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This lecture is a part of a seminar series that cover a broad range of perspectives on sustainability issues, particularly focusing on the need for a sound scientific basis for sustainable development policy.

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World Agricultural Production and Climate Change

Prof. Rattan Lal

Professor of Soil Science, Ohio State University
Director, Carbon Management and Sequestration Center, USA

Monday, August 18, 2008, 15.00–16.00

Linné Hall, the Royal Swedish Academy of Sciences,
Lilla Frescativägen 4, Stockholm

Rattan Lal argues that sequestering carbon in agricultural and forest soils can alleviate reduce the rate of buildup of atmospheric carbon dioxide and buy time for society to switch to alternative fuels. His calculations suggest that sequestration of carbon in agricultural soils through the adoption of no-till and other green practices is cost effective and provides other benefits beside reducing atmospheric levels of carbon dioxide, such as water quality, reduced flood and drought risks, and increased soil productivity. He states that the science of soils is sufficiently advanced to permit implementation of a market in carbon credits that can be effectively monitored and managed. Though the soil has a limited capacity to sequester carbon, it can meet much of U.S. targeted reduction for a period of 30 years. Soil carbon sequestration can also play a major role in supporting farm income and building up depleted soil resources in many countries.



Rattan Lal is a Professor of Soil Science in the School of Environment and Natural Resources. He is the Director of the Carbon Management and Sequestration Center at Ohio State's Ohio Agricultural Research and Development Center. Professor Lal conducts research in carbon sequestration in terrestrial ecosystems, soil dynamics and processes, and natural resources management with emphasis on food security and environmental quality in the United States, Africa, Latin America, and India. Currently his research is focused on carbon dynamics in relation to soil erosion, and soil quality as indicated by soil structure and productivity.

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