

Curriculum Vitae Gerald K. Sims

B.S., McNeese State University, 1978

M.S., Louisiana State University, 1981, *Associative dinitrogen fixation on grasses of Louisiana*

Ph.D., Purdue University, 1985, *Degradation of pyridine derivatives by soil microorganisms*

Positions Held:

2012-present Professor & Dept. Head, Entomology Plant Pathology & Weed Science, New Mexico State Univ.

2018-2019 Interim Dept. Head, Fish, Wildlife, Conservation Ecology, New Mexico State University

2003-2012 Supvy. Microbiologist (Research Leader), USDA-ARS, Urbana, IL

2007 (AUG-NOV) Acting National Program Leader (NP 304)/Interim Director, Overseas Biological Control Laboratories, USDA-ARS, Beltsville, MD

1992-2003 Microbiologist, USDA-ARS, Urbana, IL

1992-2014 Joint Faculty, Dept. Crop Sci., Dept. Natural Resources Environ. Sci., UIUC

1990-1992 Project Leader and Senior Research Chemist, Dow Chemical, Midland, MI

1985-1990 Regular Faculty, Department of Agronomy, Ohio State University

Graduate/Postdoctoral Advising:

Graduate Committee Chair/Co-Chair: Master of Science (20); PhD (10)

Postdoctoral Fellows (6)

Research Topics

- Environmental behavior of N-heterocycles
- EPA registration studies for pesticides
- Environmental process coupling
- Anaerobic transformations of xenobiotics
- Functional ecology of soil microorganisms

Grants & Contracts (faulty role)

- Competitive grants - \$6,918,112
- USDA-ARS internal grants and formula funds - \$17,761,090
- Unrestricted donations for research - \$248,000
- In kind donations (analytical equipment, radio-chemicals): ~ \$1,500,000

Grants & Contracts (department head role)

- Annual research expenditures ~\$3,500,000
- Scholarship Fundraising: ~\$250,000

Recent Works (86 research articles; 18 chapters, 52 invited talks, 138 abstracts)

1. Kanissery, R.; Liu, W.; Tiwari, R.; Sims, G. (2021). Impact of Soil Aeration on the Environmental Fate of Pre-Emergent Herbicide Metolachlor. *Appl. Sci.* 2021, 11, 8567. <https://doi.org/10.3390/app11188567>
2. Gupta N., O'Loughlin E.J., **Sims G.K.** (2019) Microbial Degradation of Pyridine and Pyridine Derivatives. In: Arora P. (eds) *Microbial Metabolism of Xenobiotic Compounds. Microorganisms for Sustainability*, vol 10. Springer, Singapore
3. Kanissery R, Gairhe B, McAvoy C, **Sims G** (2018) Herbicide Bioavailability Determinant Processes in the Soil. *J Bioremediat Biodegrad.* 10: 458. doi:10.4172/2155-6199.1000458.
4. **Sims G.K.**, Kanissery R.G. (2019) Anaerobic Biodegradation of Pesticides. In: Arora P. (eds) *Microbial Metabolism of Xenobiotic Compounds. Microorganisms for Sustainability*, vol 10. Springer, Singapore
5. **Sims G.K.**, Gomez A.M., Kanissery R. (2019) DNA Stable Isotope Probing to Examine Organisms Involved in Biodegradation. In: Arora P. (eds) *Microbial Metabolism of Xenobiotic Compounds. Microorganisms for Sustainability*, vol 10. Springer, Singapore
6. *Kanissery, R.G., A. Welsh, A. Gomez, L. Connor and G.K. Sims.* 2018. Identification of metolachlor mineralizing bacteria in aerobic and anaerobic soils using DNA-stable isotope probing. *Biodegradation*: 29(2):117-128. doi: 10.1007/s10532-017-9817-6.
7. **Sims, GK.** 2018. Nature and Bioavailability of Non-extractable soil residues of the herbicide cloransulam-methyl (invited talk). American Chemical Society, Boston, August 19-23.