

Annex

List of Publications

Refereed Journal (published, In press and submitted):

- Abreu, A.; Carulla J.E.; Kreuzer, M.; Lascano C.E.; Díaz T.E.; Cano A.; Hess H.D. 2003. Efecto del fruto, pericarpio y extracto semipurificado de saponinas de *Sapindus saponaria* sobre la fermentación ruminal y la metanogénesis *in vitro* en un sistema RUSITEC. Revista Colombiana de Ciencias Pecuarias, 16:147-154.
- Abreu, A.; Carulla J.E.; Lascano C.E.; Díaz T.E.; Kreuzer, M.; Hess, H.D. 2004. Effects of *Sapindus saponaria* fruits on ruminal fermentation and duodenal nitrogen flow of sheep fed a tropical grass diet with and without legume. Journal of Animal Science 82:1392-1400.
- Amézquita, E.; Thomas, R. J.; Rao, I.M.; Molina, D.L.; 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.
- Begum, H. H.; Osaki M.; Nanamori M.; Watanabe T.; Shinano T.; Rao, I. M. 2004. Role of phosphoenolpyruvate carboxylase in the adaptation of a tropical forage grass, *Brachiaria* hybrid, to low phosphorus acid soils. Journal of Plant Nutrition (In review).
- Cardona, C.; Fory P.; Sotelo G.; Pabon A.; Díaz G.; Miles, J. W. 2004. Antibiosis and tolerance to five species of spittlebug (Homoptera: Cercopidae) in *Brachiaria* spp.: Implications for breeding for resistance. J. Econ. Entomol. 97(2): 635-645.
- Carulla, J.E.; Kreuzer, M.; Machmüller, A.; van Dorland, H.A.; Hess, H.D. 2004. Nitrogen utilization and methanogenesis of sheep fed ryegrass silage supplemented with ensiled legumes and tannins. Grassland Science in Europe. 9:678-680.
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- Dongyi, H.; Kelemu, S. 2004. *Acremonium implicatum*, a seed-transmitted endophytic fungus in *Brachiaria* grasses. Plant Disease. 88 (11):1252-1254
- Gómez-Carabalí, A.; Rao I.; Beck, R. F.; Ortiz, M. 2004. Rooting ability and nutrient uptake by tropical forage species that are adapted to degraded andisols of hillsides agroecosystem. Acta Facultatis Ecologie Vol. 12 (In press).
- Hess, H.D.; Lascano C.E.; Carulla, J.E.; Díaz, T.E.; Machmüller, A.; Kreuzer, M. 2003. Potential of forage legumes and of saponin-containing fruits as tropical feed resources to manipulate rumen fermentation and to improve ruminant nutrition. Tropical and Subtropical Agroecosystems 3: 555-559.
- Hess, H.D.; Kreuzer, M.; Díaz, T.E.; Lascano, C.E.; Carulla, J.E.; Soliva, C.R.; Machmüller, A. 2003. Saponin rich tropical fruits affect fermentation and methanogenesis in faunated and defaunated rumen fluid. Animal Feed Science and Technology 109:79-94.
- Hess H.D.; Valencia, F.L.; Monsalve, L.M.; Lascano, C.E.; Kreuzer, M. 2004. Effects of tannins in *Calliandra calothyrsus* and supplemental molasses on ruminal fermentation *in vitro*. Journal of Animal and Feed Science 13(Supp1):95-98.

- Hess, H.D.; Beuret, R.A.; Lötscher, M.; Hindrichsen, I. K.; Machmüller, A.; Carulla, J.E.; Lascano, C. E.; Kreuzer, M. 2004. Ruminant fermentation, methanogenesis and nitrogen utilization of sheep receiving tropical grass hay-concentrate diets offered with *Sapindus saponia* fruits and *Cratylia argentea* foliage. *Animal Science* 79:177-189.
- Holmann, F.; Rivas, L.; Argel, P.; Pérez, E. 2004. Impact from the adoption of grasses from the *Brachiaria* genus on productivity and income of livestock producers: A case study of Central America and Mexico. *Journal of Livestock Research for Rural Development* (submitted).
- Holmann, F.; Argel, P.; Rivas, L.; White, D.; Estrada, R. D.; Burgos, C.; Perez, E.; Ramírez, G.; Medina, A. 2004. Is it worth to recuperate degraded pasturelands? An evaluation of profits and costs from the perspective of livestock producers and extension agents in Honduras. *Journal of Livestock Research for Rural Development*. 16:11:2004 (www.utafoundation.org/lrrd1611/holm16090.htm <<http://www.utafoundation.org/lrrd1611/holm16090.htm>>)
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- Ishitani, M.; Rao, I.; Wenzl, P.; Beebe, S.; Tohme, J. 2004. Integration of genomics approach with traditional breeding towards improving abiotic stress adaptation: drought and aluminum toxicity as case studies. *Field Crops Res.* 90: (In press).
- Kelemu, S.; Cardona, C.; Segura, G. 2004. Antimicrobial and insecticidal protein isolated from seeds of *Clitoria ternatea* (L.), a tropical forage legume. *Plant Physiology and Biochemistry* (In press).
- Kelemu, S.; Changshun, J.; Guixi, H. ; Segura, G. 2004. Genetic transformation of the tropical forage legume *Stylosanthes guianensis* with a rice-chitinase gene confers resistance to *Rhizoctonia* foliar blight disease. *Plant Pathology* (submitted).
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- Narvaez, N.; Lascano, C. E. 2004. Caracterización química de especies arbóreas tropicales con potencial forrajero en Colombia. *Pasturas Tropicales.* 26(3): 66-74
- O'Brien, R.; Peters, M.; Schmidt, A.; Cook, S.; Corner, R. 2004. Helping farmers select forage species in Central America: the case for a decision support system. *Agriculture Ecosystems and Environment.* (submitted).
- Peck, D. C.; Morales, A.; Castro, U. 2004. New small-scale rearing unit and improved mass-rearing colony for grassland spittlebugs (Homoptera:Cercopidae). *Neotropical Entomology.* 33(3): 307-314.
- Peck, D. C.; Rodriguez, J.; Gómez, L. A. 2004. Identity and first record of the spittlebug *Mahanarva bipars* (Hemiptera: Auchenorrhyncha: Cercopidae) on sugarcane in Colombia. *Florida Entomologist.* 87(1): 82-84.
- Peters, M.; Lascano, C.E. 2003. Linking On-Station Research with Participatory Approaches: Forage Development as the Pathway to Forage Technology Adoption. *Tropical Grasslands.* 37:197-203.
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- Rivas, L.; Holmann, F. 2004. Potential Economic Impact in the adoption of new *Brachiarias* resistant to spittlebugs in the livestock systems of Colombia, Mexico and Central America. *Journal of Livestock Research for Rural Development* (submitted).
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- Tscherning, K.; Barrios, E.; Lascano, C.; Peters, M.; Schultze-Kraft, R. 2004. Effects of sample post harvest treatment on aerobic decomposition and anaerobic in-vitro digestion of tropical legumes with contrasting quality. *Plant and Soil*, (In press).
- Watanabe, T.; Osaki, M.; Yano, H.; Rao, I. M. 2004. Internal mechanisms of plant adaptation to aluminum toxicity and phosphorus starvation in three tropical forages. *Biologia Plantarum* (submitted).
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- Abreu, A.; Hess, H.D.; Lascano, C.; Avila, P.; Díaz, T.E.; Kreuzer, M.; Carulla, J.E.. 2003. Efectos del fruto de *Sapindus saponaria* sobre el consumo, la fermentación ruminal y el flujo duodenal de nitrógeno en ovinos alimentados con un pasto tropical con o sin leguminosa. *Revista Colombiana de Ciencias Pecuarias*, 16 (Supl.): 67.
- Andersson, M.; Peters, M.; Lascano, C.; Schultze-Kraft, R. 2003. *Flemingia macrophylla*, a tropical shrub legume for dry season supplementation - Forage quality and dry matter production. *In: Deutscher Tropentag 'Technological and Institutional Innovations for Sustainable Rural Development' (8th to 10th of October 2003, Göttingen).*
- Arango, A.; Wenzl, P.; Cortés, D.; Gallego, G.; Ishitani, M.; Rao, I. M.; Tohme, J. 2004. Identification of candidate genes for aluminum resistance in *Brachiaria decumbens* cv. Basilisk. *In: Encuentro Latinoamericano y del Caribe de Biotecnología Agrícola*, (5, 21 to 25 June 2004, Boca Chica, Dominican Republic)
- Cardona, C.; Miles, J.; Sotelo, G. 2004. Allopatric resistance to several species of spittlebug (Homoptera: Cercopidae) in *Brachiaria* spp.: Sources, mechanisms, and progress in plant breeding. *In: International Congress of Plant Protection* (15, 2004, Beijing, China). *Proceedings*. p. 756
- Carulla, J.E.; Machmüller, A.; Kreuzer M.; Hess, H.D. 2003. Efectos de la adición de taninos y leguminosas a henolaje de ryegrass sobre la excreción de nitrógeno, la producción de metano y la retención de energía por ovejas. *Revista Colombiana de Ciencias Pecuarias* 16 (Supl.): 70.

- Connell, J.; Photakoun, V.; Millar, J.; Pathammavong, O. 2004. Strategies for enabling scaling up: technology innovation and agroenterprise development. of an international workshop "Poverty Reduction and Shifting Cultivation Stabilization in the Uplands of Lao PDR: Technologies, approaches and methods for improving upland livelihoods";(27 – 30 January 2004, Luang Phabang, Lao PDR). Proceedings. National Agriculture and Forestry Research Institute, Lao PDR. (In press).
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- Gabunada, F.G.; Phengsavanh, P.; Stür, W. (eds.) 2004. Improving Livelihoods of Upland Farmers Using Participatory Approaches to Develop More Efficient Livestock Systems. In: Annual Meeting RETA 6067. (2, 15-22 February 2004, Hanoi, VN). Proceedings
- Hanson, J.; Peters, M.; 2003. Meeting the need for herbage seeds in developing countries In: Loch. D.S. (ed.) Herbage Seeds in the New Millenium – New Markets, New Products, New Opportunities. International Herbage Seed Conference (5, 23-26 November 2003). Proceedings. The University of Queensland Gatton Camous, AU. p. 26-37.
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- Holmann, F.; Argel, P. J.; Lascano, C. E. 2004. Adoption of *Brachiaria* grasses in Mexico and Central America: A successful story. 3 p. In: International Grassland Congress (20, June 26-1 July, 2005 University College Dublin, Ireland) (Submitted).
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- Kelemu, S.; Cardona, C.; Segura, G. 2004. Antimicrobial and insecticidal properties of a protein isolated from seeds of the tropical forage legume *Clitoria ternatea* (L.). (Abstract) *Phytopathology*, 94:S50.
- Magboo, E.C.; Samson, J.G.; Villar, E.C. 2003. Scaling-up new forage systems in northern Mindanao, Philippines. *In*: Samson, Jindra (ed.). *Improving Livelihoods of Upland Farmers Using Participatory Approaches to Develop More Efficient Livestock Systems* 2003. Annual Meeting RETA 6067. (2, 15-22 26 -31 January 2003, Hainan). *Proceedings*. p 67-83.
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- O'Brien, R.; Peters, M.; Corner, R.; Cook, S. 2005. CaNaSTA – Crop Niche Selection for Tropical Agriculture, a spatial decision support system. *In*: The International Grassland Congress, (26th of June to 1st of July 2005) submitted.
- Orozco, P.P.; Schmidt, A.; Beltran, J.A.; Ayarza, M. 2004. SOL - un concepto alternativo para el mejoramiento participativo de cultivos. *In*: Congreso Nacional de Innovación Tecnológica Agropecuaria y Forestal, (1, 24-26 de marzo 2004, Managua), Memorias. Universidad Nacional Agraria (UNA), Managua; Fundación para el Desarrollo Tecnológico Agropecuario y Forestal de Nicaragua (FUNICA), Managua, NI.
- Orozco, P.P.; Schmidt, A.; Estrada, L.; Mendoza, S.R. 2004. Validación de sistemas de cultivos con introducción de leguminosas como abonos verdes y coberturas sobre la sostenibilidad de sistemas de producción tradicionales en la micro cuenca Wibuse, San Dionisio, Matagalpa. *In*: Congreso Nacional de Innovación Tecnológica Agropecuaria y Forestal, (1, 24-26 de marzo 2004, Managua), Memorias. Universidad Nacional Agraria (UNA), Managua; Fundación para el Desarrollo Tecnológico Agropecuario y Forestal de Nicaragua (FUNICA), Managua, NI.
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- Samson, Jindra (ed.) 2003. Proceedings of the Inception Workshop 'RETA 6067': Improving Livelihoods of Upland Farmers Using Participatory Approaches to Develop More Efficient Livestock Systems. (26 -31 January 2003, Hainan), PR CN, 147 p.
- Samson, J.; Roothaert, R. 2003. Bringing forages beyond feed resource boundaries: evaluating forages for soil conservation in the uplands of Bukidnon, Philippines. *In: CIP-UPWARD 2003. From Cultivators to Consumers: participatory research with various user groups. International Potato Center – Users' Perspectives with Agricultural Research and Development, Los Banos, Laguna, PH. 288 p.*
- Schmidt A.; Peters, M. 2003. Selection and Strategic Use of Multipurpose Forage Germplasm by Smallholders in Production Systems in the Central American Hillsides. *In: Wollny, C., Deininger, A., Bhandari, N., Maass, B.L., Manig, W., Muuss, U., Brodbeck, F., Howe, I. (eds.) Deutscher Tropentag "Technological and Institutional Innovations for Sustainable Rural Development" Georg-August-Universität Göttingen, (8-10th of October 2003). p. 208. (<http://www.tropentag.de/2003/pdf/proceedings.pdf>)*
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- Schmidt, A.; Peters, M.; Franco, L.H.; Schultze-Kraft, R. 2005. *Canavalia brasiliensis* – a multipurpose legume for the sub-humid tropics. *In: Poster Paper for the International Grassland Congress, (26th of June to 1st of July 2005). (submitted).*
- Schultze-Kraft, R.; Peters, M.; Vivas, N.; Parra, F.; Franco, L.H. 2005. *Desmodium velutinum* – a high-quality legume shrub for acid soils in the tropics. *In: Poster Paper for the International Grassland Congress, (26th of June to 1st of July 2005) (submitted).*
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van der Hoek, R.; Peters, M.; Hoffmann, V. 2005. Potential and constraints for animal feed as an objective of poor farmers in participatory research with multipurpose forage crops in Central-America. (26th of June to 1st of July 2005). Poster Paper for the International Grassland Congress, , submitted.

van der Hoek, R.; Peters, M.; Hoffmann, V.; 2003. Procedures for participatory research with multipurpose forages in Central American hillsides. Poster Deutscher Tropentag 'Technological and Institutional Innovations for Sustainable Rural Development' Göttingen 8th to 10th of October 2003.

van der Hoek, R.; Peters, M.; Reiber, C.; Hoffmann, V. (2004) Agronomic and Farmers' Assessments of Multipurpose Forage Crops in Central Honduras Deutscher Tropentag, 'Rural Poverty Reduction through Research for Development and Transformation', (October 5 - 7, 2004), Berlin.

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Argel, P. J.; Pérez, G. 2003. Pasto Mulato. Una nueva opción forrajera para la ganadería. Revista Oficial de la Escuela Centroamericana de Ganadería (ECAG), Costa Rica. (In press).

Belli, L. 2003. Tecnologías de Alimentación de Bovinos en Época seca. Report on a review of literature available in Nicaragua. Swiss Federal Institute of Technology (ETH), Centro Internacional de Agricultura Tropical (CIAT), Intercooperation, Managua, NI, 42 pp.

Beltrán, J.A.; Orozco, P.P.; Zapata, V.; Sanz, J.I.; Roa, M.C.; Schmidt, A. 2004. Scaling out and scaling up: The importance of watershed management organizations. *In*: Pachico, D. (ed.). Scaling up and out: Achieving widespread impact through agricultural research. Centro Internacional de Agricultura Tropical (CIAT), Cali, CO. (In press)

Gabunada, F. G. 2003. Training Manual on Livestock Participatory Research and Development. PCARRD, Laguna, Philippines. Contributed 2 chapters: 1) Visually Oriented Methods in Participatory R&D: Story Mapping Tools and Techniques. 2) Visually Oriented Problem Identification Tools: Problem Trees and Causal Models. 3) Project Monitoring and the Role of Development Workers.

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- Gabunada, F. G. 2004. Manual for Training of Trainers on Integrated Goat Management. PCARRD, Laguna, Philippines. Contributed 6 chapters: 1) Communicating with Farmers: the Necessary Communication Skills. 2) Forage nursery establishment and management. 3) Production of forage planting materials. 4) Alternatives to Traditional Feeding Management. 5) Village Appraisal and Characterization using Story Maps. 6) Village Appraisal and Characterization Using Graphical Calendars. 7) Village Appraisal and Characterization using Problem Trees. Hess, H.D. ; J. Gómez. 2004. Taninos en la Nutrición de Rumiantes en Colombia, Memorias del Taller sobre Taninos realizado el 18 de mayo 2004. Swiss Federal Institute of Technology (ETH) and Centro Internacional de Agricultura Tropical (CIAT), Cali, CO, 63 p.
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- Rao, I. M.; Barrios, E.; Amezcuita, E.; Friesen, D.K.; Thomas, R.; Oberson A.; Singh B.R.. 2004. Soil phosphorus dynamics, acquisition and cycling in crop-pasture-fallow systems in low fertility tropical soils of Latin America. *In*: Dolve R. J. ; Probert, M.E. (eds). Modeling nutrient management in tropical cropping systems. ACIAR. Australian Center for International Agricultural Research (ACIAR), Canberra, AU. Proceedings . 114: 126-134
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Horne, P.M.; Stür, W.W. 2003. Developing agricultural solutions with smallholder farmers - how to get started with participatory approaches. ACIAR (ACIAR, Canberra). ISBN 1 86320 379 6. Monograph no. 103 . 119 p.

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- Holmann F.; Lascano, C. (eds). 2004. Feeding systems with forage legumes to intensify dairy production in Latin America and the Caribbean: A project executed by the Tropileche Consortium. CIAT (Centro Internacional de Agricultura Tropical); Tropileche Consortium, Cali, Colombia; SLP (System Wide Livestock Program); and ILRI (International Livestock Research Institute), Nairobi, KY. 172 p
- Other Publications**
- Abreu, A.; Carulla J.E.; Kreuzer, M.; Hess H.D.; Lascano C.E.; Díaz T.E. 2003. Evaluación del efecto del extracto de saponinas semipurificadas de *Sapindus saponaria* sobre la fermentación ruminal y la metanogénesis *in vitro* en un sistema RUSITEC. Revista de Investigaciones de la Universidad Nacional Abierta y a Distancia 2:105-114.
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- Rao, I. M.; Miles, J.; Wenzl, P.; Ricaurte, J.; Plazas, C.; Garcia, R. 2004. Screening for aluminum resistance and field evaluation for acid soil adaptation in *Brachiaria*. Invited paper presented at the International Symposium in Kurashiki on "Al Stress Research in Plants: Present Status and New Directions for Future". Satellite Symposium of the 6th PSILPH in Sendai. Research Institute for Bioresources, Okayama University, Kurashiki, Okayama, JP. 7 August, 2004.
- Rao, I.; Beebe, S.; Ceballos, H.; Alves, A.; Miles, J.; Martinez, C.; Chatel, M.; Trouche, G.; Lorieux, M.; Blair, M.; Ishitani, M.. 2004. Phenotypic evaluation for improving adaptation to drought in common bean, cassava, rice and *Brachiaria*. Abstract of the invited paper presented at the Generation Challenge Program Workshop on Phenotyping and Water Deficit held at Agropolis, Montpellier, FR (5-9 July, 2004), p 45.
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- Stür, W.; Phengsavanh, P.; Gabunada, F.; Samson, J.; Bonilla, D. 2003. Semi-Annual Report (July – December 2003) – Improving Livelihoods of Upland Farmers Using Participatory Approaches to Develop More Efficient Livestock Systems. CIAT, Manila, PH.
- Stür, W.; Phengsavanh, P.; Gabunada, F.; Samson, J.; Bonilla, D. 2003. Semi-Annual Report (January – June 2003) – Improving Livelihoods of Upland Farmers Using Participatory Approaches to Develop More Efficient Livestock Systems. CIAT, Manila, PH.
- Stür, W.; Phengsavanh, P.; Gabunada, F.; Samson, J.; Bonilla, D..2004. Semi-Annual Report (July – December 2003) – Improving Livelihoods of Upland Farmers Using Participatory Approaches to Develop More Efficient Livestock Systems. CIAT, Manila, PH.
- Wenzl, P.; Buitrago, M. E.; Arango, A.; Gallego, G.; Chaves, A. L.; Ishitani, M.; Tohme, J.; Rao, I.M. . 2004. Elucidating aluminum resistance mechanisms in signalgrass. Invited paper presented at the International Symposium in Kurashiki on "Al Stress Research in Plants: Present Status and New Directions for Future". Satellite Symposium of the 6th PSILPH in Sendai. Research Institute for Bioresources, Okayama University, Kurashiki, Okayama, Japan. 7 August, 2004.
- Internet publications**
- Peters, M.; Schultze-Kraft, R. 2004: *Centrosema pascuorum* Mart. ex Benth. <http://www.fao.org/ag/AGP/AGPC/doc/GBASE/Default.htm> (In press).
- Schloen, M.; Peters, M.; Schultze-Kraft, R. 2004: *Canavalia brasiliensis* Mart. ex Benth. <http://www.fao.org/ag/AGP/AGPC/doc/GBASE/Default.htm> (In press).

Awards to Staff in the Project

- **Franco Luis H.:** Outstanding Support Staff (OSSCA), CIAT, December 2003
- **Wenzl, P., A. L. Chaves, G. M. Patiño, J. E. Mayer and I. M. Rao.** 2002. Aluminum stress stimulates the accumulation of aluminum-detoxifying organic acids in root apices of *Brachiaria* species. *J. Plant Nutrition and Soil Science* 165: 582-588. Outstanding Research Publication Award (ORPA), CIAT, December 2003.
- **Reiber Christoph:** Ruthenberg-Preis 2004 Potential and constraints of cowpea (*Vigna unguiculata*) in Honduran hillsides. A farmers' assessment. Master-thesis, University of Hohenheim. Field work with CIAT in Honduras
- **Pabón, A., G. Sotelo, and C. Cardona:** “Francisco Luis Gallego Award” to the best paper presented by an undergraduate student. XXX Congress of the Colombian Entomological Society, 2003.

Thesis Students

BS Thesis

Name	Status	University	Title
Bertrand Ramón Iván	On-going	Universidad Católica Agropecuaria del Trópico Seco, Estelí, Nicaragua	Diagnóstico sobre alimentación de ganado doble propósito en época de verano en comunidades aledañas al municipio de Somoto, Madriz – Nicaragua
Chaves Q. Carlos A.	2004	Universidad de Costa Rica, Costa Rica	Calidad y consumo de <i>Cratylia argentea</i> y sorgo forrajero (<i>Sorghum</i> sp.) con y sin melaza ensilada en bolsas plásticas
Flores Zenelia	Completed	Universidad Nacional Autónoma de Nicaragua – UNAN CUR, Matagalpa, Nicaragua	Determinación de la composición botánica, disponibilidad y producción de leche en potreros establecidos con pastos <i>Brachiaria</i> en asociación con <i>Arachis pintoi</i> en la comunidad Wibuse, San Dionisio
Abello Javier F.	On-going	Universidad Nacional, Bogota, Colombia	<i>Brachiaria</i> endophytes as gene delivery system
Leiva Aráuz, Oscar Javier & Martínez González Róger	On-going	Universidad Católica Agropecuaria del Trópico Seco, Estelí, Nicaragua	Validación de sistemas de cultivos con introducción de leguminosas como abonos verdes y coberturas sobre la sostenibilidad de sistemas de producción tradicionales en una microcuenca
Mera Álvarez Mónica Lorena	On-going	Universidad Nacional de Colombia, Palmira, Colombia	Efecto de leguminosas forrajeras tropicales ricas en taninos sobre la fermentación ruminal y la producción de metano en un sistema in vitro (RUSITEC)
Miller María Fernanda	On-going	Universidad del Valle, Cali, Colombia	Resistencia de <i>Brachiaria</i> spp. al salivazo: Efectos subletales de cultivares resistentes sobre los adultos de <i>Zulia carbonaria</i> (Lallemand) (Homoptera: Cercopidae)
Real Posada Franklin Rigoberto, Rayo Carazo Omar Antonio, Ramirez Ramirez Edwin José, Lopez Suarez Cheyla Matilde, Romero Duarte Juan Adán, Luna García Álvaro José	On-going	Universidad Nacional Agraria (UNA), Managua, Nicaragua	Survey on dry season feed resources in three different livestock regions of Nicaragua
Rincón Lozano Juisse Dayana	On-going	Universidad Nacional de Colombia, Palmira, Colombia	Evaluación del efecto de la sequia en genotipos de <i>Brachiaria</i> bajo condiciones de invernadero
Rosero Jaime	On-going	Universidad Nacional, Palmira	Ensayo Multilocacional de Sistemas de Establecimiento de <i>Cratylia argentea</i> cv. Veranera
Sotelo Paola	Completed	Universidad del Valle, Cali, Colombia	Resistencia de <i>Brachiaria</i> spp. al salivazo: Efectos subletales de cultivares resistentes sobre los adultos de <i>Aeneolamia varia</i> (F.) (Homoptera: Cercopidae)

MS Thesis

Name	Status	University	Title
Arango Adriana	Completed	National University, Bogotá, Colombia	Identification of candidate genes for aluminium resistance in <i>Brachiaria</i>
Castro Ulises	On-going	Colegio de Postgraduados de Chapingo, Chapingo, Mexico	Mechanisms of resistance to <i>Aeneolamia albofasciata</i> and <i>Prosapia simulans</i> en <i>Brachiaria</i> spp.
Cortés Cortés Javier Eduardo	On-going	Universidad Nacional de Colombia, Bogotá, Colombia	Efecto de los taninos de leguminosas tropicales sobre la degradación in vitro de la proteína con fluido ruminal y pepsina
Husselman Madeleen	On going	Wageningen Agricultural University	Evaluation of potential production of seed from the hybrid <i>Brachiaria</i> "Mulato" with small plot and on-farm trials on the Bolovens Plateau in southern Lao
Monsalve Castro Lina Maria	On-going	Universidad Nacional de Colombia, Palmira, Colombia	Efectos sobre la fermentación ruminal, el flujo de proteína duodenal y la absorción de nitrógeno en ovinos alimentados con leguminosas con y sin taninos
Nieto B. Juan C.	On-going	Universidad de Costa Rica, Costa Rica	Caracterización nutricional de material fresco y ensilado de Maní forrajero (<i>Arachis pintoii</i>) cultivado en asocio con Maíz (<i>Zea mays</i>) a tres densidades de siembra
Noto Fabio	Completed	Swiss Federal Institute of Technology (ETH), Zurich, Switzerland	Effects of provenance (Colombia and Kenya) on the ruminal fermentation characteristics of <i>Calliandra calothyrsus</i> (var. Patulul)
Pabón Alejandro	On-going	Universidad de Viçosa, Brazil	Mechanisms of resistance to <i>Deois incompleta</i> and <i>Notozulia entreriana</i> en <i>Brachiaria</i> spp.
Payan Arlen	On going	Centro Agronómico de Investigación y Enseñanza (CATIE), Costa Rica	Efecto de <i>Cratylia argentea</i> sobre la producción animal en la cuenca de Jucuapa, Matagalpa, Nicaragua
Reiber Christoph	Completed	University of Hohenheim	Potential and constraints of cowpea (<i>Vigna unguiculata</i>) in Honduran hillsides. A farmers' assessment.
Ricaurte José Jaumer	On-going	Universidad Nacional de Colombia, Palmira, Colombia	Impact of aluminium tolerant <i>Brachiaria</i> genotypes on soil quality characteristics of an oxisol of the altillanura of the Meta Department of Colombia
Stürm Christoph Dominic	Completed	Swiss Federal Institute of Technology (ETH), Zurich, Switzerland	Effects of combinations of legumes with contrasting contents of tannins on in vitro ruminal fermentation
Vivas Nelson	On-going	Universidad Nacional de Colombia, Palmira, Colombia	Evaluación agronómica de 144 accesiones de <i>Desmodium velutinum</i> como alternativa forrajera para las zonas de ladera del norte del departamento de Cauca

PhD Thesis

Name	Status	University	Title
Andersson Meike Stephanie	On-going	University of Hohenheim, Germany	Genetic diversity and core collection approaches in the multipurpose shrub legumes <i>Flemingia macrophylla</i> and <i>Cratylia argentea</i>
Bartl Karin	On-going	Swiss Federal Institute of Technology (ETH), Zurich, Switzerland	Effects of improved feeding systems for dairy cattle in tropical smallholder farms on milk production and quality at high altitudes
Castañeda Nelson	On-going	University of Goettingen, Germany	Genotypic variation in P acquisition and utilization in <i>Arachis pintoi</i>
Hernández Luis Alfredo	On going	University of Hohenheim, Germany	A participatory procedure applied to selection and development of forages with farmers
Louw-Gaume Annabé	On-going	ETH, Zurich, Switzerland	Adaptation of <i>Brachiaria</i> grasses to low P soils
Mejia Sergio	On-going	Universidad Nacional de Colombia, Palmira, Colombia	Identification of candidate genes responsible for adaptation of tropical forage grass, <i>Brachiaria</i> to low phosphorus soils
O'Brien Rachel	Completed	Curtin University, Australia	Incorporating socio-economic data and expert knowledge in complex spatial decision-making
Reiber Christoph	On going	University of Hohenheim, Germany	Encouraging adoption of research-based offerings with contrasting extension approaches
Rincon Alvaro	On-going	Universidad Nacional de Colombia, Bogotá, Colombia	Integration of maize with forages to recuperate degraded pastures in the Llanos of Colombia
Tiemann Tassilo	On going	Swiss Federal Institute of Technology (ETH), Zurich, Switzerland	The forage potential of tanniniferous legumes: Search for sustainable ways to cope with nutritional limitations in smallholder livestock
Tscherning, Karen Joanna	Completed	University of Hohenheim, Germany	Development of methods for the simultaneous evaluation of forage legume for feed and for soil improvement
Van der Hoek Rein	Completed	University of Hohenheim, Germany	Participatory research methods for forage-based technologies in Central-American hillsides

List of Donors

Asian Development Bank

Livelihood and Livestock Systems Project
2003-2005

Australia – ACIAR

Development of a knowledge system for the selection of forages for farming systems in the tropics (co-financed with BMZ)
2002-2005

Australia Curtin University 2001-2004

Incorporating socio-economic data and expert knowledge in representations of complex spatial decision-making (stipend PhD Rachel O'Brien)

Australia – AusAID

Forages and Livestock Systems Project
2000-2005

Common Fund for Commodities (CFC) 2003-2006

Enhancing beef productivity, quality, safety, and trade in Central America (Guatemala, Nicaragua, Honduras)

Colombian Government

Grasses and legumes with high nutritive quality
Grasses and legumes adapted to low fertility acid soils

Grasses and legumes with adaptation to drought, poor soil drainage and resistant to pests and diseases

Integration of improved grasses and legumes in production systems in savannas

FONDEAGRO- Nicaragua 2002-2003

Introducción participativa de forrajes mejorados en sistemas de producción de leche de pequeños productores en Matagalpa, Nicaragua

FUNICA - Nicaragua 2003-2004

Validación de sistemas de cultivos con introducción de leguminosas como abonos verdes y coberturas sobre la sostenibilidad de sistemas de producción tradicionales en una microcuenca, San Dionisio, Nicaragua

Germany- BMZ

- Farmer Participatory Research in Action: Selection and Strategic Use of Multipurpose Forage Germplasm by Smallholders in Production Systems in Hillside of Central America (special project)
2000-2004

- Development of a knowledge system for the selection of forages for farming systems in the tropics (cofinanced with ACIAR) 2002-2005

- Utilising multipurpose legume diversity to improve soil and feed quality including application in a watershed in the Central American hillside – PostDoc program A. Schmidt 2004-2007

- Demand-driven use of forages in fragile dry season environments of Central America to improve livelihoods of smallholders. 2004-2007

- An integrated approach for genetic improvement of aluminium resistance of crops on low-fertility acid soils 2001-2004

Germany - Volkswagen Foundation

Research and development of multipurpose forage legumes for smallholders croplivestock systems in the hillside of Latin America (with the U. of Hohenheim and CORPOICA)
2003-2006

Japan – The Ministry of Foreign Affairs - 1995

- The role of endophytes in tropical grasses
- The tropical Forage Project (core funds)

Semillas Papalotla, S.A. de C.V. 2001-2005 Brachiaria Improvement Program

Switzerland – ETH (Swiss Federal Institute of Technology), Zurich

- Adaptation of Brachiaria to low P – (2003-2005)
- The forage potential of tanniniferous legumes: The search for sustainable ways to cope with nutritional limitations on smallholder systems – (2004-2006)
- Improved feeding systems for smallholder dairy cattle with emphasis on dry season feeding and its effect on milk production and quality (2004-2007)

UK- DFID

Development of a database and retrieval system for the selection of tropical forages for farming systems in the tropics and subtropics, SoFT (with CSIRO, ILRI and QDPI) 2002-2004

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