

TEXAS TECH UNIVERSITY
CLIFFORD B. FEDLER, Ph.D., P.E.

Education:

1985 **UNIVERSITY OF ILLINOIS** - at Urbana-Champaign, Illinois
Ph.D., Agricultural Engineering

1981 **IOWA STATE UNIVERSITY** - Ames, Iowa
Master of Science, Agricultural Engineering
Master of Science, Civil Engineering

1979 Bachelor of Science, Agricultural Engineering

Professional Experience:

PROFESSOR - Sept 1997 to present - Department of Civil Engineering, Texas Tech University

ASSOCIATE PROFESSOR - Sept 1991 to Sept 1997 - Department of Civil Engineering, Texas Tech University.

ASSOCIATE PROFESSOR - Sept 1990 to Sept 1991-Department of Agricultural Engineering, Texas Tech University.

ASSISTANT PROFESSOR - 1985 to 1990 - Department of Agricultural Engineering, Texas Tech University.

Professional & Scholarly Activities:

Dr. Fedler has been involved in various activities related to environmental processing and mathematical modeling. His initial work was in the area of processing waste to energy and modeling the effects of toxic substances on the process. In addition, his research has included single cell protein and algae production from waste, ethanol production from agricultural crops, grain and food processing, and thermal conductivity investigations of granular materials. He spent time in Washington with several congressional and senate office as the technical advisor on behalf of several businesses around the country who are seeking federal funding. He serves as a member of the Board of Directors to several corporations, some of which are developing alternative energy devices to produce and bring to market. Two of Dr. Fedler's publications have received the Top 10 Paper Awards in the ASABE. In addition, he has received the Technical Paper and Presentation Award from the American Society for Engineering Education for his paper presented on the restructuring of engineering education. He received the TTU Dads and Moms Association Spencer A. Wells Faculty Award for Creative Teaching, Engineer of the Year Award by the Texas Section of ASABE, the Halliburton Outstanding Researcher Award, and the Halliburton Outstanding Teaching Award.

Selected Publications:

Landesman, L., Fedler, C., Duan, R. (2010). Plant nutrient pyytoremediation using duckweed. In A. A. Ansari, S. Singh, G.R., Lanza, and R. Walter (Ed.), *Eutrophication: Causes, Consequences and Control* (pp. 341-354 or 700). Springer Science.

C.B. Fedler and Duan, R. 2010. Biomass production for bioenergy from recycled natural waste treatment system effluent. Submitted to Resources, Conversion and Recycling, Accepted for publication.

Duan, R., C.B. Fedler, and C.D. 2010. Sheppard. Nitrogen leaching losses from a wastewater land application system. *Water Environment Research*. 82(3):227-235.

Duan, R. and C.B. Fedler. 2010. Performance of a combined natural wastewater treatment system in West Texas, USA. *ASCE Journal of Irrigation and Drainage Engineering*. 136(3):204-209.

Duan, R., Fedler, C., Sheppard, C. D. (2010). Short-Term Effects of Wastewater Land Application on Soil Chemical Properties. *Water, Air, & Soil Pollution*, 211(1-4), 165-176.

Duan, R. and C.B. Fedler. 2009. Field study of water mass balance in a wastewater land application system. *Irrigation Science*, 27(5):409-416.

Fedler, Clifford B. 2006. Potential Biomass Production from Recycled Wastewater. Vol. 47(7):46-50. *Biocycle-Journal of Composting & Organics Recycling*. The JG Press, Inc. Emmaus, PS 18049.

Landesman L, N.C. Parker, C.B. Fedler, and M. Konikoff. 2005. Modeling duckweed growth in wastewater treatment systems. *Livestock Research for Rural Development*. Vol. 17, Art. # 61. Accessed from <http://www.utafoundation.org/lrrd1706/land17061.htm>.

Veerina, S.S.; N.C. Parker; and C.B. Fedler. 2002. Toxicity effects of sludge on the survival and reproduction of *Ceriodaphnia dubia*. Vol. 11(2):113-118. *Journal of Ecotoxicology*.

Bates, M.C., N.C. Parker, and C.B. Fedler. 1995. Production of *Spriulina platensis* from a Cattle Waste Medium. *Texas Journal Agric. Nat. Resources*. Vol 8.

In addition to the publications listed above, I have authored or co-authored over 140 additional publications for various Journals, Conferences, and professional presentations.

RELATED RESEARCH GRANTS:

Texas Algal Fuels Research Center. June 2008. Department of Defense: Defense Advanced Research Projects Agency (DARPA). \$3,146,000 total for 3 years through the Texas AgriLife Research and Extension Center, \$734,571 shared portion for Year 1 and Year 2. M. Burow, M. Foster, C. Fedler, A. Kemanian, R. Lacey, and R. Srinivasan.

Development of Algal Culture for Biodiesel Production. September 2008. Strategic Fuel Supply-Department of Defense, Airforce. \$197,000 total. Collaborative project with the Texas AgriLife Research and Extension Center M.D. Burow, A.M. Schubert, C.B. Fedler, and J.V.Moroney.

Effectiveness and Utility of Surface Application and Soil Percolation for Removal of Pharmaceutical and Primary Care Product Microcontaminants. September 2008. Texas Commission on Environmental Quality. \$251,974. C.B. Fedler, B.W. Brooks (Baylor University), and M.J. Hooper.

Utilizing Agricultural Biomass in Energy Production and Economic Development. January 2007. Department of Energy through the Texas State Energy Conservation Office. \$98,123. C.B. Fedler, C. Lyford, M. Beruvides, and J. Simonton.

Design and Operation of Land Application Systems from a Water, Nitrogen, and Salt Balance Approach. April 2005 through April 2008. Texas Onsite Wastewater Treatment Research Council, TCEQ. \$205,000. C.B. Fedler, C.J. Green and J. Borrelli.

I have been involved in 70 grants as PI or Co-PI worth approximately \$11 million.