

ASA, CSSA, and SSSA 2010 International Annual Meetings

Oct. 31-Nov. 3 | Long Beach, CA



Green Revolution 2.0: Food+Energy and Environmental Security

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Success!

- The 2010 Annual Meetings, "Green Revolution 2.0: Food + Energy and Environmental Security," was a success. Thank you to all of the attendees, exhibitors, sponsors, donors, vendors, and volunteers.
- Save the date for next year: Oct. 16-19, 2011, San Antonio, TX.

News

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American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America will host 3,000 scientists, professionals, educators, and students to the 2010 International Annual Meetings, Oct. 31-Nov. 3 in Long Beach, CA.

Dates & Deadlines

[Nov 2 ASA Awards Program & Plenary Address](#)

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ASA, CSSA, and SSSA 2010 International Annual Meetings

Oct. 31-Nov. 4 | Long Beach, CA



Green Revolution 2.0: Food+Energy and Environmental Security

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326-10 CARBON Stocks and SPECTROSCOPIC Assesment of CARBON Stability IN Kenyan SOILS.

See more from this Division: S06 Soil & Water Management & Conservation

See more from this Session: Conservation Practices to Mitigate the Effects of Climate Change: II

Wednesday, November 3, 2010

Long Beach Convention Center, Exhibit Hall BC, Lower Level

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Aline Segnini¹, Adolfo Posadas Durand¹, R. Quiroz², Lieven Claessens³, Carla Gavilan², Debora Milon¹ and Ladislau Martin-Neto¹, (1)EMBRAPA - Empresa Brasileira de Pesquisa Agropecuaria, Sao Carlos, SP, Brazil
(2)Production Systems and the Enviroment, International Potato Center, Lima, Peru
(3)CIP - International Potato Center, Nairobi, KENYA

Presentations

- Paper_61831_presentation_4189_0.ppt (5.5 MB)

In the present study was developed a comparative analysis of the capacity agricultural of important cropping systems and native areas located in **Sub-Saharan Africa** to soil carbon assessment. With the aim to determine soil carbon stocks (CS) according to soil classes, altitude, temperature gradient, climatic parameters, crop classes and native vegetation, as related to global change, soils from main cropping systems as tea, coffee and maize, located in Embu, Nairobi, Kenya, were sampled. These soils were sampled, in triplicates, in five layers from 0 to 30 cm depths and processed for total carbon analysis in duplicate. CS (Mg ha^{-1}) were calculated in equivalent soil mass taking the native vegetation as reference. Using a linear additive model for a nested sampling scheme, CS were compared, among cropping systems using MANOVA and orthogonal contrasts. The whole soil samples were analyzed using the Laser-Induced Fluorescence spectroscopy (LIFS) to assess the carbon stability of these areas. We used a new device, developed by EMBRAPA-Agricultural Instrumentation, employing laser-induced optical techniques to measure the carbon levels and their stability in whole soil samples. The device is so light and convenient that it can be used directly in the field. Also, the portable LIFS system is of outmost importance in agro ecosystems contributing with studies of capture of carbon under variable climatic conditions. The results showed wide variations in the levels and stability of carbon stored in the soil depending on factors such as land use, crops grown, water content, elevation, and agricultural practices.

See more from this Division: S06 Soil & Water Management & Conservation

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