

# E D U N A B I O



Universität  
Rostock



UNIVERSIDAD NACIONAL DE LA PLATA

Corpoica



UNIVERSIDAD NACIONAL AGRARIA  
"Por un Desarrollo Agrario Integral y Sostenible"



DAAD

Deutscher Akademischer Austausch Dienst  
German Academic Exchange Service

## Proceedings

**Workshop Bogotá-Villavicencio, Colombia  
February 22-28, 2015 Organizers: Corpoica/UDCA**

**&**

**Meeting in Santa Clara  
March 2, 2015**

**Workshop Bogotá  
23/02/2015**

10:00 Opening

10:10 „The EDUNABIO-Project – First results and further perspectives“  
Bettina Eichler-Löbermann, University of Rostock, Project Leader

**Session: Aspects of agro-biodiversity in education (Moderation Laura Villamizar)**

10:40 Higher education in Agronomy and Organic Chemistry, modules and contents  
Raúl López, Dilver Pena, University of Granma

11:10 Higher education in Animal Science and Soil Science, modules and contents  
Pedro de la Fé, Onelio Fundora, University of Santa Clara

12:00 Higher education in Cropping Systems, modules and contents  
Carolina Vega, University UNA, Managua

12:20 Higher education in Chemistry, modules and contents  
Jorge Jios, University La Plata, Argentina

12:40 Higher education in Environmental Sciences,  
Edgar Martinez, UDCA

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**Session: Knowledge transfer, training, evaluation (Moderation Pedro de Fé)**

14:00 Knowledge transfer – Experiences from La Plata  
Santiago Sarandon, University La Plata

14:20 Practical training and courses  
Martha Gómez and Laura Villamizar, Corpoica Bogotá

14:40 Instruments of evaluation in education - short presentations of all partners

15:20 Biodiversity and Environmental protection on highways  
Alemayehu Gebissa, University of Rostock

15:45 Activities in 2015 (Chair: Bettina Eichler-Löbermann)

**Summary and Closure, Welcome dinner**

## **Contents of presentation– short version:**

### **Welcome addresses (Laura - Corpoica) and introduction of the all participants.**

A Presentation of the main outcomes of the first year of the EDUNABIO project and explanation of the objectives of the Workshop 2015 were given by **Bettina** (Uni Rostock).

The list of master study programs involved in the project was presented. Bettina explained the decision to insert the master programs of Sustainable Agriculture and Advance Animal Health from the University Santa Clara in the project. The integration of the Master on Animal Science supported the project considerably as animal health is commonly integrated to agricultural systems in the American region, and is a key point for agrobiodiversity. Bettina emphasized that all information regarding the evaluation tools of the modules need to be sent to Alfred Flint (Uni Rostock), and advised all members to work close together in this field. Bettina suggested to elaborate a table with all modules involved and to give the names of responsible persons. She advised Hugo to copy all presentations as they should be later presented on the projects homepage.

An overview of the activities from UDG was given by **Raul and Dilver** (UDG) followed by the presentations of **Pedro, Onelio, Ray** from UCLV. Additionally, Pedro informed about the conference on Sustainable Agriculture to be held in 2016 in Santa Clara, Cuba, and about the Journal Centro Agricola as a possible medium to publish papers related to Agrobiodiversity.

**Edgar Martínez**, the Dean of the Environmental Engineering Faculty of UDCA, Colombia, presented the content of the master study program on Socio-environmental administration.

**Jorge** (La Plata) delivered in his presentation the results of the cooperation with students from UDG, Cuba, and provided the possibility to offer trainings in spectroscopy in his institution.

**Visit of the library of CORPOICA** "Tibaitatá" and presentation of the Journal CORPOICA, as well as the collection of old/classic books.

**Santiago and Claudia** (La Plata) introduced the educational programs on agrobiodiversity for different groups: technicians, professionals, producers and students. Specifically, they emphasized the need to introduce education on biodiversity in master study programs of related disciplines.

**Carolina and Hugo** (UNA) informed about the Agro-ecology law of Nicaragua and the relevant initiatives from the universities. Hugo and Carolina presented very impressively their experience in e-learning in cooperation with UDG in Cuba.

**Alemayehu** (Uni Rostock) informed about highway construction and biodiversity and emphasized the important role of interdisciplinary approaches.

## Participants

PAÍS	UNIVERSIDAD/ INSTITUCIÓN	NOMBRE	e-mail
COLOMBIA	CORPOICA	Martha Gómez Álvarez	<a href="mailto:mgomeza@corpoica.org.co">mgomeza@corpoica.org.co</a>
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## Field Trip

**Participants:** All participants from the workshop (excluding Edgar) / and the colleagues of the branches of Corpoica.

### Field Trip 24/02/2015

#### Start of the field trip to Villavicencio.

Mauricio and Camilo (Corpoica) presented their reports about activities in the frame of EDUNABIO in UDG/Cuba, UNA/Nicaragua and CORPOICA/Colombia. Carolina gave a short summary about her visit at CORPOICA in 2014.

### Field Trip 25/02/2015

#### Visit to CORPOICA "La Libertad", Villavicencio.

- Presentation of the EDUNABIO delegates and the staff members of the departments Animal Reproduction, Animal Husbandry, Tropical grass, Genetic Resources, and Quality.
- Ruben Valencia (director of CORPOICA "La Libertad") gave a detailed presentation about the research center.
- Visit to the Laboratory of animal reproduction (artificial insemination and embryo transfer) dedicated to improve and preserve their bovine local genetic resources. The delegates received information on these topics and the recuperation of the San Martinero breed, a local genetic resource. The delegates interacted about the research on the molecular basis of the interaction ovule – spermatozoa and the use of classical and even local plant lectins on the study of the glycosylation of these cells.
- Explanation of programs on animal health for the local bovine bred San Martinero, and Cebu Brahman. The responsible person referred to the infestation of *Dermatobia hominis* and ticks in bovines, and explained the environmentally-friendly alternatives for their control. Discussion of the problems of overuse of the endectocide Ivermectin in Latinamerica, and their influence on dung beetles population and other arthropoda, as well as on the recycling of feces, suggestions on integral management of ticks.
- Visit a rubber (caucho) plantations, and detailed explanation about their management and profits for producers and communities.
- Visit of an area involved in identification, recuperation and propagation of wild fruits. Here it was shown how to preserve biodiversity and to guarantee income for the farmers at the

same time. Among other, tree grapes, tree peanuts, cacao varieties, plants for the production of natural colorants and medicine were presented.

- Visit of an experimental station dealing with the production of several species/varieties of grasses better adapted to local climatic conditions.
- Visit of an organic fruit plantation with oranges, mandarin, yellow mamey (mamey amarillo), wild cherries, and medlar (níspero).

### **Field trip 26/02/2015**

#### **Visit to the field station CORPOICA "Taluma"**

- Visit of field experiments with rotations of rice plantations and bovine production in order to improve the quality of soils. Samuel Caicedo Guerrero (director) explained the rotation. Discussion about erosion problems in relation to the different systems. Bettina referred to the control of the number of cattle per hectare in order to protect the environment in relation to CH<sub>4</sub>, N<sub>2</sub>O and N<sub>2</sub> emissions.
- Discussion about integral management of soil-grass-animal systems.
- Visit of an orange plantations.
- Visit of a cashew (marañón) plantations and technologies for their recuperation.
- Visit of an area divided and managed in several parcels including parcels with wild flora, which contribute to keep biodiversity despite of intensive agriculture.

#### **At night:**

Concluding meeting with all participants and discussion about the planned activities in 2015. Pre-planning of the workshop in Nicaragua 2016. Discussions about the balance of the scientific disciplines in the mobility activities.

### **27/02/2015**

#### **Trip to Bogotá**

*Goodbye/closing dinner.* Short statements of all delegates.

### **28/02/2015**

Departure of the delegates.

Bettina, Alemayehu and the colleagues from Cuba went to Cuba

**02/03/2015**

**Project meeting in Santa Clara (Cuba)**

**Participants:** Andres Castro Alegria (Rector of the UCLV), Alfredo Marin Cardenas (Dean of the Agricultural Faculty), Bettina, Alemanyehu, Pedro, Onelio, Ray, Idalmys, Javier Aguiar, Marta Vega, Mario Reinoso, Yamisey Yera and Leonel Lazo.

- Presentation of the dean of the Faculty of Agriculture at UCLV. He emphasized the role of the training program for farmers and the technology transfer.
- Presentation of the project EDUNABIO (Bettina)
- Information about the modules of the master study programs included in the project: Sustainable Agriculture, Plant Biotechnology and Advance Animal Health.
- The rector of UCLV appreciated the participation of UCLV at the projects. Discussion about the relation Cuba-EU-USA, and an upcoming visit of the German ambassador in Habana to UCLV. The rector emphasized the historical relations (more than 50 years) of UCLV and the University of Rostock.
- Bettina gave a talk about recent researches in bio-fertilizers.
- Pedro informed about future perspectives in topics of animal feeding and energy production with Prof. Kanswohl from the University of Rostock.
- A side meeting of Alemanyehu (Uni Rostock) and the dean of the faculty of Civil Engineering and Architecture (UCLV), and the head of the centre for Materials Research (UCLV).
- Visit of the classrooms and laboratories of the Faculty of Plant and Animal Sciences at UCLV.

*Lunch time*

- Visit of the Institute of Plant Biotechnology (IBP) and their installations. The IBP declared the intentions to intensify the cooperation with CORPOICA.