Congressional appropriation to CASMGS group of 12 universities (\$15 million) with OSU share of \$0.8 million/yr
49. USDA-NRCS: Soils and Greenhouse Effect, 1999-2000 (\$120,000)
50. USDA-NRCS: State of Soil Degradation, 1999 (\$25,000)
51. USDA-ERS: Soil Degradation, 1999 (\$25,000)
52. Lockheed Martin Energy System Inc., 1999 (\$28,000)
53. DOE, Center for Global Change Cooperator, 1999 (\$29,500)
54. USDA-ERS: Soil degradation assessment, 1998-1999 (\$40,000)
55. USDA-SMSS: Conference grant for "Land Degradation" Thailand, 1998-1999 (\$12,000)
56. USDA-NRCS: Soil Management for C Sequestration, 1998-1999 (\$250,000)
57. Lockheed Martin Energy System Inc. 1997-2000 (\$148,000)
58. USDA-NRCS: Land use and C dynamic 1997-1998 (\$48,000)
59. USDA-NRCS: Soil Erosion and C Dynamics 1997-1998 (\$40,000)
60. GTZ conference grant, Tunisia 1997 (\$8,200)
61. USDA-NRCS conference grant, 1997 (\$60,000)
62. USDA-NRCS Research Bulletin, 1997 (\$26,328)
63. FGD Grant (Co-PI), \$265,507, 1996-98
64. USDA, Carbon Sequestration in Soils, \$30,000, 1996-97
65. SSSA international symposium, \$6,000, 1996
66. USDA, ARS/FS international symposium, \$35,000, 1995-96
67. SCS, Soil Erosion and Global Change, (\$100,000), 1994-1996
68. U.S.-Hungary Fund \$20,000, 1994
69. Research Council of Norway, \$60,000/year for 3 years, 1993-1995
70. Conference grant
 - USDA-USEPA (\$100,000) 1993
71. USAID Funding for three conferences
 - Soil Management (\$22,500) 1993
 - ISTRO (\$30,000) 1991
 - Sustainable Agric. (\$30,000) 1988
72. Rockefeller Foundation (\$50,000) 1992-1993
73. US-EPA (\$50,000) 1991-1993
74. SANREM Planning Grant (\$150,000) 1991-1992
75. Special grant from IITA, (\$50,000) 1991-1992
76. Participants in Principal Multidisciplinary Grant Proposals
 - MSEA (\$350,000) 1991-1992, (\$360,000) 1992-1993
 - FGD (\$217,371) 1991-1995
77. USDA:
 - Technical Brochure (\$50,000) 1993-1994
 - N-use efficiency (\$50,000) 1991-1993
78. Proctor and Gamble
 - Soil Physical properties (\$50,000), 1992 (Co-PI)
 - Support grant (\$15,000) 1987
79. Conference grants
 - UNDP (\$30,000) 1991
 - Soil Sci. Soc. Am. (\$5,000) 1991
 - CTA-Holland (\$5,000) 1991

80. United Nations University, Tokyo, Japan (\$30,000) 1988-1991
81. Sustainable Agriculture-NC Region (\$40,000/yr.) 1989-1990
82. Sustainable Agriculture-NC Region (\$38,000/yr.) 1988-1989
83. United Nations University, Tokyo, Japan (\$1.1 million) 1983-1988
84. GTZ, Germany, (\$50,000/yr.) 1982-1987

CONSULTANCIES WITH INTERNATIONAL ORGANIZATIONS

1. USAID-FAS. Team Leader, SANREM –Innovation Laboratory Review (2013)
2. UNCCD, Zero Net Land Degradation, Position Paper (2012)
3. Center for Dev. Res., Germany (2010)
4. UNCCD position paper “Inter-Government Panel on Soil Sustainability” (IPSS) (2009)
5. FAO, Global Soil Partnership, FAO, Rome (2009-)
6. World Bank, Sustainable Land Management Bulletin, Washington, D.C. (2009)
7. CIMMYT Review, Team Leader, for Resource Management Program (2008)
8. World Bank, Washington (2008, 1998, 1997, 1989, 1988 - India) (1996, 1986- Brazil) (1997- Pakistan)
9. (1993, 1988 - Washington) (2001 - Morocco), China/GEF (2018)
10. Winrock International, Uzbekistan 14-23 October (2002)
11. FAO/UNDP, Rome, Italy (2001, 1997, 1994, 1991, 1977 - India)
12. Los Alamos National Laboratory, Member of the Review Panel (2001-2004)
13. DOE, Washington (1998)
14. Asian Development Bank, Manila, Philippines (1998)
15. NATP-ICAR, India (1997-1998)
16. CIAT, Colombia (1996, 1992)
17. EMBRAPA - Brazil (1996, 1985)
18. NORAD, Tanzania (1995, 1994, 1993, 1992)
19. USAID, member of the CRSP review team (1994)
20. GTZ, Germany (1992, Colombia)
21. UNEP, Nairobi, Kenya (1991)
22. United Nations University (1990, 1983)
23. USAID, Morocco (1990)

COUNTRIES VISITED ON OFFICIAL MISSIONS

(a) Africa

Algeria, Benin, Burundi, Burkina Faso, Cameroon, Congo, Egypt, Ethiopia, Ghana, Ivory Coast, Kenya, Liberia, Libya, Madagascar, Malawi, Mali, Morocco, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Tanzania, Togo, Tunisia, Uganda, Zaire, Zambia, Zimbabwe

(b) Asia

Bangladesh, Cambodia, China, Dubai, India, Indonesia, Israel, Japan, Kuwait, Tajikistan, Lebanon, Malaysia, Nepal, Pakistan, Philippines, South Korea, Sri Lanka, Syria, Taiwan, Thailand, Turkey, UAE, Uzbekistan

(c) South America

Argentina, Brazil, Colombia, Chile, Ecuador, Peru, Venezuela

(d) Central America

Costa Rica, Guatemala, Honduras, Nicaragua, Panama

(e) Caribbean

Dominican Republic, Haiti, Puerto Rico, Trinidad & Tobago

(f) North America

Canada, Mexico, USA

(g) Europe

Austria, Belgium, Denmark, France, Georgia, Germany, Greece, Holland, Hungary, Iceland, Italy, Moldova, Norway, Poland, Portugal, Russia, Slovakia, Spain, Sweden, Switzerland, Turkey, Ukraine, U.K., USSR

(h) Pacific

Australia, Fiji, New Zealand

COOPERATION WITH OVERSEAS UNIVERSITIES AND INSTITUTIONS

(a) Europe

1. Agricultural University of Norway, As, Norway (program on agricultural sustainability in Africa, 1993-)
2. Technical University of Dresden, Germany (2012-)

3. University of Lleida, Spain (2017-)
4. UIMP, Santander, Spain (2018)
5. University of Hohenheim, Stuttgart, Germany (program on soil erosion in the Andes, Colombia, 1992-1997)
6. Ministry of Environment and Regional Policy, and The Hungarian Academy of Sciences, Budapest, Hungary (1994-1996)
7. Univ. of Ghent, Belgium, Assoc. Expert Program (1976-87)
8. Univ. of Munich and Gottingen, Assoc. Expert Program (1983-87)
9. Univ. of Reading, U.K. (1976-86)
10. Institute of Land Reclamation and Grassland Farming, Falenty, Poland (2000-)
11. IRD/CIRAD France (2002-)
12. Soil Conservation Service of Iceland (2002-2012)
13. University of Iceland (2007-)
14. Institute for Advance Sustainability Studies, Potsdam, Germany (2010-2016)
15. Helmholtz Zentrum (GFZ), Potsdam, Germany (2010-2016)
16. Government Office of Science, London, U.K. (2010-2016)
17. Faculty of Agriculture, Aarhus University, Denmark (2010)
18. University of Bonn, Germany (2010-2016)
19. Intl. Center for Advanced Mediterranean Agronomic Studies, (CIHEAM), Valenzano, Italy
20. University of Cordoba, Spain (2008-2018)
21. CIRAD, Montreal, France (1995-)
22. University of Natural Resources and Life Sciences, Vienna Austria (2010-)

(b) Africa

1. INRA Morocco, The AAA Science Day, Meknes, Morocco (2016-)
2. African Plant Nutrition Institute, UM6P, Ben Guerir, Morocco (2023-)
3. AgriTech Center of Excellence, UM6P, Ben Guerir, Morocco (2023-)
4. Sokoine Univ. of Agric., Morogoro, Tanzania (1980-85, 1994-97, 2012-)
5. Univ. of Ibadan, Nigeria (1970-87)
6. Univ. of Ghana, Legon (1974-80; 1996-97)
7. Makerere University, Kampala, Uganda (1988-)
8. Egerton University, Kenya (2012-)
9. Hawassa University, Hawassa, Ethiopia (2010)
10. Addis Ababa University, Addis Ababa, Ethiopia (2005-)
11. Univ. of Nairobi, Kenya (2000-)
12. ICARDA, Cairo, Egypt (2015-)

(c) Asia

1. Royal Development Projects Board, Chaipattana Foundation, Bangkok, Thailand (ICV-7 Conference)
2. ITC's Life Sciences and Technology Center, Bangluru, India (2023-)
3. Malaysia, Kuala Lumpur (external faculty reviewer, 1995-2000)
4. Tamil Nadu Agric. Univ., Coimbatore, India (1998-2012)
5. ANGR Agric. Univ., Hyderabad, India (1998-2009)
6. Indian Institute of Technology, Kharagpur, India (1997)
7. Punjab Agricultural University, Ludhiana, India (1998-)
8. Haryana Agricultural University, Hisar, India (1998-)
9. JLNKVV, Jabalpur, India (2001-2012)
10. M.S. Swaminathan Res. Foundation (2000-)
11. University of Agriculture, Faisalabad, Pakistan (1997-)
12. Indian Council of Agricultural Research (1995-)
13. Tashkent Institute of Irrigation & Agricultural Mechanics, Uzbekistan (2002-)
14. Bahauddin Zakariya University, Multan, Pakistan (2008-)
15. Ben Gurion University of the Negev, Israel (2008-)
16. Sultan Qaboss University, Oman (2009-)
17. University Putra, Serdang, Malaysia (2000)
18. PMAS Arid Agricultural University, Rawalpindi, Pakistan (2010-)
19. B.Z. University, Multan, Pakistan
20. Northwest A&F University, Yangling, Shaanxi, China (2016-)
21. Himachal Pradesh Agricultural University, Palampur, India (2015)
22. Northwest A&F University, China (2012-)
23. Indian Institute of Soil Science, Bhopal, India (2010-)

24. Center of Research in Druland Agriculture, Hyderabad, India (2010-)

25. Kathmandu University, Nepal (2014-)

(d) South America

1. Federico Santa Maria University, Concepcion, Chile: 17th Int. Symp. On Soil and Plant Analysis (ISSPA) (2023-)

2. Syngenta, Sao Paulo, Campinas, Brazil (2023-)

3. University Federal de Parano, Porto Alegre, Rio Grande do Sul

4. Univ. of Palmira, Colombia (1997-2000)

5. Univ. of Sao Paulo Piracicaba, Brazil (1997-)

6. Univ. of Bahia Blanca, Argentina (1995)

7. Universidad de Buenos Aires, Argentina (2000)

8. Univ. Of Audonoma de Santo Domingo, D.R. (2002-2005)

9. Center Para El Desaprollo Agropecuario y Forestal, Inc., D.R. (2002-2005)

10. CENBIO, Sao Paulo, Brazil (2009-)

11. University Federal de Lavras, Brazil (2010-)

12. Sao Paulo State University, Piracicaba, SP- Brazil (2004-)

13. Universidad e Estadual de Ponta, Grossa, Brazil (2000-)

14. State University of Mato Grasso, Brazil (2016-)

15. Universidad Estadual ed Maringa, PR, Brazil (2010)

16. Universidad Estadual Paulista Julio de Mesquita Filho, Jaboticabal, SP- Brazil (2004)

SERVICE TO THE OHIO STATE UNIVERSITY COMMUNITY

- Member, President and Provost Advisory Committee (2011-)
- Member, President's Council on Sustainable Development (2009-2010)
- Member, India Gateway Committee (2009-)
- Member, India Program Steering Committee (2009-)
- Member, Graduate Council (2008-2009)
- Member, University Senate (2007-2009)
- Member, Senate Steering Committee (2007-2009)
- Member, Faculty Cabinet (2007-2009)
- Member, Faculty Council (2007-2009)
- Member, University Research Committee (2007-2009)
- Chair, Honorary Degree Committee (2007-2009)
- Member, OSU Honorary Degree Committee (2004-2007)
- Member, Research and Graduate Council (2004- 2006)
- Graduate Associates and Fellowship Committee of the University (2004-2006, 1996-1998)
- Honorary Doctorate Degrees in Soil Science and Natural Resources (12 nominees processed and awarded from 2004-1989)
- Coordinator, OSU/Battelle Project on MRCSP (2003-2010)
- Faculty Coordinator, Climate Change CIRIT (OIA) (2002-2006)
- Member, Advisory Committee, Center for African Studies (2002-2003)
- Coordinator, CCERI (Office of Research) (2001-2003)
- Member, South Asia Committee, OIA (2001-2003)
- Coordinator, OSU-CASMGS program (2000-2004)
- Member, Selection Committee, Anderson Chair, FAES, (2000, 2004)
- Member, Screening Committee, Associate Provost International Affairs (2000)
- Member, India Cooperative Program Steering Committee (Visited India with President Kirwan and have since developed collaborative programs with PAU and ICAR) (1998-)
- University Distinguished Scholar Award Committee (1998-2000)
- Member, Univ. Postdoctoral Fellowship Committee (1989-90; 1994-95)
- Member, Graduate Studies Committee of Soil Science (1998-1999; 1996-1997; 1991-1992; 1988-1989)
- Member, Policy and Standard Committee, Faculty Council (1997-2000)
- Natural Resources (1996-98)
- Environmental Science (1996-98)
- Member, Faculty Council, College of Food, Agric. & Env. Science (1996-1998)
- Member, Int'l Committee on Project Reinvent (1996-1998)
- Member Int'l Advisory Committee, College of Food, Agric. & Env. Science (1988-1990)

SOILS RESOLUTION

As President of the Soil Science Society of America (2007), Prof. Lal spearheaded the “Soils Resolution” for adoption by the U.S. Senate. The Resolution “Recognizing Soils as An Essential Natural Resource” (S.R. 401) was adopted unanimously by the U.S. Senate on 23 June 2008. This Resolution is the first of its kind adopted by any government.

TESTIMONY TO U.S. CONGRESSIONAL BRIEFINGS AND SENATE HEARINGS

1. Lal, R. House Soil Caucus, 8 December, Cannon House Office Building, Washington, D.C. (2006)
2. Lal, R. Potential of agricultural sequestration to address climate change. Senate Committee on Environments and Public Works. 8 July 2003, Dirksen Senate Office Building, Washington, D.C. (2003)
3. Lal, R. Importance of soil carbon in mitigating global warming. Senate Hearing, EPW Committee. Senate Office Building, 30 April 2001, Washington, D.C. (2001)
4. Lal, R. Soil Carbon sequestration and climate change. Senate Hearing. Science and Technical Sub-Committee, 24, May, 2001, Washington, D.C. (2001)
5. Lal, R. Senate Agricultural Sub-Committee, 4 May 2000, Washington, D.C. (2000)
6. Lal, R. Soil management for achieving global food security and mitigating the greenhouse effect. Cannon House Office Building, 18 October 1999, Washington, D.C. (1999)
7. Lal, R. Policy implications for soil carbon sequestration. Congressional Briefing, 3 August 1999, Hart Senate Office Building, Washington, D.C. (1999)

MAJOR INTERESTS

(a) Research

Climate change and land use, soil processes and greenhouse effect, soil erosion and greenhouse gas emissions, soil C sequestration, sustainable management of soil and water resources, restoration and rehabilitation of degraded lands and mine lands, soil and water conservation, soil structure and compaction, conservation tillage, natural resources management with particular emphasis on food security in relation to environment quality, soil degradation and food security.

(b) International agriculture

Agriculture development in the third world, particularly through research on sustainable management of natural resources, soil productivity and environmental quality, and institutional building.

TEACHING EXPERIENCE

- Environmental Soil Physics ENR 5261, (since 2012)
- Soils and Climate Change ENR 5268, (jointly with School of Earth Sciences) (since 2012)
- Soils and Climate Change ENR 871, (jointly with School of Earth Sciences) (2008-2011)
- Climate Change, Science, Policy and Human Dimension (Intl. Studies, 3 credits) (2002-2003)
- Soils and the Greenhouse Effect (Soil Sci 871, 3 credits) (1999-2007, alternate years)
- Global Land Degradation (NR797, 3 credits) (1999-2002)
- Environmental Hot Spots: Middle East & Africa (NR693, 3 credits) (1999-2000)
- Soil Physics course, Pakistan Agric. Res. Board, Faisalabad, March-April (1997)
- Soil Degradation and Conservation in The Tropics, Ohio State/Univ. Hohenheim, Germany (1994-1996)
- Soil and Water Conservation, Training Course, India, (1994)
- Tropical Soils (Agronomy 643, 3 credits) (1993)
- Advanced Soil Physics (Agronomy 871, 3 credits) (1989-)
- Environmental Soil Physics (ENR 671, 5 credits) (1988-)
- Soil Management (Agronomy 442, 5 credits) (1988)
- Soils and Climate Change (ENR 671) (1987-2011)
- Soil and Water Conservation, Univ. of Maracay, Venezuela (1978)
- Soil and Water Conservation, Ibadan, Nigeria (1976-1986)

GRADUATE AND UNDERGRADUATE STUDENT RESEARCH SUPERVISION

M.Sc.....	62 (from 16 countries)
Ph.D.....	53 (from 20 countries)
Undergraduate	14 (from the USA)

POSTDOCTORAL RESEARCH SUPERVISION AND VISITING SCIENTISTS

Postdoctoral.....	58 (from 24 countries)
Research Scientists	11 (from 5 countries)

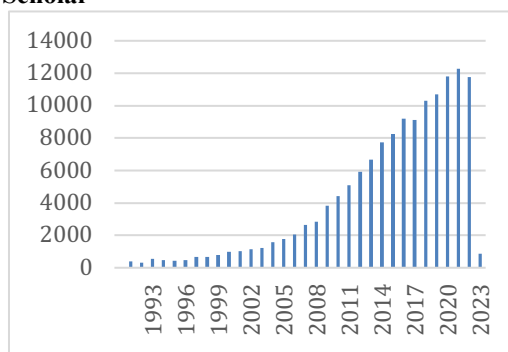
Visiting Scholars	164 (from 30 countries)
Special trainees (non-degree)	18 (from India/ NATP/ World Bank)
Total Scholars Supervised	380 (from 54 countries)

SOME SIGNIFICANT PUBLICATIONS (as of 1/2023)

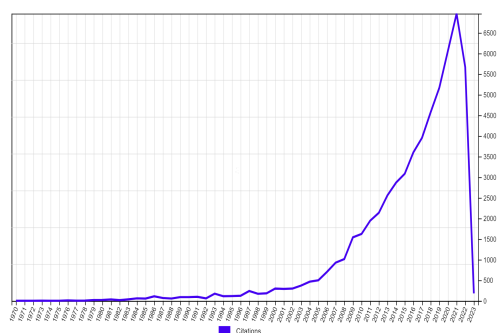
Journal Article	Citations
1. Lal, R. 2004. Soil carbon sequestration impacts on global climate change and food security . Science 304: 1623-1627	7919
2. Bronick, C.J., Lal, R. 2005. Soil structure and management: a review . Geoderma 124:3-22.	4644
3. Lal, R. 2004. Soil carbon sequestration to mitigate climate change . Geoderma 123:1-22.	3997
4. Lal, R. 2005. Forest soils and carbon sequestration . Forest Ecology and Management 220:242-258.	1805
5. Lal, R. 2003. Soil erosion and the global carbon budget . Environment International 29:437-450.	1751
6. Lal, R. 2004. Carbon emission from farm operations . Environment International 30:981-990.	1590
7. Lal, R. 2008. Carbon sequestration . Philosophical Transactions of the Royal Society B 363:815-830.	1518
8. Lal, R. 2001. Soil degradation by erosion . Land Degradation & Development 12:519-539	1518
9. Stockmann, U., Adams, M.A., Crawford, J.W. ... Lal, R., et al. 2013. The knowns, known unknowns and unknowns of sequestration of soil organic carbon . Agriculture, Ecosystems, & Environment 164:80-99.	1356
10. Paustian, K., Andr��n, Janzen, H.H., Lal, R., Smith, P., Tian, G., Tiessen, H., Van Noordwijk, Woomer, P.L. 1997. Agricultural soils as a sink to mitigate CO₂ emissions . Soil Use and Management 13: 230-244.	1236
11. Lal, R. 2005. World crop residues production and implications of its use as a biofuel . Environment International 31: 575-584.	1236
12. Lal, R. 2015. Restoring Soil Quality to Mitigate Soil Degradation . Sustainability 7(5): 5875-5895	1078
13. Lal, R. 2006. Enhancing crop yields in the developing countries through restoration of the soil organic carbon pool in agricultural lands . Land Degradation & Development 17:197-209	1043
14. Liu, R., Lal, R. 2015. Potentials of engineered nanoparticles as fertilizers for increasing agronomic productions . Science of the Total Environment 514:131-139	910
15. Lal, R. 1998. Soil erosion impact on agronomic productivity and environment quality . Critical Reviews in Plant Sciences 17:319-464.	893
16. Lal, R. 2002. Soil carbon dynamics in cropland and rangeland . Environmental Pollution 116:353-362.	876
17. Lal, R. 1997. Residue management, conservation tillage and soil restoration for mitigating greenhouse effect by CO₂-enrichment . Soil & Tillage Research 43:81-107.	784
18. Lal, R. 2004. Carbon sequestration in dryland ecosystem . Environmental Management 33:528-544.	743
19. Shukla, M.K., Lal, R. 2006. Determining soil quality indicators by factor analysis . Soil & Tillage Research 87: 194-204	738
20. Mulumba, L.N., Lal, R. 2008. Mulching effects on selected soil physical properties . Soil and Tillage Research 98 (1):106-111.	718
21. Lal, R., D.C. Reicosky, J.D. Hanson. 2007. Evolution of the plow over 10,000 years and the rationale for no-till farming . Soil and Tillage Research 93 (1):1-12.	709
22. Lal, R. 2003. Global potential of soil carbon sequestration to mitigate the greenhouse effect . Plant Sci 22:151-184.	695
23. Blanco-Canqui, H., R Lal. Crop residue removal impacts on soil productivity and environmental quality . Critical reviews in plant science 28 (3), 139-163	674
24. Bruce, J.P., Frome, M., Haites, E. Janzen, H., Lal, R., Paustian, K. 1999. Carbon sequestration in soils . Journal of Soil and Water Conservation 54:382-389.	661
25. Blanco-Canqui, H., Lal, R. 2008. No-tillage and soil-profile carbon sequestration: an on-farm assessment . Soil Science Society of America Journal 72:693-701	657

CITATION INDEX FOR PROF. RATTAN LAL

Google Scholar



Web of Science

Citations Indices (as of 1/2023): [Google Scholar](#)

	All	Since 2018
Citations	142,323	57,814
h-index	181	110
i10-index	1049	715

Citations Indices (as of 1/2023): [Web of Science](#)

	All
Citations	58,892
h-index	116

Publications of Prof. R. Lal from 1967 - 2022

Year	Books Written	Books Edited	Referred Journal Articles	Chapters in Multi- authored Books	Invited Keynote Presentations	Voluntary or Conference Papers	Misc. Publications	TOTAL
2022	2	2	44	7	68	0	0	123
2021	0	1	32	8	94	2	2	139
2020	0	4	49	15	110	0	7	185
2019	0	4	35	9	37	3	4	92
2018	2	4	53	28	30	0	1	118
2017	1	3	49	21	31	5	5	115
2016	0	2	50	41	26	3	6	128
2015	0	3	47	38	33	2	0	123
2014	0	0	53	18	17	18	4	110
2013	1	3	49	22	21	10	0	106
2012	0	5	31	32	16	12	3	99
2011	0	1	33	8	30	4	0	76
2010	1	2	22	20	17	10	2	74
2009	0	1	45	15	26	0	2	89
2008	1	0	31	3	23	13	8	79
2007	0	2	38	9	12	9	17	87
2006	0	4	26	35	15	2	0	82
2005	0	1	34	5	11	9	1	61
2004	2	1	32	8	9	7	5	64
2003	0	2	17	9	6	0	1	35
2002	0	2	10	24	6	5	2	49
2001	1	3	17	16	9	1	5	52
2000	0	4	16	24	18	3	7	72
1999	1	1	13	8	21	4	2	50
1998	0	4	15	29	14	5	6	73
1997	0	1	21	3	6	0	5	36
1996	0	0	9	3	8	3	1	24
1995	2	4	15	15	2	1	0	39
1994	1	3	6	11	10	1	0	32
1993	0	1	7	11	7	1	3	30
1992	1	2	8	2	2	2	1	18
1991	0	3	12	9	7	8	3	42
1990	1	3	10	2	10	1	4	31
1989	0	0	25	2	1	3	0	31
1988	0	1	5	11	4	12	1	34
1987	1	1	12	4	6	0	4	28
1986	0	1	17	6	8	0	0	32
1985	1	0	7	0	12	3	0	23
1984	0	0	14	2	8	4	0	28
1983	1	0	10	0	5	5	0	21
1982	0	0	8	0	4	5	0	17
1981	1	1	8	6	1	0	0	17
1980	0	0	5	12	1	7	0	25
1979	0	2	8	10	2	1	3	26
1978	0	0	7	4	2	1	0	14
1977	0	1	1	6	3	1	0	12
1976	1	0	8	2	2	2	0	15
1975	2	0	1	0	1	3	0	7
1974	0	0	5	1	2	2	0	10
1973	0	0	1	0	0	0	0	1
1972	0	0	1	0	0	0	0	1
1971	0	0	2	0	0	0	0	2
1970	0	0	4	0	0	0	0	4
1969	0	0	1	0	0	0	0	1
1968	0	0	0	0	0	0	0	0
1967	0	0	1	0	0	0	0	1
Total	24	83	1080	574	810	194	115	2885

Thematic Distribution of Books Published
By Prof. R. Lal (1967-2022)

Theme	Books Authored	Books Edited
1. Soil erosion and sedimentation	3	3
2. Conservation Agriculture (No-till and mulch farming)	3	2
3. Carbon sequestration, cycling	5	26
4. Soil structure, compaction, crusting, erodibility		
5. Sustainable management of soils	4	20
6. Tropical deforestation and watershed management	1	3
7. Soil quality assessment and management		4
8. Mine soil reclamation		
9. Soil-water management		
10. Greenhouse effect, abrupt climate change	1	8
11. Soil degradation and desertification	1	3
12. Global food security		5
13. Soil drainage, water table management	1	
14. Soil thermal properties and temperature		
15. Biofuel feeds stock and soil quality		1
16. Agroforestry systems		
17. Bioturbation/soil fauna		
18. Carbon farming		
19. Soil Science/Soil Ecology	2	4
20. Soil Physics	1	1
Total	22	80