

POSTGRADUATE TRAINING COURSE 2018 "FOOD CHAINS IN AGRICULTURE"





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Dear Readers,

With its special initiative “ONE WORLD - No Hunger” and the establishment of green innovation centres for the agricultural and food sectors in African and Asian countries, the German government is addressing one of the most urgent challenges for humanity. Political and religious conflicts, population growth and dramatic changes in environmental conditions are forcing millions of people into migration. They do not only lose their social contacts, their (land) property and their former livelihoods, but often also at least partially access to food supply. In order to reduce further migration and the associated dependency on food aid, effective approaches are needed to give those who are affected a convincing perspective in their home region.



The Weihenstephan-Triesdorf University of Applied Sciences with its broad range of green engineering courses and its experience in international knowledge transfer sees it as its sociopolitical task to participate in solutions of global nutrition issues and environmental problems. During a visit by Dr. Gerd Müller, the German Federal Minister for Economic Cooperation and Development in September 2017, we immediately agreed to develop a qualification program for outstanding Master's graduates from universities in selected African partner countries.

It is now a particular pleasure for me to hand over the certificates to 25 African scientists for the first round of the five-month postgraduate course “Food Chains in Agriculture”. Two more courses have already been confirmed until 2020. The professional training includes study projects and courses on sustainable agricultural production, planning and management of value chains, analysis of markets and development of business ideas for the local market. An alumni network is also intended to strengthen the cooperation between the HSWT and the universities in the partner countries.

I would like to thank all those who are involved in this successful qualification initiative, especially the initiators of the Federal Ministry for Economic Cooperation and Development (BMZ) and the German Society for International Cooperation (GIZ); the responsible persons and lecturers from the Faculty of Agriculture, Food and Nutrition and all other supporters such as the German Agricultural Society and Triesdorf Education Centre of Agriculture and Food.

Dr. Eric Veulliet
President of the Weihenstephan-Triesdorf University of Applied Sciences

Dear Readers,

The future of our rapidly growing world population will be decided in the rural areas of our planet. Three quarters of hungry and malnourished people are located in these areas, even though they yield the highest food production. According to FAO estimates, agricultural production must increase by 60% by 2015 to sufficiently feed the growing world population. This confronts agriculture with a great challenge: To meet the rising food demands while using our natural resources economically.



To achieve a successful transformation towards modern agriculture, knowledge of innovative cultivation methods, practices to reduce post-harvest losses and best practices of food processing are of great importance. The programme Green Innovation Centres for the agriculture and food sector – founded by the German federal government – supports these processes by schooling smallholders in 15 partner countries. In the GIZ training centre in Feldafing, we have hosted over 750 international course participants, many of them women in leadership positions. Some of our workshops take several weeks and offer the possibility to get a practical insight into 70 organisations in Bavaria. The course content varies from cattle farming over potato cultivation to ecological agriculture. The international participants take the acquired knowledge and acquired skills back to their home country where they pass it on to others.

In cooperation with the Weihenstephan-Triesdorf University of Applied Sciences we follow the same approach in our postgraduate programme “Food Chains in Agriculture“. After successfully completing the programme, the graduates are able to contribute towards modernising the rural areas and promoting youth employment and rural living to a young population within the 15 partner countries. They have the skills to counter poverty and hunger. Further, they play a crucial role in coming closer to our vision: “ONE WORLD – No Hunger“

Jürgen Richter

Advisor for schooling and exchange of the green innovation centres for the agriculture and food sector, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

GREEN INNOVATION CENTRES FOR THE AGRICULTURE AND FOOD SECTOR – A SHORT INTRODUCTION

Knowledge is the most important resource when it comes to agriculture. The Federal Ministry for Economic Cooperation and Development (BMZ) has set up 15 green innovation centres, which disseminate knowledge and implement innovations on a wide scale. We are therefore creating opportunities for millions of smallholders, cooperatives, processing companies and traders in 14 different countries of Africa and in India. Experts in development cooperation, companies, associations and academics, as well as farmers, are jointly developing ideas and concepts for better cultivation, fewer crop losses and higher quality standards. Up to March 2022, the BMZ will be investing 277.7 million Euros to build up these networks.

There are many facets of innovation, e.g. new production techniques, such as the use of high-quality seeds or improved farming and harvesting methods. However, adapting the way in which food is stored can also be an innovation, as are efficient forms of cooperation, proper transport and modern marketing. Innovations such as these can only be established more broadly if all forces in society work together. For this reason the green innovation centres cooperate together with government agencies, civil society, the academic community and the private sector and learn about the successes of their partners across borders.

The green innovation centres focus on the entire value chain: from the field to the plate. As part of the BMZ special initiative “ONE WORLD – No Hunger”, they help to overcome hunger and to improve the food situation worldwide.



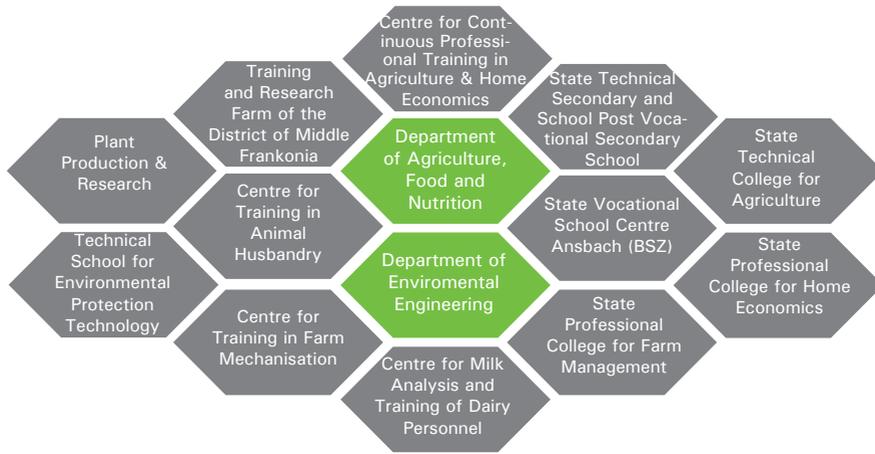
WEIHENSTEPHAN-TRIEDSDORF UNIVERSITY OF APPLIED SCIENCES

Green. Innovative. Practical. The brand core of the Weihenstephan-Triesdorf University of Applied Sciences is its specialisation in green engineering courses. The focus is on the natural world and our place in it. From molecules to landscaping, from agriculture to food and nutrition, from energy to health – in all our degree programs we concentrate on the efficient and sustainable use of natural resources. Our 6,500 students live and study on the largest green campus in Germany, made up of the Weihenstephan and the Triesdorf campuses. Our outstanding learning facilities include pilot plants, laboratories, a biotechnology centre, and a large number of facilities that can be used by external partners. We work actively to preserve natural resources, to ensure long-term competitiveness, and to contribute to the development of rural areas. We foster our students to become responsible engineers, and equip them with a first-class education with which to face the national and international employment market.



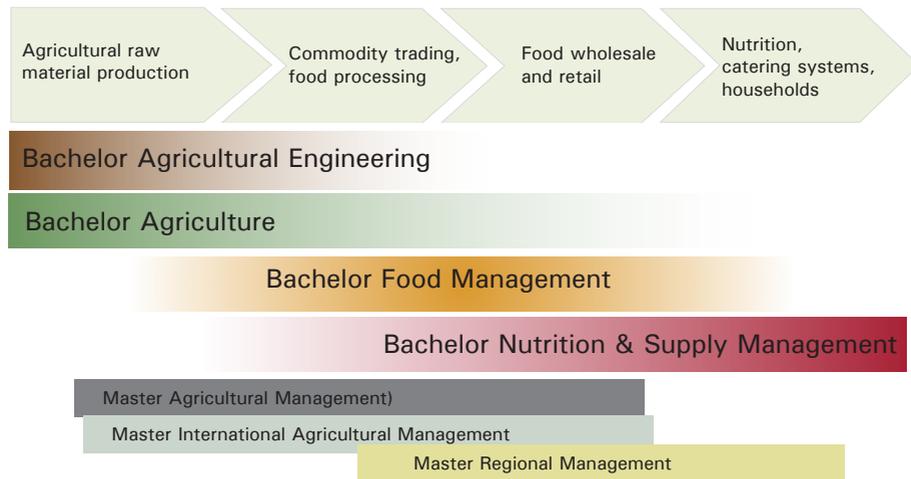
The two campuses of the Weihenstephan-Triesdorf University of Applied Sciences

At the Triesdorf campus, the university is integrated into the “Triesdorf Qualification Centre for Agriculture, Nutrition, Energy and Environment”, which is unique in Germany. A total of 10 different educational institutions, institutes for applied research in agriculture, energy, environment and nutrition, as well as practical facilities such as agricultural demonstration farms, an agricultural machinery park, plants for the production of bioenergy or for the production of food make it possible to combine theoretical knowledge with practical implementation in the shortest possible time.



The University in the network of the Triesdorf Education Centre

In Triesdorf, the Department of Agriculture, Food and Nutrition has been orienting its courses on the concept of the “food value chain” for years. The students learn to think beyond sectorial borders and to keep an eye on the entire value-added chain of a product: for cereals, for example, from sustainable cultivation, collection, storage and processing to the end products of the respective customers.



Food Value Chain - Specific Orientation of the Department of Agriculture, Food and Nutrition

This orientation towards the concept of the value chain forms an important basis for the implementation of the Postgraduate Training Course “Food Chains in Agriculture”. A further advantage is the worldwide contacts with foreign universities in the postgraduate training of young agricultural professionals.

OBJECTIVES, STRUCTURE AND CONTENT OF THE POST-GRADUATE COURSE



Triesdorf University Campus

OBJECTIVES

The course is designed in such a way that it provides highly qualified graduates of Master’s programs with in-depth knowledge and practical experience on the subject of “Establishing value chains in the agricultural and food sector”. The participants should be able to implement in their home countries the opportunities resulting from the improvement of agricultural production, the reduction of post-harvest losses and, above all, from the processing and marketing of the products at home. As many processing, upgrading and marketing steps as possible from the raw product to the end product should be implemented in the production areas, i.e. in the rural regions themselves.



Gero Wieschollek moderating the introductory module

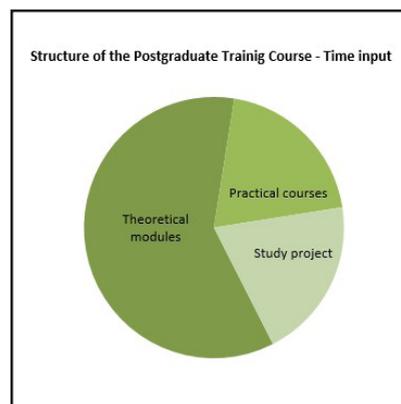
STRUCTURE

The program begins with a **two-week introductory course at the GIZ training center in Feldafing**. Under the guidance of experienced staff and moderators, the participants are initially prepared for their five-month stay in Germany. This starts with a general introduction to „Life in Germany”, but also on questions of health insurance or the payment of monthly stipend. Short excursions bring the stipendiaries together with representatives of the Bavarian Agricultural Administration and Agricultural Research, with

associations and practical farmers, in order to give them a first insight into the structures and processes in the German agricultural sector.

The introductory phase serves above all to get to know each other better within the group and to formulate the individual expectations of the participants. In daily workshops, development goals are formulated, major obstacles for development in the respective home countries identified, and initial proposals for strengthening the agricultural and food sectors are made.

The academic part of the course starts in the third week at the Weihenstephan-Triesdorf University of Applied Sciences. The time frame of the course (May to September) offers the advantage that participants at the Triesdorf Campus can integrate into student life for about three months and then - during the semester break - concentrate on preparing their study project.



Theoretical moduls:

Sustainable plant production (incl. organic farming)
Sustainable animal husbandry (incl. organic farming)
Applied agricultural engineering, digital methods and innovations
Adaption and application of renewable energies
Advanced agricultural economics, empirical research methods
Development of value chains in agriculture and food production
Food quality, food and nutrition security
Agricultural market analysis, marketing
Agricultural policy, diversification, rural development policy
Structure and functions of business plans, business start-ups
Project planning methods

Knowledge update

Value Chain concept

The **University courses** consist of three parts, which are closely interwoven in the course design:

- » **Theoretical moduls;** they account for about 60% of the workload to be performed in the course.

- » **Practical courses** to deepen theoretical knowledge and acquire practical skills; a strong application orientation is provided by the numerous excursions to best practice examples in the agricultural and food industries. Practical courses and excursions account for about 20% of the workload.
- » Elaboration of a self-chosen **project study** on the topic "value chains"; the project study accounts for about 20% of the total workload.



Model of a value chain

In practice, the starting point of value chains in the agricultural sector is usually agricultural raw material production, which is followed by the collection, storage and processing of agricultural products into end products for consumers or other buyers. The weakest link in a chain determines the strength - i.e. competitiveness - of the entire chain. A value chain can therefore only be established on the market successfully if all chain links - from agricultural production to the end customer - are organized as efficiently as possible and make a sustainable contribution to the overall process.

The production of farm products in sufficient quantity and high quality requires - beyond the consideration of natural and regional economic conditions - good knowledge of agricultural production methods. Due to the different academic backgrounds of the participants, **homogenization and updating of technical production knowledge** is therefore essential. This facilitates the subsequent planning and evaluation of individual projects and their linkage to a value chain. The learning contents include:

- » Country-adapted agricultural production techniques;
- » Requirements for sustainable plant production and animal husbandry; this also includes organic farming methods;
- » Modern agricultural technology solutions that can be used in the home countries.



The application of digital methods goes beyond the planning and control of production processes and takes into account, for example, the early detection of production risks or the development of adapted solutions for different climatic conditions.

Application-oriented economic competencies form the common theme across all links of a value chain. The starting point is initially the planning and economic evaluation of production and

processing processes in individual businesses, but also, for example, the planning of municipal projects to improve local infrastructure. One focal point is the question of how existing production systems in the countries can be designed more efficiently and which factors can be influenced by the farmers (co-)decide on success or failure. This also includes the planning of complementary entrepreneurial activities on the fringes of agriculture, e.g. an entry into the processing of farm products or their direct marketing, but also, for example, the acquisition of municipal services with the aim of opening up new markets for the local population (diversification). In order to make better use of such opportunities, course participants are familiarized with the basics of setting up a business and planning projects.

The **value chain concept** in the agricultural and food sector forms the core of the course. Theoretical inputs alternate with workshops in which the participants work out the practical prerequisites for building up and assess a value chain. The central questions are

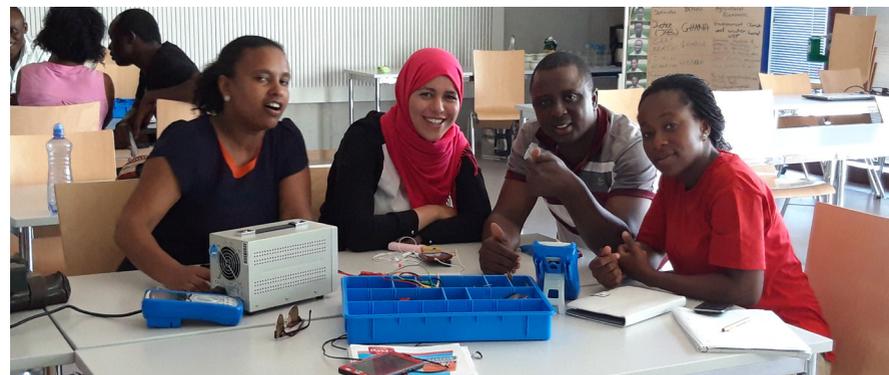
- » the success factors of a value chain,
- » their economic, social and regional economic effects,
- » risks of a value chain for the partners involved,
- » prerequisites for managing a value chain.

In exercises with examples from the home countries, the participants learn how value chains can be set up and how existing chains can be optimized and which “adjusting factors” influence the success of such models. This part of the course is accompanied by modules on

- » the analysis of agricultural and food markets,
- » the planning of marketing instruments,
- » questions of product and food quality.

In addition, the discussion of agricultural and regional policy interrelations shows the influence of political context factors on the success of value chains. The focus is on

- » possibilities of market stabilization and structural support for value chains,
- » starting points for using value chains as instruments of rural development, in particular to improve the local employment and income situation.



Practical courses:

In order to achieve a high degree of applicability, the courses are supplemented by practical trainings and excursions to best practice examples.

The practical courses include professionally supervised in-house exercises, workshops and special seminars in departments of the Triesdorf agricultural training center (e.g. poultry and beekeeping).

Excursions to ongoing projects were integrated into most of the theoretical modules. In addition, two excursions lasting several days focused on the objective,

- » to make clear the role of education, consultancy and applied research in establishing value chains,
- » to demonstrate in practice successful value chains in the agricultural and food sector and to discuss their structure and development with the partners involved.

Project study:

A considerable part of the course is devoted to the individual preparation and presentation of a project study. Participants will work on a specific topic related to a value chain in their home country. This can be e.g.

- » the optimization of a process in the field of agricultural production
- » a proposal to reduce harvest and storage losses,
- » the introduction of product processing
- » the improvement of product recording for small farmers,
- » or the production and application of renewable energies in production or processing.

The project study combines the participants' knowledge of their country with the theoretical learning content conveyed in the course and the insights gained during the excursions. The preparation of the projects will be accompanied by lecturers from various disciplines. The results will later be incorporated into the practical work of the innovation centers.

2018: 25 PARTICIPANTS FROM 10 COUNTRIES IN AFRICA

SELECTION OF COURSE PARTICIPANTS

The course is addressed to highly qualified junior staff from African countries who are receiving intensive support from the German Federal Government as part of the global project "ONE WORLD - No hunger": Benin, Burkina Faso, Cameroon, Ethiopia, Ghana, Côte d'Ivoire, Kenya, Malawi, Mozambique, Nigeria, Togo, Tunisia, Zambia. The aim is to attract at least one participant per year from each of these countries to the course.

When selecting course participants, the University cooperates with GIZ staff in these countries. Central selection criteria are:

- » Bachelor's degree in an agricultural degree programme
- » Very good Master's degree in an agricultural or nutritional science degree programme
- » Good command of English
- » Age: not older than 35 years as possible
- » Professional relationship with the work of the Green Innovation Centres - in practice or at university level.

In addition, the university attaches great importance to the adequate participation of women. In the first training course this was achieved with a share of 40% female participants.



The 25 participants from 10 African countries with their lecturers from the HSWT, bottom-up: Prof. Dr. Ralf Schlauderer (dean), Prof. Dr. Otmar Seibert (course instructor), Stefan Reger (German teacher), Vadym Petrenko (course assistant)



PARTICIPANTS FROM ETHIOPIA



OVERALL INFORMATION:

Area: 1.104.300 km²

Population: 105 million (2017)¹

Density: 95 people per km²

Capital: Addis Ababa, 2,8 million inhabitants (2017)

Most important agricultural goods:

- » cereals (maize, wheat, millet, barley)
- » coffee
- » broad beans

Population working in agriculture: 68%²

¹ <https://esa.un.org/unpd/wpp/DataQuery/>

² <https://tradingeconomics.com/ethiopia/employment-in-agriculture-percent-of-total-employment-wb-data.html>



Name: Haile, Masho Akile

Location: Bahir Dar, Ethiopia

Education: Master in Horticulture

Current position: Lecturer in Horticulture

Name: Ayele, Hiwot Abayneh

Location: Hawassa, Ethiopia

Education: Master of Science in Agricultural Economics

Current position: Lecturer in Agribusiness and Value Chain Management Department



Name: Ayele, Yaynabeba Abayneh

Location: Hawassa, Ethiopia

Education: Master of Science in Agricultural and Applied Economics

Current position: Lecturer for Agribusiness and Value Chain Management Program

Name: Ali, Jemal Mohammed

Location: Assela, Ethiopia

Education: Master of Science in Food Science and Nutrition

Current position: Lecturer for Food Analysis



PARTICIPANT FROM CAMEROON



OVERALL INFORMATION:

Area: 475.440 km²

Population: 24 million (2017)³

Density: 51 people per km²

Capital: Yaoundé, 2.5 million inhabitants

Most important agricultural goods:

potatoes, maize, cassava, cacao, palm oil, poultry

Population working in agriculture: 62%³



Name: Lenou Nkouedjo, Lionel

Location: Yaoundé, Cameroon

Education: Master in Agribusiness Management

Current status: Independent consultant

³ <https://tradingeconomics.com/cameroon/employment-in-agriculture-percent-of-total-employment-wb-data.html>

PARTICIPANT FROM MALAWI



OVERALL INFORMATION:

Area: 118.484 km²

Population: 18.6 million (2017)⁴

Density: 157 people per km²

Capital: Lilongwe, 650.000 inhabitants

Most important agricultural goods:

maize, tobacco, sweet potatoes, cassava, soy, sunflower

Population working in agriculture: 85%⁴



Name: Milner, Derrick

Location: Lilongwe, Malawi

Education: Master of Arts in Economics

Current position: Looking for employment

⁴ <https://tradingeconomics.com/malawi/employment-in-agriculture-percent-of-total-employment-wb-data.html>

PARTICIPANTS FROM BENIN



OVERALL INFORMATION:

Area: 114.760 km²

Population: 11,2 million (2017)⁵

Density: 99 people per km²

Capital: Porto-Novo, 265.000 inhabitants

Most important agricultural goods:

- » cereals (maize, rice)
- » cotton
- » cassava
- » poultry

Population working in agriculture: 43%⁶

⁵ <https://esa.un.org/unpd/wpp/DataQuery/>

⁶ <https://tradingeconomics.com/benin/employment-in-agriculture-percent-of-total-employment-wb-data.html>



Name: Karimou M, Sakiratou

Location: Parakou, Benin

Education: Master in Agricultural Economics

Current position: Research assistant at the Laboratory of Analysis and Research on Economic and Social Processes at University of Parakon

Name: Amonsou Biaou, Oloni Elie Fortuné

Location: Parakou, Benin

Education: PhD Student, Sociology of Rural Development

Current position: Chief Executive Officer of National Union of Soybean Producers of Benin (Farmer's organization)



PARTICIPANTS FROM KENYA



OVERALL INFORMATION:

Area: 580.367 km²

Population: 49.7 million (2017)⁷

Density: 86 people per km²

Capital: Nairobi, 2.8 million inhabitants (2017)

Most important agricultural goods:

- » tea
- » maize
- » beans
- » horticultural crops
- » potatoes
- » milk
- » coffee

Population working in agriculture: 34%⁸

⁷ <https://esa.un.org/unpd/wpp/DataQuery/>

⁸ <https://tradingeconomics.com/kenya/employment-in-agriculture-percent-of-total-employment-wb-data.html>



Name: Kamau, Davies Ngure

Location: Bukura, Kenya

Education: Master of Science in Agribusiness Management and Trade

Current position: Lecturer for Agribusiness and Value Chain Management at the Department of Agricultural Education and Community Development, Bukura University

Name: Ochieng, Jared Alfred

Location: Nakuru, Kenya

Education: Master of Science in Plant Breeding

Current position: Research/Teaching Assistant at Nakuru University



Name: Muhia, Kelvin Thuku

Location: Nairobi, Kenya

Education: Master of Science in Agribusiness Management and Trade

Current position: Project Officer, Laikipia County Government HIVOS Project

PARTICIPANTS FROM MALI



OVERALL INFORMATION:

Area: 1.240.192 km²

Population: 18.5 million (2017)⁹

Density: 15 people per km²

Capital: Bamako, 1.3 million inhabitants

Most important agricultural goods:

- » maize
- » rice
- » cotton
- » peanuts

Population working in agriculture: 58%¹⁰

⁹ <https://esa.un.org/unpd/wpp/DataQuery/>

¹⁰ <https://tradingeconomics.com/mali/employment-in-agriculture-percent-of-total-employment-wb-data.html>



Name: Fané, Siriki

Location: Koulikoro, Mali

Education: Master of Sciences in Natural Resources Management and Climate Change

Current position: Lecturer-Researcher in the Department of Rural Engineering, Water and Forest of the Polytechnic Rural Institute of Training and Applied Research of Katibougou, Koulikoro

Name: Guindo, Modibo

Location: Bamako, Mali

Education: Master of Science in Agricultural Economics

Current status: Looking for employment



PARTICIPANTS FROM NIGERIA



OVERALL INFORMATION:

Area: 923.768 km²

Population: 191 million (2017)¹¹

Density: 207 people per km²

Capital: Abuja, 590.400 inhabitants (2013)

Most important agricultural goods:

- » corn
- » potatoes
- » rice
- » yams
- » cacao
- » cassava

Population working in agriculture: 37%¹²

¹¹ <https://esa.un.org/unpd/wpp/DataQuery/>

¹² <https://tradingeconomics.com/mali/employment-in-agriculture-percent-of-total-employment-wb-data.html>



Name: Nwanguma, Ugochi Esther

Location: Akure, Nigeria

Education: Master in Agricultural Technology

Current position: Lecturer for Animal Science and Post-graduate students, Federal College of Agriculture, Akure

Name: Aruwajoye, Dami Adewale

Location: Akure, Nigeria

Education: Master in Forest biology and Silviculture

Current position: Lecturer for Forestry at Federal College of Agriculture, Akure



PARTICIPANTS FROM GHANA



OVERALL INFORMATION:

Area: 238.533 km²

Population: 28.8 million (2017)¹³

Density: 121 people per km²

Capital: Accra, 2 million inhabitants

Most important agricultural goods:

- » maize
- » rice
- » cassava
- » yams
- » cashew
- » cocoa
- » pineapple

Population working in agriculture: 41%¹⁴

¹³ <https://esa.un.org/unpd/wpp/DataQuery/>

¹⁴ <https://tradingeconomics.com/ghana/employment-in-agriculture-percent-of-total-employment-wb-data.html>



Name: Blankson, Dorcas

Location: Cape Coast, Ghana

Education: Master of Philosophy in Soil Science

Current status: Looking for position

Name: Mbroh, Isaac

Location: Cape Coast, Ghana

Education: Master of Philosophy in Agricultural Economics

Current status: Looking for position



Name: Ankomah-Baffoe, Justice

Location: Kumasi, Ghana

Education: Master of Philosophy in Land Use and Environmental Science

Current status: Looking for position

PARTICIPANTS FROM TOGO



OVERALL INFORMATION:

Area: 56.785 km²

Population: 7.8 million (2017)¹⁵

Density: 137 people per km²

Capital: Lomé, 750.000 inhabitants

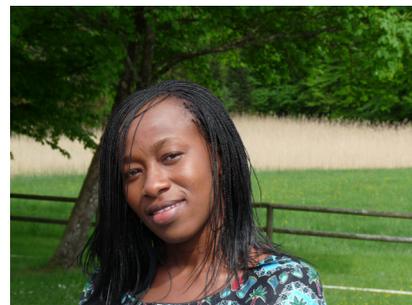
Most important agricultural goods:

- » peanuts
- » cashew
- » soy
- » cotton
- » coffee

Population working in agriculture: 38%¹⁶

¹⁵ <https://esa.un.org/unpd/wpp/DataQuery/>

¹⁶ <https://tradingeconomics.com/togo/employment-in-agriculture-percent-of-total-employment-wb-data.html>



Name: Atchoglo, Ruth

Location: Lomé, Togo

Education: Master in Agro Bioengineering (Integrated Agronomy)

Current position: Research Assistant in Department of Science, University of Lomé

Name: Kotchadjo, Kossi

Location: Lomé, Togo

Education: Master in Agro Bioengineering

Current position: Assistant-consultant at ARTAGRIS Development Engineering



Name: Alawi, Koudoua Pikléwé

Location: Lomé, Togo

Education: Master of Sciences in Agro Bioengineering (Animal Sciences and Production)

Current status: Looking for employment

ON TOP: GERMAN LANGUAGE COURSE

To make the stay in Germany easier for the participants, a German course is offered by professional language teachers. On average two times a week students have the possibility to develop basic language skills in German in the language center of the university. The course is based on the A1 level (beginner level) of the CEFR (Common European Framework of Reference). The German course is designed in such a way that the level A1 of the CEFR can be reached by the end of the course and can be certified by an examination. The learning of basic German is linked with the expectation to facilitate communication during the practical learning units and excursions and to strengthen the subsequent contact between home institutions and the HSWT. This course is offered on a voluntary basis and is an additional option for participants.

Cultural events and excursions go along with the German language course, like for example: The "Master Draught" in Rothenburg ob der Tauber – that means living history and colorful events in front of the unique backdrop of this wonderfully preserved, medieval town in romantic Franconia. In the exciting and moving stage play "The Master Draught" by Rothenburg`s master glazier and poet Adam Hörber the dramatic and legendary events of the year 1631 have been performed every year since 1881.



FIELD TRIPS AND SOCIAL EVENTS

Field trips, study tours and farm visits were offered to almost all modules. The objective was to give on one side practical examples to the comprehensive approach of value chains but also to provide an insight to regional and cultural features.

During the first one-week tour the Bavarian State Research Institute for Fruits and Horticulture in Veitshöchheim demonstrated how plants can be better adapted to the effects of climate change by breeding. The Julius Kühn Institute (JKI) in Darmstadt focused on the question of how plants can be kept healthy and productive in an organic way. To the contrary, the Agricultural Center Limburgerhof, the global headquarter of BASF's Crop Protection division, informed the participants in which way this goal can also be achieved with the help of innovative methods of chemical crop protection.

The Kuratorium für Technik und Bauwesen in der Landwirtschaft e.V. (KTBL) explained its programs for the systematic collection and processing of practical data for the purpose of planning sustainable agricultural production processes. And a guided tour of JohnDeere's production halls showed how far more than a hundred tractors are individually manufactured every day - each tractor within 4.5 hours only.

The second excursion focused on existing value chains in the agricultural and food sectors: "simple" models for direct marketing of organic food via a "vegetable box", models for the self-sufficiency of large consumer groups (Plankstetten monastery), the processing of hay milk from eight farms into cheese in a cheese-cooperative, but also the complex model of UNSER LAND, the largest cooperative for the processing and marketing of regional food in the Munich metropolitan area. The highlight was the Vihscheid in Allgäu: the drive of cattle from the alpine meadows, where they were kept during the summer, into the valley: a unique agricultural and cultural event in the villages.

The participants also used numerous social events in the area surrounding the university to familiarize themselves with the region, e.g. the Middle-age festival in Hilpoltstein, Barden meeting in Ansbach, or the Mercedes Oldtimer Meeting in Ornbau. Besides this regularly bicycle tours, volleyball and football as well as other sport activities took place. Not at least, some of the participants supplemented the social activities by participating in church communities.



