ILRI-DAAD Scholarships

1) ILRI-DAAD PhD Scholarship – Burkina Faso

Application deadline: June 10, 2015

Graduate fellow position available, to will work on the baseline characterization of the adaptation strategies of agro-sylvo-pastoral farmers in the Sahelian zone of Burkina Faso to identify promising climate smart technologies. In addition the graduate fellow will test and evaluate prioritized technologies that can enhance food security and adaptation to climate change which is the objectives of the CCAFS project.

Responsibilities

- Conduct baseline surveys to characterize agro-sylvo-pastoral systems in the Sahelian zone of Burkina Faso.
- Inventorize promising crop, livestock and agro-forestry practices that can enhance adaptive capacity of smallholder farmers to climate change.
- Design, test and monitor on-farm climate smart interventions (crop, livestock and agro-forestry practices.
- Analyze collected data and write manuscripts for journal publication.
- Participate in relevant project meetings and workshops in Burkina Faso and Mali

Essential Skills and Qualifications will include:

- MSc in natural resource management or related discipline.
- At least one year experience in field-based surveys in agro-sylvo-pastoral systems.
- Good quantitative and analytical skills.
- Willingness to learn new tools and approaches.

See more: https://ilri.simplicant.com/jobs/18477-ilri-daad-phd-scholarship/detail

2) ILRI-DAAD PhD Scholarship Animal Sciences for Sustainable Productivity (ASSP) – LegumeCHOICE in Ethiopia

Application deadline: June 10, 2015

ILRI Research Project: LegumeCHOICE: Realizing the underexploited potential of multi-purpose legumes towards improved livelihoods and a better environment in crop-livestock systems in East & Central Africa

The Goal of the project is to improve food and nutrition security, reduce poverty, and enhance the production environment of smallholder farmers and rural populations, in particular women, through
facilitation of the smart integration and use of multi-purpose legumes, providing food, protein, feed, fuel, and/or organic matter in crop-livestock systems. The Purpose of the project is to provide knowledge and tools to farmers and development partners facilitating farmers to make rational decisions for enhancing short and long-term contributions of multi-purpose legumes to farmer livelihoods including aspects of legume production, input supply systems, and markets.

**Graduate Fellowship Project Title:** *Multipurpose legumes in integrated crop-livestock systems in East Africa: Farmer’s preferences and decision making.*

**The position**

The PhD research will build on the theoretical framework developed through the Legume CHOICE project. The research will involve:

- Developing a classification of legume types e.g. food legumes, tree legumes, forage legumes, cover legumes through literature review, consultation with key informants and through farm-level surveys.
- Assess contribution of each type to farm family objectives: provision of food, forage, soil nitrogen, fuel and others, through farm-level surveys.
- Understand farmer perceptions of legumes and their functions through focus group discussions at community level.
- Assessment of how different farmer typology demands alters the optimal choice of legume types through simple modelling approaches.

**Responsibilities:**

- Identify different legume types and their use, and assess how they contribute to farm family objectives in Kenya and Ethiopia including provision of food, forage, fuel and soil fertility.
- Understand attitudes to the introduction and value of legumes for multiple uses.
- Assess how different farmer typology demands alters the optimal choice of legume types through simple modelling approaches.

**Essential Skills and Qualifications will include:**

- MSc in a relevant discipline.
- Understanding and experience of smallholder systems in Sub-Saharan Africa.
- Ability to produce written work of reasonable quality.
- Ability to work in multi-cultural/multi-disciplinary teams.
- Willingness to spend considerable periods in rural locations for field work.
- Evidence of initiative and ability to work independently.

3) ILRI-DAAD PhD Scholarship Food Safety and Zoonosis - African Bioservices project - Kenya

**ILRI Research Project: African Bioservices project**

African Bioservices project will implement an empirical study in the Mara-Serengeti ecosystem to demonstrate how drivers of change – including climate, land use and demographic changes influence key elements of biodiversity and ecosystem functioning. The project also plans to link the changes in the types of ecosystem services with socio-economic impacts using sustainable livelihoods framework.

**Graduate Fellowship Project Title: Effects of the changes in biodiversity and ecosystem services on human health and wellbeing in the Mara-Serengeti ecosystem, southwest Kenya**

**The position:**

The African Bioservices project has a very limited focus on infectious diseases and this PhD position will allow contribute to the development of a tool that links trade-offs in ecosystem services with occurrence and transmission of selected zoonotic diseases (including brucellosis, leptospirosis, and trypanosomosis), using methods that have been developed under the Dynamic Drivers of Disease in Africa: livestock/wildlife, human health and wellbeing project. This position will add value to the project’s (AfricanBioservices) activities and it will also contribute to Agriculture for Nutrition and Health (A4NH) program’s System Level Outcomes on Improved *Natural Resource Systems and Ecosystem Services*.

**Responsibilities:**

- Manage field surveys including collection of secondary and primary data on the target zoonotic diseases in people and livestock.
- Conduct spatial analyses on the distribution of diseases in the study area.
- Correlate the changes in ecosystem services quantified by the project team with spatial distribution of the diseases being studied.

**Essential Skills and Qualifications will include:**

- MSc in epidemiology, geography, public health.
- Minimum of two years’ research experience with a good number of scientific publications, technical reports and/or conference presentations.
- Excellent quantitative skills including application of GIS techniques in infectious disease epidemiology.
- Excellent written and verbal communication skills.

4) ILRI-DAAD PhD Scholarship Harnessing genetic diversity for improved goat productivity (BecA – ILRI Hub)

Application deadline: June 10, 2015

ILRI Research Project: Harnessing genetic diversity for improved goat productivity (BecA – ILRI Hub)

Goats are a significant component of the livelihood of smallholder farmers and pastoralists in Cameroon and Ethiopia. With funding from the Swedish Ministry for Foreign Affairs through Swedish International Development Agency (Sida) the goat project brings together partners in both countries aim to increase goat productivity through strengthening the capacity of national goat breeding programs. This includes studying the goat diversity in these countries, knowledge of which is critical to empower breeders to develop better goats suited to resource-poor people; and developing ICT-based tools to support management decisions through the production chain.

Household surveys are underway to characterize goat production systems in Ethiopian and Cameroon

Graduate Fellowship Project Title: Genomic Signatures of adaptive evolution in wild African goats

The position:

Africa has approximately 33% of the world goat population. Goats occupy diverse habitats ranging from drylands to temperate highlands to hot humid lowlands. Africa also has two wild species of these the Nubian ibex (Capra nubiana) is trans-boundary (found in Sudan, Egypt, Eretria and parts of the Mideast) and adapted to extreme arid lands.

The project team has generated genome sequence data from Capra nubiana and this data together with that from domesticated goat species can be used to decipher the genetic basis of adaptations to contrasting environments.

The PhD candidate will apply bioinformatics to decipher the ibex genome data and the publicly available genome sequence data from other goat species and generate testable hypothesis on genes and gene pathways that may have value in improving goat productivity.

Responsibilities:

The fellow will be primarily applying bioinformatics to interrogate the Nubian genome sequence data and genome data of other goat and ruminant species and identify candidate adaptive genes and gene pathways that can be tested and validated in appropriate biological systems.

Essential Skills and Qualifications will include:

- Master’s degree in Bioinformatics or related fields (Applied mathematics or computer sciences).
- First Class Degree in Computer Sciences or Applied Math with interest biology may be considered.
5) ILRI-DAAD PhD Scholarship ILRI Tick unit – Kenya

ILRI Research Project: ILRI Tick Unit

The tick unit, also referred to as the vector lab, is a unit under the animal biosciences program that has been in existence since 1979. The unit is instrumental to past and present ILRI contributions to animal health research through vaccine development and vector genomics. The unit has the ability to perform controlled animal experiments using up to 16 cattle (the target host for most interventions) simultaneously. ILRI tick unit includes a unique biological resource not found anywhere else in the world, comprising of four (three) genera of ticks; *Rhipicephalus*, *Rhipicephalus* (*Boophilus*), *Hyalomma* and *Amblyomma*.

Graduate Fellowship Project Title: *Evaluation of Anti-Vector Vaccine Antigens targeting iron hemostasis in ticks.*

The position:

The envisaged project is expected to boost the re establishment of tick research at ILRI. The successive candidate will join a team working on integrated vector control using anti-tick vaccines, acaricides and habitant modification, disease transmission at the livestock-wildlife tick-interfaces and vector-host-pathogen interactions. Specifically, the fellow will evaluate the efficacy of a recently described gut antigen that is ubiquitous to ticks. Data from the project will contribute towards the development of an environmentally safe alternative to the use of chemical pesticides against tick infestation especially in high yielding dairy cattle.

Responsibilities:

Clone and express recombinant Ferritin 2 proteins from multiple tick species endemic to east Africa. Investigate sequence polymorphism across species and field strains. Conduct vaccine trials in cattle against both homologous and heterologous tick challenges under laboratory pen conditions.

Essential Skills and Qualifications will include:

- Masters in animal life sciences.
- Experience in molecular biology and bioinformatics highly desirable.
- Preferably a university employee or employed within the National Agricultural Research Systems (NARS) – teaching fellows/research assistants.

Terms of appointment: ILRI will offer a competitive stipend to cover living expenses in the project location(s). The successful candidate will be supervised jointly by an ILRI

- See more at: [http://ilri.simplicant.com/jobs/18474-ilri-daad-phd-scholarship-ilri-tick-unit-kenya/detail#sthash.fmk4Fm7b.dpuf](http://ilri.simplicant.com/jobs/18474-ilri-daad-phd-scholarship-ilri-tick-unit-kenya/detail#sthash.fmk4Fm7b.dpuf)
ILRI-DAAD PhD Scholarship Improved vaccines for the control of East Coast fever in cattle in Africa (BecA – ILRI Hub) - Kenya –

Application deadline: June 10, 2015

ILRI Research Project: *Improved vaccines for the control of East Coast fever in cattle in Africa (BecA – ILRI Hub)*

The Vaccine Biosciences group, hosted by the ILRI Animal Health theme, focuses on African Swine fever (ASF), contagious bovine pleuropneumonia (CBPP) and East Coast fever (ECF) The outputs include new or improved vaccines, diagnostic assays and biosecurity protocols that aim to increase livestock productivity in the targeted value chains in particular and to control the spread of the diseases in general.

**Graduate Fellowship Project Title:** *Epidemiological investigation of the presence of Theileria parva in the cattle and ticks in Cameroon and evaluation of a combined anti-sporozoite and anti-schizont vaccine against ECF.*

**The position:**

This PhD project aims at improving the subunit vaccine through new vaccine formulation and delivery as well as new combination of antigens targeting both the sporozoite and schizont stages of the infection (combination that has never been done). In addition, data on the status of Theileria in Cameroon is lacking and the proposed investigation of its presence will inform control and preventive measures.

**Responsibilities:**

- Improvement of the subunit vaccine against ECF.
- Collection of cattle blood samples and ticks.
- Identification of collected ticks vectors.
- Identification of tick borne haemoparasites by Reverse Line Blot (RLB) hybridization assay.
- Characterization of *T. parva* stocks using Microsatellite /Minisatellites.

**Essential Skills and Qualifications will include:**

- MSc Molecular biology, Zoology, Biochemistry and related fields in Biology.

7) ILRI-DAAD PhD Scholarship Mitigation of Greenhouse gas Emissions-Kenya

ILRI Research Project: Mitigation of Greenhouse gas Emissions

The project aims to generate a comprehensive baseline data for greenhouse gases (GHG) emissions from agricultural systems in East Africa region. It also works to systematically characterize major farming systems for GHG emissions. Because most sub-Saharan African countries have agricultural dependent economies (estimates above 30% GDP), development plans must consider the environmental impact of different intensification pathways in terms of GHG emissions but also with regard to water supply and water quality or biodiversity - that are designed to achieve food security in the region.

Graduate Fellowship Project Title: Developing locally validated emission factors for a set of typical African smallholder livestock systems

The position

The output of the PhD project will provide accurate emission factors for at least 3-4 different African cattle feeding practices using local feed resources. This will also provide important insights into dietary and animal factors that may be employed in improving animal productivity as well as developing new mitigation options in the African smallholder context.

Responsibilities

- Characterize smallholder livestock productions systems within sub-Saharan countries using new data to be generated in this project.
- Formulate diets that typify feeding practices and feed composition in the identified systems.
- Design in consultation with ILRI supervisor animal feeding trials, and implement them.
- Samples collection and analysis.
- Data collection and processing.
- Writing of thesis and drafting of articles for publication in peer-reviewed journals

Essential Skills and Qualifications will include:

- A minimum of MSc from. From a recognized university in ruminant nutrition or any animal production.
- Bachelor’s degree in Animal Science or Veterinary Science (minimum B- average)
- At least one year experience of livestock handling and husbandry in an intensive research setting
- Demonstrated solid understanding of research design and statistical analytical principles.

8) ILRI-DAAD PhD Scholarship Small Holder Pig Value Chain Project - Uganda

ILRI Research Project: Smallholder Pig Value Chain Development (SPVCD) in Uganda project

The Smallholder Pig Value Chains Development (SPVCD) in Uganda project seeks to transform subsistence-level pig-keeping into a viable, profitable business model increasing incomes, and thereby reducing poverty and enhancing food security, while preserving community natural resource systems. Its goal is to improve livelihoods, incomes and assets of smallholder pig producers, particularly women, in a sustainable manner, through increased productivity, reduced risk, and improved market access in pig value chains.

Graduate Fellowship Project Title: Gender issues in trading and marketing of the pig value chain in Uganda.

The position

The gender component of the pig value chain in Uganda focuses on enhancing the participation and access to benefits of both women and men along the value chain nodes. The trading node is essential in the value chain because it generates income. However, in the Uganda value chain (like in other value chains) both formal and informal pig trading and marketing nodes seems to be dominated by men. The role of women has not been explored and the roles that gender issues play in affecting who is involved in what component of trading are unknown. This study addresses the following research questions: 'who are involved in the trade and marketing node of the pig value chain and why?' 'What constraints do they face or opportunities?' 'Who are the informal and formal traders and why?' What spaces exist for overcoming (gender-based) barriers to marketing and providing new trading opportunities?

The findings will be used to develop a strategy to ensure that women, along with the men, participate and benefit from the trading node of the value chain. The findings might also be useful for similar research undertaken in the other L&V value chains.

Responsibilities:

- Undertake research within the Uganda value chain to address the research questions listed above.
- Provide an overview of main gender issues in the L&F UG pig value chain.
- Develop a strategy for gender inclusiveness in the trading node of the value chain – in collaboration with the gender team; implement its main activities and assess their effectiveness for strategy refinement.
- Collaborate with researchers doing a similar study in the other L&F value chains, whenever possible.
- Produce at least 2 journal articles in collaboration with the gender team.

Essential Skills and Qualifications will include:

- MA in a relevant field (gender, development, sociology, social sciences, etc.)
• Experience working on gender issues in rural agriculture, food security and/or nutrition.
• Passion about agricultural research for gender equitable development.
• Qualitative and/or quantitative analytical skills and ability to think beyond basic descriptions of gender inequalities to discern underlying gender power relations
• Good command of English language.
• Excellent writing skills.

• **Desirable**
• Fieldwork experience at community level.
• Work experience in Uganda or East Africa.

- See more at: [https://ilri.simplicant.com/jobs/18478-ilri-daad-phd-scholarship-small-holder-pig-value-chain-project-uganda/detail#sthash.6bnKxTeo.dpuf](https://ilri.simplicant.com/jobs/18478-ilri-daad-phd-scholarship-small-holder-pig-value-chain-project-uganda/detail#sthash.6bnKxTeo.dpuf)