

Profile:

Name: Dr. Elsa Hegmann
Country of origin: Germany
Finished SIA: May 2012

PhD Studies: *Qualitätsbedingende Eigenschaften neuer Kakao-Genotypen und deren Verhalten im Nachernteverfahren – eine Analyse neuer Kakao-Selektionen aus Costa Rica*
University of Hamburg, Germany

Year Finished PhD: 2015

Job: Rausch GmbH, Berlin (www.rausch.de)
Deputy Head of Cocoa and Research and Project Manager at *Tres Equis – Finca de Cacao*, Costa Rica

Article:

During a four-month internship at CATIE in Costa Rica, which I completed as part of my bachelor's degree in agricultural sciences at the University of Hohenheim, I became fully aware of the importance of preserving biodiversity and the challenges and potentials associated with growing tropical crops today. What fascinated me most was the work in the world's second largest cocoa collection (IC3) held at CATIE and the understanding that an incredible amount of knowledge, effort and dedication is required to obtain the raw material for chocolates. Since then, cocoa has been a central part of my career and personal life.

Shortly after my return from Costa Rica, I started looking for a Master's programme that promised interesting content, strong relation to current topics and at the same time was internationally oriented.

Thus, the decision for the newly established Joint degree Master *Sustainable International Agriculture* of the University of Göttingen and the University of Kassel-Witzenhausen was made quickly and a few months later I sat in the introductory sessions together with students from all over the world. We were the 1st year of SIA.

After one and a half enriching years in Göttingen, I returned to Costa Rica for my Master thesis' studies on different fermentation- and drying strategies for six new cocoa varieties (*Theobroma cacao* L.) selected at CATIE. Since 2007, these high-yielding and disease resistant cocoa clones are cultivated by cocoa farmers throughout Central-America, however, detailed information on the individual quality properties was lacking. The Master thesis was supervised by Prof. Ploeger of the Department of Organic Food Quality and Food Culture at the University of Kassel and Prof. Lieberei of the Department of Crop Biology at Biozentrum Klein Flottbek of the University of Hamburg.

Prof. Lieberei, internationally known for his extensive research on *Theobroma cacao* L., offered me a doctoral position to study in more detail the main components involved in aroma formation of the six CATIE-varieties and to identify which post-harvest treatment can be advised to farmers to exploit the full quality potential of these fine flavour cocoas.

Thus, between 2012 and 2015 I spent all harvest seasons in Costa Rica carrying out monoclonal fermentation studies, followed by several months of fruit pulp analytics and chemical quality analyses at the University of Hamburg. The family business Rausch GmbH, located in Berlin, supported the financing of my doctoral thesis and offered me a position in their Cocoa department.

Since its establishment in 1918, the Rausch company is dedicated to the production of high quality chocolates exclusively made out fine flavour cocoa from different origins. We source cocoa directly from the farmers and avoid middlemen. Hence, during the last 7 years I have been working closely together with our partner cooperatives/farmers to ensure the aroma quality and quantity of their raw cocoa beans. Together with my colleague Dr. Christina Rohsius, I visit them several times a year to check the quality and to carry out in-field trainings (participatory approaches), especially on post-harvest management. In addition, I manage the company's own Fine Cocoa Estate in Tres Equis, Costa Rica, since May 2018. The aim here is to reforest old pastures by means of diverse and environmentally friendly agroforestry systems, while at the same time ensure the production of high quality cocoa beans for our chocolates.

The project includes the cooperation with national and foreign research institutes to support young scientists in their careers related to sustainable agriculture.