



## Sustainable Agriculture and Natural Resource Management Collaborative Research Support Program

SANREM CRSP  
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### Graduate Research Assistant (MS): Crop & Soil Environmental Sciences, Virginia Tech

#### Position Summary:

The Sustainable Agriculture and Natural Resource Collaborative Research Support Program (SANREM CRSP) is a United States Agency for International Development (USAID)-funded project that conducts applied research to support the implementation of sustainable agriculture and natural resource management practices in developing countries. The SANREM CRSP is managed by the Virginia Tech Office of International Research, Education, and Development (OIRE), which currently oversees a portfolio of approximately \$98 million in international research and development projects. A Graduate Research Assistant (GRA) is being sought to conduct research in soil and crop management for conservation agriculture farming systems, soil-based carbon sequestration, and climate change.

Responsibilities will include:

- Conducting research on soil organic carbon from 13 developing countries to determine if smallholder conservation agricultural systems can sequester soil carbon and improve soil quality; and if so, by how much;
- Conducting laboratory analyses that lead to peer-reviewed publications; and
- Occasional travel to developing countries may be required.

The GRA will conduct research and provide technical data needed to develop conservation agriculture for rain-fed smallholders in food insecure developing countries. These systems have been shown to enhance soil quality, land productivity, and carbon sequestration on large mechanized farms around the world, but their adoptability and sustainability by smallholders is less certain. The successful applicant will work toward a MS graduate degree within the Department of Crop and Soil Environmental Sciences (CSES) at Virginia Tech, and is contingent upon acceptance by the Virginia Tech Graduate School and CSES.

The thesis research will be conducted in connection with the SANREM CRSP. Work may include soil organic carbon fractionation, greenhouse gas modeling, various spectroscopic methods for determination of C speciation, and/or studies on soil phosphorus. Research will be conducted in collaboration with seven SANREM CRSP sponsored long-term research activities in the following regions: Haiti, Latin America, West Africa, East Africa, Southern Africa, South Asia, and Southeast Asia. Additional information on the SANREM CRSP is available at: [www.oired.vt.edu/sanremcrsp](http://www.oired.vt.edu/sanremcrsp).

#### Required Qualifications:

- BS in Agronomy, Crop Science, Soil Science, Chemistry, or a closely related field of study that has equipped the applicant with the necessary knowledge, skills, and abilities to perform the duties and responsibilities of the position
- Excellent written and oral English skills



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- Strong laboratory skills
- Willingness to travel
- Ability to meet the entrance requirements of the Virginia Tech Graduate School and the Department of Crop and Soil Environmental Sciences
- Citizenship in a SANREM partner country: United States, Bolivia, Cambodia, Ecuador, Ghana, Haiti, India, Kenya, Lesotho, Mali, Mozambique, Nepal, Philippines, or Uganda.
- Willingness to study on a J-1 visa (international students only)

#### **Preferred Qualifications:**

- Knowledge of spectroscopy
- Agricultural experience, preferably in developing countries
- Knowledge of conservation agriculture and carbon cycling
- Strong analytical and statistical skills

#### **Benefits:**

- Tuition and fees for a graduate degree at Virginia Tech
- 12-month stipend of \$1626/mo.
- Subsidized student health insurance

Note: Benefits are contingent upon satisfactory performance and continued funding.

#### **How to apply:**

Contact Dr. Michael J. Mulvaney at [mulvamj@vt.edu](mailto:mulvamj@vt.edu) or +1-540-231-1218 for more information and questions. Please send Dr. Mulvaney a CV and cover letter explaining your career interests, qualifications (including laboratory experience), and GRE and TOEFL scores, if applicable.

Formal application is online at <http://www.graduateschool.vt.edu/admissions/applying/index.html> and requires the following information:

- Cover letter
- Curriculum Vitae
- Academic transcripts
- Letters of recommendation from three references
- GRE and TOEFL scores if non-US citizen

Review of candidates will begin on Aug. 1, 2012 and continue until a suitable candidate is appointed. The application deadline is Sept. 1 for international students or Dec. 1 for US students for the spring semester, which begins on Jan. 21, 2013. Appointment before that date is possible, with a preferred starting date in Nov. or Dec. 2012.

Additional application information for international students:

[http://www.graduateschool.vt.edu/igss/application\\_prearrival/index.html](http://www.graduateschool.vt.edu/igss/application_prearrival/index.html)