Name: Edgar Amézquita Collazos
Position title: Soil Physics
Specialty Area: Soil Physics
Current time allocation: PE-2 100%

Education:

- **Ph.D.** Universidad de Reading, Inglaterra (1981).
- **M.Sc.** Magister Science en Física y Conservación de Suelos. IICA-CATIE, Turrialba, Costa Rica (1974).
- **B.Sc.** Ingeniero Agrónomo. Universidad de Nariño, Pasto, Colombia (1970).

Position held (since terminal degree):

- Soil Physicist, Tropical Soil Biology and Fertility Institute of International Center for Tropical Agriculture (TSBF-CIAT), Cali, Colombia (1994-present).
- Researcher and Assessor in soil and water management problems in flowers for exportation (1990-1994).
- Director (E) of the National Program of Natural Resources. ICA-Tibaitatá, Colombia (1991-1992).
- Director (E) of the Natiional Program of Soil Science. ICA-Tibaitatá, Colombia (1989-1991).
- Researcher in soil physical and erosion problems in the National Program of Soil Science. ICA-Tibaitatá, Colombia (1986-1989).
- Coordinator of the Soil Physical and Fertility Management. Cagua Experimental Station, FUSAGRI-Venezuela (1981-1986).
- Coordinator for heavy Soil Management in the Orinoco Delta River. FUSAGRI-Venezuela (1975-1978).

Research Responsibilities (2002 – present):

- Identification of constraints in savanna soils, for crop and pasture production.
- Development of solutions to overcome soil constraints, increase soil productivity and sustainability in savanna soils. Development of the concept of building-up an arable layer.
- Development of indicators and field tools for soil quality evaluations.
- Development of decision support systems for defining land use in savanna (Geosoil, Decision tree).
- Analysis of long-term climatologycal data (Carimagua, La Libertad) as a support to take decisions in soil physical management.
- Evaluation of soil erosion in hillsides (Mondomo, Santander de Quilichao, Pescador).
- Development of field tools (microreliefmeter, minirainfall simulator) for soil erosion and runoff evaluations in hillsides.

Professional Service (2002 – present):

- ***Memberships and Services in Scientific Societies***
  Vice-president of the Colombian Society of Soil Science (SCCS)

- ***Service on Editorial Boards***
  Suelos Ecuatoriales – Revista. Colombian Society of Soil Science

- ***Contributions to major international conferences (organizer)***
  IX Latin American Congress of Soil Science, Cartagena (Colombia)
  Colombian Congress of Soil Science, Cali (Colombia)

Honors and Awards (since terminal degree):

- Acknowledgment of the Colombian Society of Soil Sciences, as Director of thesis of students that obtained the National Award of Soil Science. Rolfe Argüello, 1991.
- Acknowledgment of the Colombian Society of Soil Sciences, as Director of thesis of students that obtained the National Award of Soil Science. Martha Rojas and Alberto Aragón, 1994.
- Colombian Society of Soil Sciences. Honor Acknowledgement, Septiembre 2002.
- Universidad de Ciencias Aplicadas y Ambientales (UDCA). Acknowledgement, Bogotá, May 24-2002.

Graduate Student Advisement (2002 – present):

Degree completed		**Current**	
BSc.	6	BSc.	-
MSc.	6	MSc.	2
PhD.	4	PhD.	2

Refereed journal publications (2002-2006):

Amézquita E., Thomas R.J., Rao I.M., Molina D.L. and Hoyos P. 2004. Use of deep-rooted tropical pastures to build-up an arable layer through improved soil properties of an Oxisol in the Eastern Plains (Llanos Orientales) of Colombia. *Agriculture, Ecosystems and Environment* 103: 269-277.

Amézquita M.C., Ibrahim M., Llanderal T., Buurman P. and Amézquita E. 2004. Carbon sequestration in pasture and silvo-pastoral systems in sub-ecosystems of the American Tropics. *Journal of Sustainable Forestry* (in review).

Amézquita M.C., M. Ibrahim, E. Amezquita. 2005. Carbon sequestration in pastures, silvo-pastoral systems and forests in four regions of the Latin American tropics. In: Montagnini F. (editor). Environmental Services of Agroforestry Systems. Haworth Press. New York. Special Issue of Journal of Sustainable Forestry 21(1) (in press).

Amézquita, E., L.F. Chávez, D.L. Molina, P. Hoyos, J.H Galvis. 2003. Susceptibility to compaction of improved soils (Oxisols) in the Eastern Plains of Colombia. International Soil Tillage Research Organisation Conference*, Proceedings of ISTRO-16 "Soil Management for Sustainability"*. Brisbane, Australia, 13-18 Julio 2003. pp.29-35.

Barrios Edmundo, Juan G. Cobo, Idupulapati M. Rao, Richard J. Thomas, Edgar Amézquita, Juan J. Jiménez and Marco A. Rondón. 2005. Fallow management for soil fertility recovery in tropical Andean agroecosystems in Colombia. Agriculture, Ecosystems & Environment Volume 110 (1-2): 29-42.

Corrales Irlanda Isabel, Edgar Amézquita, Mariela Rivera y Luis Fernando Chávez. 2005. Efecto de las condiciones físicas y químicas de un Oxisol de la Altillanura Colombiana bajo diferentes tratamientos sobre los rendimientos y desarrollo de raíces en siembra directa. *Revista Suelos Ecuatoriales* (*in review*).

Decaëns, T., L. Mariani, Nixon Betancourt, J.J. Jiménez. 2003. Seed dispersion by surface casting activities of earthworms in Colombian grasslands. *Acta Oecologica* 24: 175-185.

Decaëns, T., N. Asakawa, J.H. Galvis, R.J. Thomas, E. Amézquita. 2002. Surface activity of soil ecosystem engineers and soil structure in contrasted land use systems of Colombia. *European Journal of Soil Biology* 38: 267-271.

Hoyos Garcés Phanor, Edgar Amézquita C y Diego Luis Molina López. 2005. Mejoramiento de las Características del Suelo y su Efecto en la Productividad en Dos Suelos de la Altillanura Plana del Departamento del Meta. *Revista Suelos Ecuatoriales* (*in review*).

Phiri S., Amézquita E., Rao I.M. and Singh B.R. 2003. Constructing an arable layer through chisel tillage and crop-pasture rotations in tropical savanna soils of the Llanos of Colombia. *Journal of Sustainable Agriculture* 23(1): 6-29.

Rivera Peña M. and Amézquita E. 2003. Evaluación del modelo de simulación CERES-Maize aplicado a una variedad de maíz en Oxisoles de los Llanos Orientales de Colombia. Universidad Nacional de Colombia – Sede Palmira. *Acta Agronómica* 52(1-4): 39-44.

Torrente T.A., García-Ocampo A., Escobar Ch. C.A., Amézquita E. and Sampayo T.J. 2003. Condiciones hidrofísicas de suelos con alta saturación de magnesio en el Valle del Cauca, Colombia. Universidad Nacional de Colombia-Sede Palmira. *Acta Agrónomica* 52(1-4): 29-37.

Zhiping Q., Rao I.M., Ricaurte J., Amézquita E., Sanz J.I. and Kerridge P.C. 2004. Root distribution and nutrient uptake in crop-forage systems on Andean hillsides. *Journal of Sustainable Agriculture* 23(4): 39-50.

Invited keynote presentation at major international conferences (2002-2006):

- Edgar Amézquita, Idupulapati M. Rao, Edmundo Barrios, Marco Rondón and Miguel Ayarza. 2005. "Management of acid soils in the Llanos of Colombia". Presented at International Workshop on "Advances in improving acid soil adaptation of tropical crops and forages and management of acid soils". EMBRAPA-CIAT, Brasilia DF-Brazil, October 16-22, 2005.\
- Amézquita E. 2004. La fertilidad física del suelo. Magisterial conference presented at XVI Latin American Congress and XII Colombian Soil Science Congress "CLACS 2004", Cartagena, Colombia. September 27 to October 1, 2004.
- Amézquita E. 2004. El ambiente físico del suelo en relación con su calidad integra. Principal conference presented at XVI Latin American Congress and XII Colombian Soil Science Congress "CLACS 2004", Cartagena, Colombia. September 27 to October 1, 2004.

Research Grants (2002-present):

Funding source	**Grant title (principal investigators)**	**Amount (US$)**	**Period**
Programa Nacional de Transferencia de Tecnología Agropecuaria (PRONATTA)	Estrategias para la construcción de capas arables productivas en dos suelos de la Altillanura Colombiana	70,361	2001-2003
Challenge Program on Water & Food	Quesungual Slash and Mulch Agroforestry System (QSMAS): Improving crop water productivity, food security and resource quality in the sub-humid tropics	754,800	2004-2007
Corporación Autónoma Regional del Cauca (CRC)	Ubicación y medidas de control de procesos erosivos de la Cuenca del Río Cauca	109,144	2005-2006
Corporación Autónoma Regional del Cauca (CRC)	Estudio de las limitantes físicas, químicas y biológicas de los suelos de la Meseta de Popayán con miras a mejorar su productividad	34,169	2006