

**Centre for Agriculture in the Tropics and Subtropics**  
**Tropenzentrum**

**Report 2008/2009**



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# Preface

2008 and 2009 were the years of global food and economic crisis. The number of hungry people has risen to over one billion people. On our international symposium held on the World Food Day 2009, Patrick Webb, former Chief of Nutrition for the UN World Food Programme stressed the role of science to increase productivity but on a sustained and more resource-efficient basis. Our mandate and history is at the very heart of this issue. For almost 30 years the Tropenzentrum has been actively involved in research and teaching in rural development, pushing agriculture back on the international agenda.

The last two years have been rewarding and encouraging for us. The approval of the Food Security Center as a Center of Excellence by the German Academic Exchange Service (DAAD) in May 2009 is only one of the highlights. Our proposal was amongst the five winners of the nationwide competition for excellence in development cooperation in higher education. After the approval through the DAAD the Tropenzentrum assisted the Food Security Center in its setting up and by now the centre is fully operating as an independent institution of the Universität Hohenheim. However, to reap benefits of synergy we are closely working together and share important decision making bodies.

Another highlight I want to point out is the approval of the German Research Foundation (DFG) to support the Uplands Program for another three years. The Uplands Program is the only international research programme in agriculture funded by the DFG and since 1985 Hohenheim has been continuously running a Special Research Programme (SFB) in tropical agriculture. Closely linked to our intensive cooperation with Thailand is the new joint Master of Science Programme between Hohenheim and Chiang Mai University on Sustainable Agriculture and Integrated Watershed Management (SAIWAM).

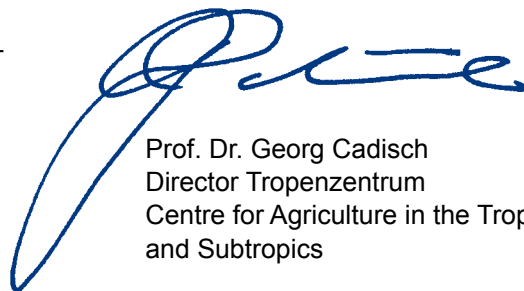
Within the last two years, several important multidisciplinary projects such as GRASSNET and RISO-CAS started. Others, such as the SFB Africa, are still in preparation phase.

The Tropentag 2008 in Hohenheim with more than 600 participants and the International Symposium on the World Food Day 2009 with about 500 participants were the outstanding events in the last two years.

An important strategic step ahead was the faculty decision to advertise again the professorship for tropical agriculture. Aquaculture plays an eminent role in food security issues and with this decision Hohenheim would further strengthen its international position. However, recent decisions at university level challenge this development and we still have to advocate at all levels.

Despite of the many good news we experienced a great loss – the sudden death of Dr. Dr. h.c. Hermann Eiselen. He had dedicated his whole life to combat hunger in the world and from the very beginnings of the Tropenzentrum he was a faithful friend and adviser and his outstanding commitment and support promoted many important initiatives in research and teaching. The Tropenzentrum is extremely grateful to Dr. Hermann Eiselen and we will continue upholding his values which are very much in line with the centre's founding principles. For him the idea of hunger was unacceptable and he will always remind us that we cannot afford to be complacent. We look forward to a fruitful continuation of the Foundation's important work under the new Foundation Fiat Panis and its Director Dr. Andrea Fadani.

Summing up, I want to thank all our members and all our collaborators within and outside the university in contributing to our efforts in generating new approaches towards solving the food and environmental issues of the world.



Prof. Dr. Georg Cadisch  
Director Tropenzentrum  
Centre for Agriculture in the Tropics  
and Subtropics

# About us

**The Tropenzentrum is the cross-sectional and interdisciplinary centre on development-oriented agricultural and food sciences at the Universität Hohenheim.**

## Organisation

### New developments

Although the newly established Food Security Center (FSC) is administered as an independent university institution with its own management and self-supporting budget, it is closely linked to the Tropenzentrum (TROZ) to harness synergies in organisation and coordination of joint activities. Thus TROZ and FSC share the same recently extended advisory and management board.

### Members

The Tropenzentrum lives from the commitment of its members. The ten professors heading the tropical oriented chairs are "born members" of the centre. Apart from them any scientist of the university, engaged in research or teaching in the fields of agricultural-, food- or environmental sciences in developing countries can become associate member upon application to the centre's board. More than 100 active members from the university's three faculties cover a wide thematic spectrum related to agriculture and food sciences, from natural and technical sciences, to economics and social sciences.

Within the last two years we could welcome more than 20 new members: Dr. Steffen Abele, Tanja Befuß, Prof. Martina Brockmeier, Prof. Anne Bellows, Dr. Marc Cotter, Dr. Helmut Dalitz, Dr. Roland Gerhards, Dr. Marc Giese, Prof. Harald Grethe, Dr. Klaus Haas, Dr. Petra Högy, Dr. Ludwig Kammesheidt, Dr. Marc Lamers, Dr. Stefanie Lemke, Dr. Frank Rasche, Dr. Marie Joy Schulte, Prof. Alfonso Souza-Poza, Dr. Anna Treydte, Kirstin Urban, Dr. Detlef Virchow, Prof. Volker Wulfmeyer and Dr. Sabine Zikeli.

Prof. Werner Doppler, chairholder of "Farming and Rural Systems in the Tropics and Subtropics" retired in October 2009, in the same year Prof. Volker Kottke and Prof. Franz Kromka retired too. Prof. Rolf Claus, Prof. Winfried Drochner, Prof. H.H. Geiger,

Prof. Dietrich Leihner and Prof. Jürgen Zeddies retired in 2008. Dr. Jan Grenz and Dr. Ellen Hoffmann have left the service of the Universität Hohenheim and herewith their Tropenzentrum membership ended. The Tropenzentrum would like to thank all these members for their commitment to the university and the Tropenzentrum. The current list of members is presented in the Annex.

### Managing Board

The TROZ managing board consists of eight professors, two research assistants, one student and the centre's executive manager (without vote). The director of the Centre is elected for a period of two years by the board.

In December 2009 the members assembly elected a new board for the term 2010/2011. Prof. Georg Cadisch was re-elected as director of the Tropenzentrum, Prof. Joachim Müller is again acting as deputy-director. The newly appointed director of the FSC, i.e. Prof. Manfred Zeller and three additional professorial board members (Prof. Anne Camilla Bellows, Prof. Reiner Doluschitz and Prof. Harald Grethe) and Dr. Gerster-Bentaya are strengthening the board's competence in FSC-related issues.

### Advisory board

The advisory board consists of members from both locally and internationally operating governmental and/or private institutions dealing with science and/or development issues. The advisory board provides the centre with critical guidance and support in its strategic orientation, which is crucial for successful networking and outreach activities. In 2008, Dr. Christoph Beier (GTZ) and Dr. Wolfram Münch (EnBW) were welcomed as new members in the advisory board.

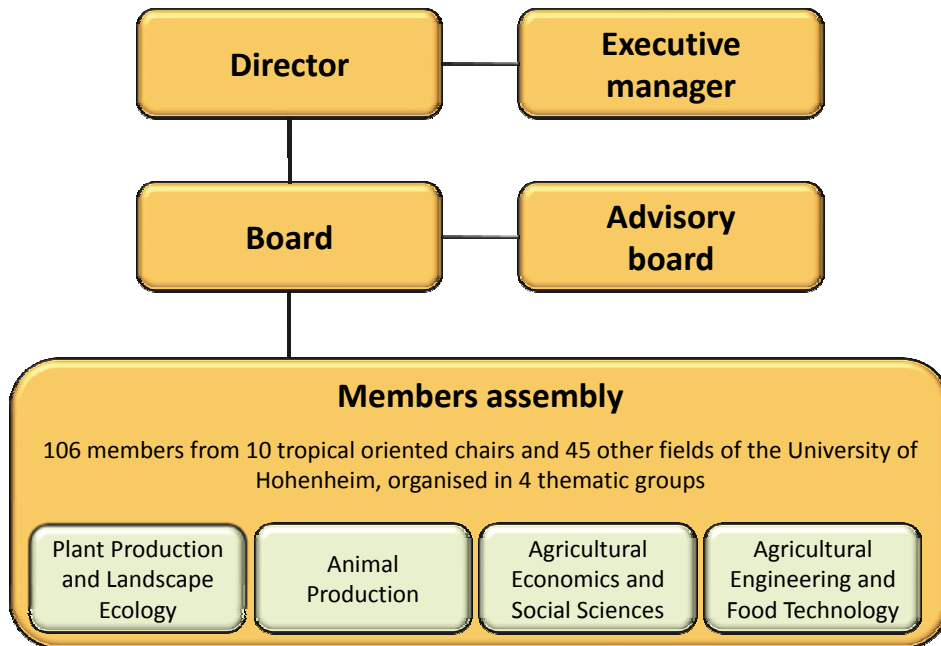
With the inception of the Food Security Centre the advisory board was expanded by three more members especially with respect to strengthening and expansion of FSC's networking and activities.

### Advisory Board Tropenzentrum

Dr. Christoph Beier	Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)
Dr. Michael Brüntrup	Deutsches Institut für Entwicklungspolitik (DIE)
Dr. Ursula Eid	Parlamentarische Staatssekretärin a. D
Dr. Andrea Fadani	Foundation Fiat Panis
Senator e.h. Universität Hohenheim Dr. h.c. Visayas State University Claus-Peter Hutter (chair)	Umweltakademie Baden-Württemberg
Dr. Wolfram Münch	EnBW Energie Baden-Württemberg
Miriam Überall	Unilever Foods, R&D Division
Ingrid Walz	Deutsche Stiftung Weltbevölkerung
Michael Windfuhr	Diakonisches Werk der Evangelischen Kirche in Deutschland e. V., Brot für die Welt
Dr. Ingrid Wüning Tschol	Robert-Bosch-Stiftung

### Board Tropenzentrum

Prof. Georg Cadisch	Director
Prof. Joachim Müller	Deputy Director
Prof. Michael Ahlheim Prof. Werner Bessei Prof. Tilman Grune Prof. Jens Wünsche Prof. Anne Valle-Zárate Prof. Manfred Zeller	Professorial representatives
Dr. Jan Grenz (until 2008) Dr. Anna Treydte (from 2008) Dr. Reiner Zimmermann	Academic staff representatives
Jonas Luckmann (2008) Christian Halle (2009)	Student representatives



## Management

The centre's management unit consists of two permanent staff, i.e. the executive manager (full-time position) Dr. Ludwig Kammesheidt and the secretary Margit Völmle (half-time position). Within the reporting period the centre managed to continue financing a part-time position in the field of public relations. Bärbel Sagi is mainly involved in the preparation and editing of the Centre's publications and homepage as well as in event management and other supporting activities. Moreover a part-time position for project administration was financed during the whole period.

able to generate from one Euro coming from the university another seven Euro from third parties, while in 2008 and 2009 this figure has increased to nearly nine Euro. The spending of these resources over the last two years is listed in the following table.

## Finances

The Tropenzentrum received from the University annual funds of € 130 000. The sum allocated from the university as reward for third party finances obtained in 2008 amounted to € 4 029 and € 4 125 in 2009 (see table page 5).

The Centre has further increased the amount of third party money in recent years. In the previous reporting period (i.e. 2007) the Tropenzentrum was

<b>Financial resources (€)</b>	<b>2008</b>	<b>2009</b>
<b>Revenues from the University</b>		
<b>Univ. Hohenheim</b> budget funds Tropenzentrum	130 000.-	130 000.-
<b>Univ. Hohenheim</b> reward for third party incomes in 2008 and 2009	4 029.-	4 125.-
<b>Univ. Hohenheim</b> co-finance of SFB564	215 160.-	285 210.-
<b>Total contribution of the University</b>	<b>349 189.-</b>	<b>419 335.-</b>
<b>Funding from third parties</b>		
<b>BMBF</b> 'Living Landscapes China' LILAC	270 769.-	371 666.-
<b>BMBF</b> 'Fuel and Livestock Feed for Future' Jatropha - China	534 680.-	672 241.-
<b>BMZ/GTZ</b> 'Consultancy contract for bio energy studies'	54 974.-	
<b>BMZ/GTZ</b> 'Tropentag 2008'	15 000.-	
<b>BMZ/GTZ</b> RISOCAS	500 000.-	280 000.-
<b>DAAD/BMZ</b> Fact finding mission workshop		14 280.-
<b>DAAD/BMZ</b> Food Security Center		215 000.-
<b>DAAD</b> HOST programme with Kyushu University, Japan	10 640.-	22 064.-
<b>DAAD</b> AgEcon tutorials and overheads of scholarship programme	14 880.-	19 740.-
<b>DAAD</b> GrassNet		182 870.-
<b>Deutsche Phytomedizinische Gesellschaft</b> 'Tropentag 2008'	500.-	
<b>DFG</b> funds allocated to SFB564	1 499 000.-	1 679 400.-
<b>Eiselen Foundation Ulm</b> theses research grants	40 000.-	33 800.-
<b>Eiselen Foundation Ulm</b> scholarship program	16 200.-	
<b>Eiselen Foundation Ulm</b> Tropentag 2008	3 000.-	
<b>EnBW</b> Jatropha - Madagaskar	79 000.-	105 147.-
<b>Jap. Bildungsministerium</b> 'Liaison Office in Hohenheim'		15 400.-
<b>NATURA</b> 'Tropentag 2008'	2 500.-	
<b>Total contribution of third parties</b>	<b>3 041 143.-</b>	<b>3 611 608.-</b>
<b>Financial resources from third parties per 1 € of revenue from the University</b>	<b>8.7</b>	<b>8.6</b>

## Distinctions, Awards, New Professors

### Distinctions

In recognition of his particular achievements Prof. Dr. Dr. h.c. Hans-Peter Liebig was awarded an honorary doctorate from the Agricultural University Tirana (Albania) on July 21, 2008 and an honorary doctorate from the Belgrad University on April 4, 2009.

Prof. Dr. Werner Bessei was awarded an honorary doctorate from the Kaposvár University, Hungary.

Prof. Dr. Dr. h.c.mult. Jürgen Zeddies (emeritus, Department of Farm Management) was conferred the Order of Merit of the Federal Republic of Germany (Bundesverdienstkreuz) on December 9, 2008 and the Badge of Honour of the Universität Hohenheim on June 20, 2008.

Prof. Dr. habil. Dr. h.c. Reinhold Carle from the Department of Food Science and Biotechnology was appointed honorary professor ("profesor extraordinario") from the Universidad Salvadoreña Alberto Masferrer in El Salvador.

Dr. Heinz-Dieter Isengard, Department of Food Science and Biotechnology, was conferred an honorary doctor on October 8, 2007 by the University of Agricultural Sciences and Veterinary Medicine Timisoara (Rumania) for his substantial contributions to food sciences and the Rumanian-German cooperation.

Prof. Dr. Franz Heidhues was honoured for his contribution to the successful scientific cooperation between Thailand and Germany, during the celebrations of the 30 years of cooperation between the DFG and the National Research Council (NRCT) in Thailand, on November 15, 2008.

### Awards

At the Tropentag 2008 In Hohenheim Dr. Michael Frei received the Josef G. Knoll-Science-Award for his PhD work "Studies on Productivity and Environmental Effects of the Integration of Semi-Intensive Fish Culture in Rice Field Ecosystems", supervised by Prof. Dr. Klaus Becker.

At the same event Juan Carlos Laso Bayas was awarded with the Hans H. Ruthenberg award for his outstanding Master thesis "Assessment of physical mitigation provided by tree crops in the 2004 Tsunami event in Aceh-Indonesia", supervised by Prof. Dr. Georg Cadisch.

At the Tropentag 2009 in Hamburg, Anne Rysavy received the Ruthenberg award for her thesis on "GIS-based Gap Analysis as a Tool for Biodiversity Conservation Optimization: The IITA Cowpea Collection"; she was supervised by Prof. Dr. Joachim Sauerborn. Another award recipient was Volker Häring, since July 2009 doctoral student in the Special Research Programme SFB 564 for his diploma thesis on "Nachhaltigkeit der Landnutzung in einem tropischen Berglandgebiet in der Son La Provinz Vietnam", supervised by Prof. Scholten (Universität Tübingen) and Prof. Karl Stahr from Hohenheim. Dr. Sybille Neidhardt received the Jochen-Stephan Preis of the Universität Hohenheim,

### New professorship appointments

In August 2009, Prof. Dr. Martina Brockmeier accepted the offer of the chair of "International Agricultural Trade and Food Security" at the Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics. She succeeded Prof. Dr. Martin Qaim who held the chair until September 2007. Martina Brockmeier studied food economics at the University of Gießen, where she also earned further degrees in food and agricultural economics (doctorate in 1993; postdoctoral qualification in 2002). She joined the Institute of Market Analysis and Agricultural Trade Policy of the Johann Heinrich von Thünen Institute (vTI) in 1999 where she acted as the director of the institute until July 2009. Her research focuses on the analysis of the effects of international trade policy on developing countries and food security using the general equilibrium model GTAP and related methods.

PD Dr. Harald Grethe accepted the chair "Agricultural and Food Policy" in April 2008. Dr. Christian Lippert (June 2008), Dr. Sabine Fiedler (December 2008) and Dr. Ulfert Focken (December 2009) were appointed honorary professors of the Universität Hohenheim.





Ruthenberg Award 2009  
Anne Rysavy (front left)



Ruthenberg Award 2008  
Juan Carlos Bayas (second from right)



Joseph-G-Knoll Science Award 2008  
Dr. Michael Frei (second from right)

# Communication and Networking

**The Tropenzentrum is actively involved in communication and networking activities at national and international level to keep rural development issues on the global agenda.**

## Major Activities

The centre is the hub for all inquiries about research in the tropics and subtropics and development issues. The Tropenzentrum serves as meeting point for researchers, politicians, media and the interested public. In close cooperation with the coordinators of the international master programmes, the Tropenzentrum presents Hohenheim on conferences and fairs.

### TROZ Invites

In the seminar series “Tropenzentrum Invites: Hohenheim discussions on global challenges”, both external and in-house experts give talks about specific development issues, often with a focus on specific projects or regions. These seminars serve as a scientific platform and are well accepted by scientists and students alike. In the period reported nine seminars were held. A special highlight was the seminar of Dr. Carlos Seré, Director General of the International Livestock Research Institute (ILRI) in Nairobi, Kenya.

### World Food Day 2009

On October 16, the “World Food Day”, Hohenheim hosted an international symposium on global food security issues. This academic event was jointly organised by the Universität Hohenheim and the Heidelberger Akademie der Wissenschaften who celebrated its 100th anniversary in 2009.

About 450 people, many of them students, scientific staff and professors attended the symposium. Professor Patrick Webb, former Chief of Nutrition for the UN World Food Programme and Professor Ernst Ulrich von Weizsäcker, chair of the International Panel for Sustainable Resource Management at UNEP were the key note speakers. Subsequently Ingar Brueggemann, representing the Deutsche Stiftung Weltbevölkerung (German Foundation for World Population), Professor Albrecht Melchinger, Chair of Plant Breeding, Michael Windfuhr, Human



*from above: Prof. Dr. Ernst Ulrich von Weizsäcker, and Prof. Dr. Patrick Webb*

Rights Director at Brot für die Welt (Bread for the World) and Professor Manfred Zeller, Chair of Rural Development Theory and Policy and Director of the Food Security Centre, joined the panel discussion.

### International Platform for Asian Agricultural Education (IPAAE)

Tropenzentrum is member of the “International Platform for Asian Agricultural Education” (IPAAE) based in Japan, aiming at establishing an international standard for higher education in agricultural studies. The program focuses on Master course students.

To promote high profile education in international courses, six universities in Japan, Thailand and Germany have joined the platform to offer sub-

jects on current issues of Asian agriculture through international teacher's mobility funds. Hohenheim is the only German University associated with IPAAE. The academic network is developing/offering joint modules, e-learning platforms, study trips and credit transfer systems.

### Consultancy on Bioenergy

The Tropenzentrum was commissioned by GTZ/ BMZ to carry out baseline studies on the potential of bioenergy plants in developing countries. The consultancy mainly focussed on *Jatropha curcas* L., a shrub or small tree species native to Central America, and, to a lesser extent, on *Acrocomia totai* Mart., a palm species naturally distributed in tropical America. The studies covered a wide range of issues from overcoming constraints in the procurement of seeds over viable options for smallholder schemes to policy frameworks conducive to sustainable bioenergy production. Major conclusions of the baseline studies will be presented in a discussion paper.

### Tropenzentrum brochure

Just in time for the Tropentag 2008 the new TROZ brochure was released. It gives an overview of the research and teaching activities focusing on the tropics. The brochure shows the broad range of research and teaching activities. The brochure was revised in September 2009, including a presentation of the newly founded Food Security Center.

### Homepage

In August 2009, the new TROZ homepage went online. To increase compatibility, the Tropenzentrum changed to the Typo3 Content Management System, which is used by the University. In the course of the conversion to the new system the homepage was relaunched. A fresh, modern layout was combined with new content elements such as the TROZ trailer, a map with TROZ research activities, including detailed information of associated members. The new homepage is user-friendly and allows for timely updating.

### Establishment of an Alumni Portal

The Tropenzentrum together with the Alumni Hohenheim e.V., a network of former students of Economic and Social Sciences at the Universität Hohenheim has substantially contributed to the establishment of the Hohenheim Alumni Portal, a common platform for all alumni of the alma mater. The goal of the alumni portal is to provide a platform for alumni networking strengthening the ties between students, graduates and friends of the Universität Hohenheim beyond national borders. <https://www.uni-hohenheim.de/alumni>

### Tropentag

The Tropentag is the International Conference on Research for Development in Agriculture and Forestry, Food and Natural Resource Management.

#### Tropentag 2008

With an unprecedented number of 620 participants from 76 countries, Hohenheim hosted the Tropentag 2008 entitled "Competition for Resources in a Changing World: New Drive for Rural Development". 20 sessions with 93 oral presentations and 418 poster presentations were recorded. A special highlight was the multivision presentations on tropical forests by Markus Mauthe. The event had also been announced in local colleges and was well received.

#### Tropentag 2009

In 2009, Hamburg organised for the first time the Tropentag on "Utilisation of Diversity in Land Use Systems: Sustainable and Organic Approaches to Meet Human Needs". The topic was addressed in 30 sessions each with four oral presentations and 21 guided poster sessions with a total of almost 300 posters. 85 scientists came from Hohenheim. Of the 132 oral presentations and 283 posters, 19 and 35, respectively, were contributions from Hohenheim.

The impressive number of contributions from scientists in Europe, Africa, Asia, and Latin America underlines the Tropentag's reputation as an international event on the agenda of the development-oriented scientific community and decision makers alike. The proceedings of all conferences are published on [www.tropentag.de](http://www.tropentag.de).

## Food Security Center (FSC)

The Food Security Center (FSC) was founded in 2009, after the Universität Hohenheim and its Tropenzentrum had been among the five award winners in a nationwide competition, involving 44 outstanding university projects. The German Academic Exchange Service (DAAD) and the Federal Ministry for Economic Cooperation and Development (BMZ) had called for this competition to strengthen the scientific contributions of German universities towards the Millennium Development Goals.

The newly established Food Security Center will receive up to five million Euro of funding over the next five years under DAAD's programme exceed (Higher Education Excellence in Development Cooperation).

### FSC objectives

FSC aims at providing effective and innovative, scientific contributions to reduce hunger and achieve food security, and thus to progress towards achieving the Millennium Development Goal 1. Thematically, FSC is concerned with sustainable food availability, socio-economic food access, and food use. FSC seeks to be the leading think tank in Germany for food security related issues. The Food Security Center (FSC) engages in five areas of activity:

- Interdisciplinary teaching and training of PhDs in the PhD programme "Global Food Security".
- Demand-driven and impact-oriented research at postgraduate level by implementing research projects in developing and middle-income countries, jointly with partner universities and research networks in Africa, Asia and Latin America and in collaboration with agencies for development cooperation and local and national stakeholders.
- Capacity building through South-North, North-South and South-South academic exchange, implemented by various instruments such as a visiting professorship of FSC in Hohenheim, scholarships for PhD students and postdoctoral scientists.
- Capacity strengthening of universities in developing countries.
- Knowledge transfer, advisory services regarding the evaluation of policies, projects, and food and agricultural technologies.

### Activities in 2009

In 2009, the FSC focused on setting up the Center as an institution at the Universität Hohenheim. The network with the international strategic partners was intensified and regional coordinators at each continent started to work for the FSC. In December 2009, the first planning workshop took place in Hohenheim. Short-term and long-term activities were scheduled for 2010 and the years to come.

Prof. Dr. Gideon A. Obare from Egerton University, Kenya, started a one-year employment as visiting professor at FSC. He is giving lectures and doing research with a main focus on improved access to markets at local, national and international level for agricultural producers and its impact on food security.

### FSC structure

The FSC is an interdisciplinary centre of the Universität Hohenheim and shares the same managing board and advisory board with the Tropenzentrum. The FSC builds on existing long-term partnerships of the Universität Hohenheim and its Tropenzentrum with development institutions in Germany and Europe, with international agricultural research centers such as those being members of the Consultative Group on International Agricultural Research (CGIAR), and with universities and regional scientific networks in Africa, Asia and Latin America.

The FSC collaborates with five networks: regional networks in Africa, Latin America and Asia, networks existing in Germany, and finally the international agricultural research centers. Three institutions have agreed to act as strategic regional partners. These are RUFORUM (Regional Universities Forum for Capacity Building in Agriculture), Uganda, the University of Costa Rica and the Kasetsart University in Thailand.

Duration: 2009 - 2014  
 Funding: DAAD, Foundation Fiat Panis  
 Director: Prof. Dr. Manfred Zeller  
 Executive Manager: Dr. Detlef Virchow  
[www.foodsecurity.de](http://www.foodsecurity.de)



# Capacity Development

**Contributing to development-oriented training and promoting knowledge transfer to developing countries is one of the main objectives of the Tropenzentrum.**

## International Master of Science Programmes

The Faculty of Agricultural Sciences at the Universität Hohenheim offers seven international Master of Science programmes taught in English:

- Agricultural Sciences in the Tropics and Subtropics (AgriTropics)
- Sustainable Agriculture and Integrated Watershed Management (Saiwam)
- Agricultural Economics (AgEcon)
- Crop Sciences
- Environmental Science - Soil, Water and Biodiversity (EnvEuro)
- Environmental Protection and Agricultural Food Production (EnviroFood)
- Organic Food Chain Management (OrganicFood)

The AgriTropics and SAIWAM courses are the two degree programmes especially focusing on development issues in the tropics and subtropics and hence are presented in this report.

### AgriTropics

Established in 1999 as the first Hohenheim M.Sc. programme offered in English, AgriTropics is interdisciplinary and interdepartmental. It is designed to provide students of all nationalities and scientific training in all aspects of the agricultural sector and related fields, including communication, negotiation and project implementation skills. It also prepares students for a PhD in the field of life science research in the tropics and subtropics.

Since October 2008, the international Master of Science Programme "Agricultural Sciences in the Tropics and Subtropics", called AgriTropics, has been under the academic guidance of Prof. Folkard Asch. The coordination of the programme is under Ms. Kerstin Hoffbauer, her office is located at the Tropenzentrum. The neighbourhood provides for intensive exchange between students and the Tropenzentrum and programme office. Students

of this programme are the major target group for events organised by the Tropenzentrum such as the TROZ Invites seminar series, conferences, excursions, etc. Many of the students join with interest and enthusiasm.

In spring 2008, DAAD and the "Stifterverband für Deutsche Wissenschaft" selected AgriTropics as one of the TOP TEN Master Programmes in Germany. The reward of 20,000 € was planned to be used for the establishment of a clubroom for AgriTropics students. Unfortunately, due to a lack of available rooms on the campus, the idea did not materialise.

The advisory board was initiated in 2008, and already met twice in Hohenheim (2009 and 2010). The advisory board consists of representatives from international organisations such as GTZ, FAO and CIAT and offers guidance to uphold the quality and structural development of the programme, especially to ensure that students are trained for the requirements of the job market. The advisory board also assists in advertising the programme and to remain in contact with graduates. The board was highly involved in a discussion on changes in the programme structure. Due to the growing numbers of international Master programmes, competition with more disciplinary programmes, such as Agricultural Economics has risen in recent years. The interdisciplinary character of AgriTropics needs revision.

From winter semester 2010/11, AgriTropics will have a new course structure. Also, new examination regulations will be applied. The main changes are:

- Eight interdisciplinary compulsory modules instead of seven
- No specialisations
- Seven elective modules, to be chosen with the assistance of a module recommendation list.
- Streamlining of all international Master programmes in Hohenheim

Within the eight Compulsory Modules new modules have been or will be developed:

- Module on Interdisciplinary Science Training will teach basic experimental skills embedded in case studies.

- Module on Methods in Interdisciplinary Collaboration will replace the Interdisciplinary Case Study and will cover the teaching of scientific collaborative methods and the ability to apply them.
- Module on Natural Resource Management will cover the content of the module Water and Soil, but will be adjusted and broadened in the near future.
- The elective module on “Qualitative Methods in Biosciences”, will be offered as Compulsory Module for all students.

In October 2008, the scholarship support of the Father and Son Eiselen Foundation (now: Foundation Fiat Panis) phased out. In contrast to the initial concern of students, the number of students in the programme could be kept stable within the normal rate of fluctuation. On average, 28 students start their master studies in AgriTropics each year. About six students per year are provided with scholarships, mainly from DAAD, EED, KAAD or local governmental scholarships. In 2009, the programme started with a total of 25 students with ten students coming from Germany. Taking into account the objective to attract more German students, this can be considered a great success.

In 2004, the study programme was evaluated and accredited by ACQUIN unconditionally for a period of five years (until 30.09.2010). The re-accreditation of AgriTropics in 2010 will be included in a group accreditation with other Master programmes of the Agricultural Faculty. The self-report has already been completed and an evaluation and inspection by ACQUIN is expected during summer semester 2010.

Responsible professor: Prof. Dr. Folkard Asch  
Coordination: Dipl. agr. Biol. Kerstin Hoffbauer  
[www.uni-hohenheim.de/AgriTropics](http://www.uni-hohenheim.de/AgriTropics)

## SAIWAM

In March 2009, the Faculties of Agriculture of Chiang Mai University and Universität Hohenheim started the new International Master Programme “Sustainable Agriculture and Integrated Watershed Management” (SAIWAM).

The programme addresses post-graduate students from the Greater Mekong Subregion (GMS), from South Asia, Latin America and East Africa, who

seek to deepen their knowledge about watershed agro-ecosystems and new pathways of integrated watershed management including sustainable agricultural practices. Students from Europe, East Asia and North America are also welcome.

In summer semester 2009 eight students started and another 20 students enrolled in winter semester 2009. The students are hailing from eleven different countries: Bangladesh, Cameroon, China, Germany, Laos, Nepal, Pakistan, Thailand, Uganda, USA and Vietnam.

## Universities

SAIWAM has been developed based on the long and intensive research cooperation between Chiang Mai University and Universität Hohenheim. Both universities have long-standing experience in research on sustainable agriculture and integrated watershed management and have developed an extensive network of partner universities and research organisations in the Southeast Asian region and beyond. Furthermore, both universities are recognised to be among the leading universities in South-East Asia and Europe in the fields of agricultural science and natural resource management.

Chiang Mai University and Universität Hohenheim offer high-quality interdisciplinary research in the Greater Mekong subregion. The Universität Hohenheim is involved in several long-term interdisciplinary research programmes, such as the Thai-Vietnamese-German Collaborative Research Centre “Sustainable Land Use and Rural Development in Mountainous Regions of Southeast Asia” funded by the German Research Foundation (DFG) and the Sino-German research cooperation “Living Landscapes China” funded by the German Ministry of Education and Research (BMBF).

## Programme structure

The two-year Joint-Degree M.Sc. consists of four semesters, during which fifteen thematic modules and the master thesis must be completed. The first two semesters, with a broad interdisciplinary training, are to be completed at Chiang Mai University. The third semester taught at the Universität Hohenheim leads to a specialisation in one of three fields, namely Agricultural Economics and Social Sciences, Natural Resource Management and Animal Production Systems. The master thesis can be prepared at either of the two universities. The offered modules are jointly organised and taught by Thai and German professors.

Guest lecturers from various Asian partner universities, international research centres and development organisations enrich the curriculum with their special field of expertise. Students also benefit from the worldwide academic network of the two universities.

### Career Perspectives

With its interdisciplinary, team-oriented and intercultural approach, the study programme addresses a rapidly growing job market at the national and international level. Professionals with a profound expertise in key global issues, such as climate and land use change, resource conservation and high-value agricultural production, are in high demand. Jobs will be available in international research and development organisations working on sustainable agriculture, global environmental change, nature protection, and food security. National careers can be pursued in land use planning, environmental impact assessment as well as in teaching interdisciplinary approaches in natural resource management.

Responsible professor: Prof. Dr. Karl Stahr  
Coordination: Dipl.-Ing. agr. Silke Will  
[www.uni-hohenheim.de/saiwam](http://www.uni-hohenheim.de/saiwam)

## GRASSNET

GrassNet is a cross-continental network for sustainable adaptation of grassland systems vulnerable to climate change with partners from Germany, South America, East Africa, and North China. Natural grasslands are considered as the world's largest multifunctional agro-ecosystems supporting 100-200 million pastoral people worldwide. The pressure on natural grasslands is constantly increasing through population growth and associated encroachment of agriculture and increasing demand for food and raw materials. To this adds the recent expansion of bio-fuel farming.

Thus, natural grasslands are increasingly seen as hot spots of contrasting socio-economic interests, which are particularly vulnerable to land use changes and the effects of climate change. Sustainable land-use and protection of the grassland resources for future generations in the context of adaptation to climate change pose a challenge for research and education. Extrapolating regional approaches to a global level enables the assessment of local expertise for global, system wide application and implementation.

The educational network "GrassNet" uses different DAAD funding instruments to link young people in education with pressing research questions and to support a change of paradigms in system analysis for research and education, GrassNet will train 12 Master and three PhD students in a cross-continental network of three research centres. Intensive regional research activities will be stimulated by the network through regular exchange of knowledge and research approaches on post-doc level. The results of this cooperation will be included in the regularly organised Summer Schools enabling cross system and cross continental analysis of the impact of climate change on natural grasslands and their use.

During the first 6 month of GrassNet activities in 2009 the cooperation between the partner countries was intensified during a workshop organised by DITSL at Kassel-Witzenhausen and the GrassNet Summer School 2009 held in Hohenheim with more than 30 participants. Currently 6 Msc students from the GrassNet partner countries are registered in international study programmes at the Universität Hohenheim and the University of Kassel. Post docs from the international partners are frequently visiting the German Universities for research and supervision of the GrassNet MSc students.

Cooperation partners: Germany: Deutsches Institut für Tropische und Subtropische Landwirtschaft GmbH (DITSL, Germany), Estación Experimental Agropecuaria Corrientes - Instituto Nacional de Tecnología Agropecuaria, Corrientes (Argentina), Agricultural Research Institute (KARI, Kenya), National Arid Lands Research Centre (Kenya), University of Egerton, Faculty of Agriculture (Kenya), Institute of Grassland Science Northeast Normal University (IGS-NENU, China)

Duration: June 2009 - December 2013  
Funding: DAAD  
Responsible professor: Prof. Dr. Folkard Asch  
Coordination: Dr. Marcus Giese  
[www.grassnet.info](http://www.grassnet.info)

## PhD Programme

The Chair "Farming and Rural Systems in the Tropics and Subtropics" is responsible for the financial and logistic management of a PhD programme with the title "Agricultural Economics and Related



Sciences". Young lecturers and researchers are primarily selected from Africa, Asia and Latin America. Preference is given to agricultural economists, but related disciplines such as agricultural production may also be considered.

The objective is to contribute to human capacity building and to strengthen academic teaching and research in tropical and subtropical countries by providing the opportunity to acquire the "Dr. sc. agr." degree (Ph.D.). This project is financed by DAAD and provides scholarship for PhD students.

Responsible professor: until 2009 Prof. Doppler  
<https://490c.uni-hohenheim.de>

## Excursion

The Tropenzentrum regularly organises excursions to the tropics for advanced students who are interested in agricultural development in the tropics and subtropics. The so-called "Große Tropenexkursion" provides the opportunity to complement theoretical knowledge acquired during the course work with practical experience in the field.

In 2010 (March 13-28) a study trip to Northern Vietnam was organised. Out of 46 applications, 17 students from different international Hohenheim Master programmes were selected for the excursion. A series of seminars were held by students in winter semester to make them familiar with Vietnam. For the first time the German student group was joined by a group of another 11 students from

partner universities of the IPAAE platform and the Hanoi University of Agriculture. This underlined the interdisciplinary and multicultural character of the student excursion. In addition, four professors from three Japanese universities attended the study tour.

The study trip, led by Prof. Stahr, Prof. Cadisch, Dr. Clemens and Dr. Kammesheidt, provided insights into nature conservation issues through the visit of the Ba Be National Park. The second part of the excursion was devoted to the interdisciplinary agricultural research of Hohenheim's "Uplands Program" in the Son La province and the impact of large-scale infrastructure projects, i.e. the Son Da dam project, on sustainable resource management and people's welfare in rural areas of northern Vietnam. Besides there was enough time for getting together within the international student group through numerous fun activities such as wine tasting, Karaoke, dancing and so on.

## Thesis research grants

The Foundation Fiat Panis (formerly Eiselen) offers the opportunity to conduct research in developing countries to complete a bachelor, diploma or master thesis. The research work, carried out in cooperation with national and international partner institutions, ensures that the students receive a practical training for future involvement in development cooperation. This programme has been running since 1982. As of December 2009, 470 students have completed their theses within the grant scheme. In the years 2008 and 2009, altogether 42 grants were given with a total volume of € 75 638 (see Annex).

*Excursion 2010 to Vietnam*





# Research

**More than 100 researchers covering all disciplines related to agriculture and food sciences are organised in the four thematical research groups of the Tropenzentrum.**

## Special Research Program – SFB 564

The SFB 564 “Research for Sustainable Land Use and Rural Development in Mountainous Regions of Southeast Asia, known as “The Uplands Program” aims to make a scientific contribution to the conservation of natural resources and the improvement of living conditions of the rural population in mountainous regions of Southeast Asia. The mountainous regions are vitally important ecosystems threatened by high population growth, resettlement programmes, migration and rapidly changing market conditions.

The program started in 2000 initiated by the Tropenzentrum as collaboration with several universities and research institutes in Thailand and Vietnam. The program comprises thirty research projects, fourteen of which are led by Universität Hohenheim and funded by the Deutsche Forschungsgemeinschaft (DFG).

The other research projects, conducted by Thai and Vietnamese institutions, are funded by the National Research Council of Thailand (NRCT) and the Ministry of Science and Technology (MOST) in Vietnam. These projects correspond to each other, in that disciplinary cooperation partners between Germany and Thailand or Vietnam respectively, work on issues of common interest.

In July 2009, the Uplands Program entered its fourth and final phase ending in June 2012. An external evaluation of the programme by a team of eleven prominent scientists has attested the Uplands Program to practicing excellent fundamental research with a high impact on the study regions and enduring importance facing global land use changes and food insecurity.

In pursuit of its objective, the program builds on three main concepts: on Interdisciplinarity, on a systems approach and on the active participation of stakeholders in all stages of research. The scientific contributions of the Uplands Program include:

- Innovations such as improved irrigation methods, fruit drying and processing technologies, methods of soil and water conservation, and improved livestock varieties.
- Systems modeling to increase our understanding of decision-making and natural resource flows in mountainous systems.
- Capacity building including the transfer of knowledge and innovations to stakeholders, the promotion of interdisciplinary research approaches at partner universities, and the training of young scientists.

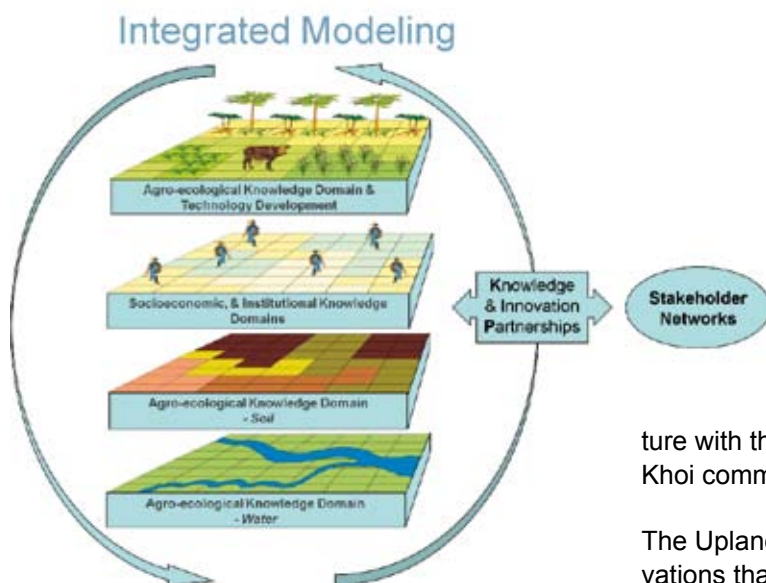
The priority areas in phase IV are integrated modeling, scaling up and scaling out and transfer of knowledge and innovations.

### Integrated Modeling

The challenge to sustainable resource use is the most prominent at the fault line between the economic incentives to intensify agriculture and the constraints imposed by the natural environment. New insights into sustainable resource use can be obtained by coupling quantitative models that represent the diverse aspects of the system – soils, hydrology, land use, and decision-makers. Sub-projects in the program couple their models to test scenarios exploring the effect of innovations and policy options on sustainability. A key concept of the SFB 564 is the integration of the various knowledge domains in order to understand the system under study. This integration allows building scenarios of the effects and processes occurring in response to innovations brought into the system. Multi-agent system modeling and ecological watershed modeling allows linking biophysical processes with economic and institutional change.

### Scaling up and scaling out

Depending on biophysical conditions, knowledge networks and institutional arrangements, a given site develops along trajectories of resource availability, market access and multi-stakeholder and



institutional environments. This leads to site-specific constraints and options for innovations brought into the system. Including this heterogeneity in research is fundamental to the transfer of knowledge to stakeholders, innovation dissemination and the scaling out to other regions.

### Transfer of knowledge and innovations

The transfer of research is a priority area in the research program. This includes partnerships with farmers, extension workers, administrators, and policy makers to make use of the most promising research findings. Three subprojects are conducting joint research with private companies in Thailand and Germany to transfer their inventions for practical use. It also includes the transfer of knowledge to young researchers. To date, over 70 students have conducted their doctoral research in the program. A further component in capacity development is the new joint-degree M.Sc. programme SAIWAM (see page 13).

### SFB activities in 2008 and 2009

In January 2008 scientists of the Uplands Program launched an affiliated transfer project for water and soil resource conservation in northern Vietnam, funded by the EnBW Rainforest Foundation for the time period January 2008 to September 2012. The project is entitled "Sustainable natural resource conservation and fostering rural development through adapted soil conservation measures in the uplands of Vietnam using a participatory approach". It cooperates with the National Agricultural Extension Centre in Hanoi and the Hanoi University of Agricul-

ture with the research area located in the Chieng Khoi commune, Yen Chau district, Vietnam.

The Uplands Program has produced various innovations that can be applied to upland agriculture. In this context, three new so-called "transfer projects" have started on July 2009 that focus on the transfer of innovations to the study regions. The three projects deal with water saving irrigation of fruit orchards, fruit drying and integrated fruit processing.

In April 2008 the Uplands Program organized the international symposium on "Interdependencies between upland and lowland agriculture and resource management" held in Hohenheim. It provided a platform for scientists and practitioners to communicate their research findings along the upland-lowland gradients in agroecosystems. In September 2009, researchers of MOST and DFG-funded projects of the Uplands Program exchanged ideas with stakeholders during a two day workshop in Son La town, Vietnam. The workshop was organized to get closer to farmers, extension workers, and government officers to share results and to receive feedback so that research can be translated into practice.

In March 2009, the joint-degree MSc program "Sustainable Agriculture and Integrated watershed Management" (SAIWAM) with the Chiang Mai University was officially launched. The program was initiated by scientists of the Uplands Program. During the last two years the German projects of the Uplands program published 52 scientific articles in peer-reviewed journals, and 6 books or book chapters, 127 conference publications, 1 habilitation, 14 Dissertations, 21 MSc theses and 7 BSc theses.

Director: Prof. Dr. Karl Stahr  
Duration: 2000 - 2012  
Funding: DFG  
[www.uni-hohenheim.de/sfb564](http://www.uni-hohenheim.de/sfb564)

# Plant Production and Landscape Ecology

## Special/Heterosis in plants – a key to feeding the world in the 21st century

The commercial exploitation of heterosis, also called hybrid vigour, was made possible by the development and cultivation of hybrid cultivars and is a landmark achievement in plant breeding. In the past 100 years, ever since George H. Shull scientifically described heterosis and laid the foundation for modern hybrid breeding. The use of heterosis in crop breeding has greatly expanded and the acreage under hybrid cultivars has steadily increased. Hybrid breeding has made commendable contributions to meeting the food, feed, and fibre needs of a growing world population, and has benefitted farmers and consumers. It has also fostered the development of a viable seed industry, which has been a tremendous stimulus for plant breeding research.

Maize breeders form single cross hybrid varieties by crossing two unrelated inbred lines. Though the mechanisms of heterosis are not yet fully understood, it is well known that the F1 hybrid - the first generation of offspring - yields more than its two inbred parents. Hence, heterosis is defined as the performance advantage of the F1 hybrid as compared to the mean of its two inbred parents. These parent inbred lines must be genetically stable (also called homozygous) for two reasons: 1) to be able to produce the same hybrid variety year after year, and 2) to guarantee that the hybrid variety exhibits the same agronomic and quality properties every time it is grown.

Traditionally, maize inbred lines are formed by continuous self-pollination for six to eight generations. This is extremely time-consuming. Efficiency of breeding new maize varieties can be significantly improved through the application of doubled haploid (DH) inbred lines as components of hybrid and synthetic varieties. Synthetics are developed by intermating not only two but several (10-20) carefully selected inbred lines followed by seed increase through open pollination. This variety type allows farmers to recycle the harvested seed for replanting in the following cycle without suffering severe yield losses. However, yield potential of synthetics is about 10-20% lower compared to single cross hybrids.

DH lines are nowadays routinely employed in private and public maize breeding programs in Europe and North America. Through the induction of a haploid phase (i.e. reduction to single chromosomes instead of chromosome pairs) and subsequent doubling of the chromosome set (i.e. making one copy of every chromosome to form pairs of identical chromosomes), fertile and homozygous inbred lines can be produced using DH technique in only two cropping cycles. The use of DH lines features several quantitative genetic and operational advantages including: 1) exploitation of maximum genetic variance, 2) high reproducibility of early selection results, and 3) simplified logistics. Hence, significant cost savings are possible due to reduced expenses for nursery activities, handling of seed batches, and for maintenance breeding. Despite the obvious advantages of using DH lines for hybrid maize breeding, few efforts have been made to exploit the technique for tropical maize breeding programs. The Department of Plant Breeding, Seed Science and Population Genetics of the Universität Hohenheim in collaboration with the International Maize and Wheat Improvement Center (CIMMYT), is one of the few institutions working to implement and improve the DH technique for tropical maize and, in particular, for maize breeding programs in sub-Saharan Africa (for details see page 29).

*Heterosis effect in maize*





Hybrid corncob

This CIMMYT-Hohenheim collaboration is investigating the various processes involved in DH line production in tropical maize and is conducting capacity building through training scientists of national maize breeding programs. This will enable maize breeders and researchers from sub-Saharan Africa to exploit the DH technique for rapid development of inbred lines that have been improved for abiotic and biotic stress tolerance and nutritional quality. By crossing two or more of the resulting DH lines, breeders can quickly develop new hybrid or synthetic maize varieties, which accelerates the arrival of better adapted, more stable, and higher yielding maize for resource-poor farmers in the world's most harsh environments.

Prof. Dr. Albrecht E. Melchinger  
Dr. Heiko K. Parzies  
Department of Plant Breeding, Seed Science and  
Population Genetics

## Department of Plant Production and Agroecology in the Tropics and Subtropics (380)

### Plant Production in the Tropics and Subtropics (380a) Prof. Dr. Georg Cadisch

The Plant Production Section focuses on plant-soil-environmental interactions, investigating trade-offs between crop production and environment. Current research topics cover eco-physiological aspects of crop production (including plant diversity), nutrient cycles, carbon sequestration, competition, and environmental impacts of plant-animal production systems with specific consideration of  $N_2$  fixing legume based approaches as well as studies on promising minor crops regarding their future utilisation. The research approach of this section is based on two pillars:

- A theoretical analysis, i.e. building and using models to improve both our current understanding of agroecosystem functioning and the use of resources in the tropics and subtropics.
- An experimental approach on improving our knowledge of plant production, plant diversity and nutrient cycles in agroecosystems by using stable isotope ( $^{15}N$ ,  $^{13}C$  and  $^{18}O$ ), molecular marker and mid-infrared spectroscopy methods.

### Research projects:

**Impact of Intensification on Land-use Dynamics and Environmental Services of Tropical Mountainous Watersheds** (funded within the DFG Special Research Program SFB 564-C4.1 and C4.2)

This project aims at understanding the biophysical linkages and drivers of land-use changes in upland areas and at assessing their impact on systems productivity, sustainability and environmental services. Thus, subproject C4.1 monitored C and N flows between upland and lowland cropping systems and productivity of current cropping systems in the target region. Data were used to parametrise the simultaneously developed prototype of a spatially explicit and integrated dynamic biophysical model for land-use change impact assessment (LUCIA).

Building on previous achievements, C4.2 focuses on better understanding of biophysical linkages and drivers of land use changes in upland areas of Vietnam and Thailand and their impact on systems productivity and environmental services. Therefore,

several watersheds along a gradient of agricultural intensification and market integration will be evaluated using LUCIA and turbidity sensors in irrigation channels and rivers to provide feedback on impact of land use change on environmental services and crop production.

**Integrated DFG Project “Regional Climate Change”: Application of Mid-Infrared Spectroscopy for parameterisation of soil carbon turnover models on a regional scale** (funded within the integrated DFG Project “Structure and Functions of Agricultural Landscapes under Global Climate Change - Processes and Projections on a Regional Scale”)

Changing climatic conditions and land use changes are expected to alter carbon dynamics in the soil and hence the role of soil carbon as sink or source for atmospheric carbon dioxide. The current study will develop new methods to parameterise soil organic carbon dynamics models at regional scale.

An innovative approach will be the determination and characterisation of soil carbon pools using mid-infrared spectroscopy coupled with thermo-analysis. Apart from estimating the size of soil carbon pools, their decomposition rates will be assessed, facilitating prediction of soil C dynamics at regional scale. A validated soil carbon model will, in conjunction with Expert-N modelling software and a coupled high resolution atmosphere climate model, facilitate prediction of soil C dynamics under changing climatic conditions in Southwest Germany.

**Trees in multi-Use Landscapes in Southeast Asia (TUL-SEA): A Negotiation Support Toolbox for Integrated Natural Resource Management** (funded by BMZ/BEAF)

Replicable, cost-effective approaches are needed in the hands of local professionals with interdisciplinary skills to help stakeholders sort out positive and negative effects of trees in multi-use landscapes (‘agroforestry’). ICRAF in SE Asia has developed a negotiation support approach for reducing conflict in multi-use landscapes.

The approach aims to bridge perception gaps between stakeholders (with their local, public/policy and scientific knowledge paradigms), increase recognition and respect for these multiple knowledge systems, provide quantification of trade-offs between economic and environmental impacts at landscape scale, and allow for joint analysis of

plausible scenarios. Building on the achievements of participatory rural appraisal, we can now add quantitative strengths with the toolbox for trade-off analysis. The TUL-SEA project (NARS, ICRAF and Universität Hohenheim) will lead to the following outputs: (i) tests of cost-effectiveness of appraisal tools for tradeoff analysis in a wide range of agroforestry contexts in SE Asia; (ii) enhanced national capacity in trade-off analysis, information-based INRM negotiations and ex ante impact assessments; (iii) an integrated toolbox ready for widespread application.

The research focus of the Plant Production section is set on evaluating negotiation support tools and concentrates on the Forest, Agroforest, Low Value Landscape Or Wasteland (FALLOW) model. FALLOW is a landscape-dynamics model, developed at the World Agroforestry Centre for assisting the negotiation process between stakeholders in a changing landscape by visualizing possible consequences of land use changes within a watershed.

**Integrated Isotopic Approaches for an Area-wide Precision Conservation to Control the Impacts of Agricultural Practices on Land Degradation and Soil Erosion** (funded by the International Atomic Energy Agency in Vienna, Austria)

The overall objective is to develop integrated isotopic approaches to identify hot spot areas of land degradation in agricultural catchments for effective soil conservation measures.

Specific research objectives are (i) to develop the combined use of fallout radionuclide techniques with conventional techniques and spatial analysis to establish soil redistribution patterns and rates over several temporal scales on a catchment basis, (ii) to develop and validate protocols for the application of compound specific stable isotope techniques, a promising approach to elucidate the composition of labile soil organic carbon (SOC), its qualitative changes, and enables in particular the evaluation of essential C source-and-sink relationships in a defined ecosystem altered by considerable erosion and deposition processes, (iii) to integrate nuclear based approaches with other non-nuclear techniques through modelling and other tools to establish comprehensive soil redistribution studies on an area-wide basis, and (iv) to create the basis to develop decision support tools for implementing precision conservation and contributing to sustainable land management.

**Measuring and modeling spatially variable fluxes in the soil-plant system** (funded by the KU Leuven, Belgium and supported by DAAD)

The research is carried out in cooperation with KU Leuven, Forschungszentrum Jülich and Kasetsart University in Bangkok, and aims at improving our understanding of how spatial variability in soil properties and vegetation characteristics control water flow and transport processes in the soil at field scale, and how it determines resource use efficiency of agro-ecosystems. It focuses on the spatio-temporal dynamics of water contents and competition for water uptake in mixed cropping systems.

The emphasis is on spatial variation caused by the cropping pattern and landscape. To this end, a set of monitoring techniques will be used with which spatial patterns of crop status and subsurface soil water contents can be imaged in a non-invasive manner. Soil water content distributions will be determined using geophysical methods: electrical resistivity tomography and time domain reflectometry. The state of the crop and its spatial pattern will be monitored using leaf area index (LAI) sensors and an infrared camera. These techniques will be complemented with  $^{13}\text{C}$  stable isotope analysis of plants, which is a measure of the integrated stress of the plant over the growing season. To interpret the obtained datasets, a soil-crop model will be developed which considers light interception, photosynthesis and stomatal control, water flow within the plant, root growth and root water uptake, and heat fluxes within the canopy in more detail than in currently available crop growth models.

**Fostering rural development and environmental sustainability through integrated soil and water conservation systems in the uplands of Northern Vietnam** (funded by the EnBW Rainforest Foundation and carried out in cooperation with the SFB 564)

The on- and off-site effects of inappropriate land use systems in mountainous regions of northern Vietnam pose considerable threats to people's livelihoods and the environment. However, soil and water conservation projects have only had limited impact in the past, and few farmers are nowadays practicing effective soil conservation measures on their fields. Reasons for the lacking adoption of soil conservation measures are that (i) they are economically not attractive, (ii) the introduction of high yielding varieties combined with increased fertiliser use masks negative impacts of cropping activi-

ties on soil fertility in the short-term, and (iii) many projects used a top-down approach to disseminate soil conservation techniques without adequately considering farmers' needs. The overall goal of this project is to foster sustained and enhanced livelihoods and environmental quality in the uplands of Northern Vietnam.

**Diversity of the tropical legume genus *Stylosanthes* in Venezuela** (funded by Eiselen Foundation and DAAD)

Field research was carried out in Venezuela. Collection of herbarium information was conducted in different Venezuelan, European and US herbaria. The objectives of the project are to: (i) assess the diversity of the genus *Stylosanthes* in Venezuela using both morphological and molecular marker analysis, (ii) collect germplasm and herbarium specimens of the different species, (iii) assess the biogeography of the Venezuelan *Stylosanthes* species and (iv) provide recommendations on conservation, uses and research needs. Results will contribute to the sustainable use and conservation of this valuable plant genetic resource.

**Agro-Ecology (380b)** Prof. Dr. Joachim Sauerborn

Agro-ecosystems are those ecosystems which have been established and manipulated by man to serve his own needs. Our research activities aim at designing diversified, self-sustaining, low-input and resource-efficient agricultural systems with a high but sustainable level of productivity. To reach this goal it is necessary to acquire knowledge on quantity and quality of the biotic and abiotic factors, i.e. to identify key processes in the regulation of agro-ecosystems. Based on a better qualitative (what happens? or does anything happen?) and quantitative (how much happens? or how does it happen?) insight, sustainable management practices and pest regulation options can be realised.

**The research priorities are:**

- Rural development by land-use diversification: actor based strategies and integrative technologies for agricultural landscapes in mountainous Southwest China.
- Change of a multifunctional landscape and its effects on structural and biological diversity: case



study of the Naban Watershed, Southwest China. [www.lilac.uni-hohenheim.de/en/structure/EcolB.php](http://www.lilac.uni-hohenheim.de/en/structure/EcolB.php)

- Use of ecological sanitation products in tropical agriculture to enhance crop production and mitigate soil degradation. A pilot scheme at Valley View University, Accra, Ghana, where we use modern sanitary practice to make available marketable products (fertiliser and irrigation water) instead of waste materials. [www.uni-hohenheim.de/respta/](http://www.uni-hohenheim.de/respta/)
- Development of innovative methods for parasitic weed management and investigations of host-parasite interactions. [www.uni-hohenheim.de/www380/380b/science/supraregional/start.htm](http://www.uni-hohenheim.de/www380/380b/science/supraregional/start.htm)
- Rainforestation farming - a concept for the restoration of degraded areas in the humid tropics using indigenous tree species and integrated cultivated crops.
- Analysis of the geographical range of parasitic weeds and its determining factors, and of the potential distribution of these organisms under current and predicted future climate.

### LILAC - Rural development through land use diversification: actor-based strategies and integrative technologies for agricultural landscapes in the south-western Chinese highlands

China's rapid growth in recent years has also increased the demand for natural rubber. As a consequence rubber plantations have displaced much natural vegetation, especially the Yunnan and Mekong regions are experiencing this unbridled rubber boom. The consequences of social changes, economic risk for the farmers and ecological losses in biodiversity have been given little attention so far.

*Biological diversity*



The objective of the collaborative project Living Landscapes China (LILAC) is to develop effective land use planning through the use of certain strategic tools. Economists, ecologists and sociologists from Germany and China work together to develop an integrated model based on a geographic information system (GIS), which will be able to predict the economic, social and ecological effects of different land uses within a landscape context.

Future land use scenarios are developed together with local decision makers and analysed with regard to the consequences in these three areas. Furthermore, emphasis is placed on investigating alternative, high-value products, such as medicinal plants and spices, to promote agro-biodiversity and the rural economy.

Partners: a wide range of collaborating German research institutions, coordinated by Universität Hohenheim and Chinese research institutions, coordinated by Xishuangbanna Tropical Botanical Garden (XTBG), Chinese Academy of Science (CAS)

Duration of project: June 2007 - December 2010  
Funding: Federal Ministry of Education and Research (BMBF)

[www.lilac.uni-hohenheim.de](http://www.lilac.uni-hohenheim.de)

### Crop Water Stress Management (380c)

*Prof. Dr. Folkard Asch*

In consideration of severe water shortages emerging in many agricultural production systems worldwide, an improved understanding of mechanisms of plants in response to variable soil water supply and atmospheric conditions is required to realise 'water-wise' food production. Work focuses on aspects of plant water use under abiotic stressors such as drought, flooding, salinity, iron toxicity and temperature.

A variety of threats imposed on food production by climate change have been identified. However, climate change may as well act as stimulus for highly required changes of land-use pattern. In-depth analyses of the interaction between carbon and water balances are considered to be of outstanding importance to sustain food production in this context.

### Current projects:

- **RISOCAS:** Developing rice and sorghum crop adaptation strategies for climate change in vulnerable environments of Africa (see below).
- **AfricaRice:** Screening of lowland rice varieties for iron toxicity responses. Genotypic variation in iron toxicity tolerance is analyzed building a base to further identify promising physiological mechanisms which may be employed in varietal improvement programmes.
- **GRASSNET:** Cross-continental network for sustainable adaptation of grassland systems vulnerable to climate change. Network within “International Networks for Climate Change” (see also page 14).
- Potential to recultivate abandoned land in Madagascar with the energy plant *Jatropha*: In this project, field studies and greenhouse experiments will be combined to quantitatively describe the response of *Jatropha curcas* to water availability and atmospheric conditions. Funded by the Foundation Energy Research Baden-Württemberg and the EnBW Rainforest Foundation.
- **BAtroS:** Soil melioration and Cultivation processes for drought-prone sites (funded by BMBF)  
Project1: Physiological responses of field crops to soil ameliorants under drought-prone conditions. Physiology (leaf gas exchange, dry mass allocation pattern, Abscisic Acid signaling, water potential within the Soil-Plant-Atmosphere-Continuum)of plants supported by application of diverse ameliorants is assessed to improve crop performance in drought-prone environments and on marginal sites.  
Project 2: Effects of hydro-absorbers in seed coats on drought resistance and seedling vigor in cereals. Physiology of seedling emergence as affected by different seed coating technologies is assessed to improve crop establishment in drought-prone environments.

### RISOCAS - Developing rice and sorghum crop adaptation strategies for climate change in vulnerable environments in Africa

Irrigated rice, rainfed sorghum, and rainfed upland rice are three of the most important staple small-grain cereals in Sub-Saharan Africa. Phenology, growth, water use and attainable yield of rice and sorghum are subject to seasonal climatic patterns. These patterns have already changed and will do so in the near future.



from above: Sorghum panicle Mali, first and second planting date on rice field in Madagascar

To avoid negative impacts, crop adaptation strategies will be required, both in terms of varietal development and crop management. To develop coping strategies for increasing climate variability and weather extremes, a broad range of varietal types of rice and sorghum will be studied on existing climatic gradients that cover expected ranges of change, such as temporal/intra-annual gradients (irrigated rice in Senegal), latitudinal gradients (sorghum on a N-S transect in Mali) and altitudinal gradients (upland rice in Madagascar).

Relevant meteorological data, site-specific soil characteristics and water balances, and parameters of growth and yield will be monitored. These data will be used to identify valuable traits and ideotype concepts for varietal improvement and to adapt, calibrate and field-validate crop models (based on the crop model ‘SARRAH’).

The resulting tools will allow predictive applications in the context of climate change scenarios. The field experiments in Senegal, Mali and Madagascar will end in mid-2010 after almost two years of data collection. First results were presented at the Tropentag 2009 in Hamburg, showing among others the annual variation of water use and yield of irrigated rice in the Sahel, the responses of sorghum varieties to climatic variability in Mali, and the temperature effects on the phenology of upland rice along an altitude gradient in Madagascar.

Partners: African Rice Center (AfricaRice, Benin), CIRAD (France), Institute for Rural Economy (IEAR, Mali), National Centre for Applied Research in Rural Development (FOFIFA, Madagascar)  
Duration: May 2008 - April 2011  
Funding: Federal Ministry for Economic Cooperation and Development (BMZ)  
[www.risocas.de](http://www.risocas.de)

## Department of Botany (210)

### General Botany (210a)

*Prof. Dr. Manfred Küppers*

Within the BIOTA framework, funded by the German Ministry of Education and Research, the working group of Dr. Helmut Dalitz has since 2001 participated with two projects in the BIOTA-East group in Kenya and Uganda. One project is mainly focusing on investigations of distribution, regeneration and growth of trees in the Kakamega Forest in Kenya and the Budongo Forest in Uganda. Since 2003 growth has been measured monthly, using dendrometer bands, giving a clear picture about differences of growth within different compartments of the two forests. Furthermore abiotic factors such as climate (temperature, precipitation, radiation) and soil parameters have been measured and analyzed.

The main hypothesis behind is that tree regeneration is dependent on biotic and abiotic factors, leading to high spatial heterogeneity of parameters, influenced by the growth of trees in a positive feedback mechanism. In close cooperation with the National Museums of Kenya (NMK), the KWS (Kenya Wildlife Service), the Budongo Forest Project and the Makerere University (Kampala) several MSc students, 2 PhD studies and several para-ecologists have been trained. The other project focuses on

capacity building in biodiversity information systems in close cooperation with the National Museums of Kenya and the University of Makerere.

## Department of Soil Science and Land Evaluation

### Soil Science and Petrology (310a)

*Prof. Dr. Karl Stahr*

The research group Soil Science and Petrography mainly deals with three thematic areas related to the tropics and subtropics. Soil regionalisation and development of methods for modern soil mapping is one topic. Thereby methods of remote sensing, geographical information systems, and non-destructible methods on the ground and related computer models are used to identify soil units and their relational landscape properties. The second focus is on soil development. Here, in-depth studies on the behaviour of silica in soils, on the occurrence of rare minerals and on the formation of clay, minerals and iron oxide are carried out in several parts of the tropics. Beside these studies on site ecology, including physical and chemical soil degradation, also studies on soil care are carried out. In particular, the C and N turnover and its influence through land use changes is a topic.

The Department of Soil Science and Land Evaluation also participates in the SFB 564, mainly in subproject B1 and B4.

Recently two PhD theses have been finished, one on a soil catena with influence in western Senegal, the other one on the effect of compost on soil fertility in the semi-arid area in Ethiopia. Ongoing studies are dealing with land use change and carbon sequestration in the North China plane, and the possibilities of the production of forest crops in saline areas in India and Pakistan. The latter is embedded in the EU funded BIOSAFOR project, with partners from different EU countries. Another EU funded project (MIA VITA) is dealing with the impact of volcanic ash on soil fertility in the Philippines.

CODE-WA is an interdisciplinary research project for development. It lays emphasis on participatory approaches and is funded by the German Ministry for Economic Cooperation and Development (BMZ) and hosted at ICRISAT Sahelian Centre in Niger. CODE-WA aims to increase farmers' options to cope with effects of climate change like shortened rainy seasons, and higher unpredictability and vari-



*Groundnut evaluation in the CODE-WA project*

ability of rains. Concurrently it focuses on developing innovative ways to increase farmers' incomes. CODE-WA includes research on climatology, plant breeding, phytodiversity, soil science and communication. The major impact of the project will be the introduction of new crops, varieties and techniques at the four CODE-WA sites along the bio-climatic gradient from northern Sahelian to southern Sudanese zone.

### Biogeophysics (310d) Prof. Dr. Thilo Streck

The chair deals primarily with the measurement and mathematical modelling of biophysical processes in agro-ecological systems. In doing so, one focus is on the transport and transformation of environmentally harmful chemicals, the other one on soil-plant-atmosphere interactions. In our applied research, we determine quantitatively and at an early stage the effects of already implemented or planned interventions on certain goods (e.g. soils, plants, ground water, surface water and health).

In the tropics the following research projects have been carried out in 2008/2009:

- Transport of Agrochemicals in a Watershed in Northern Thailand – Subproject B2.3 of SFB 564, in cooperation with the Chiang Mai University, Thailand. This project has been completed.
- Probabilistic assessment of the environmental fate of agrochemicals under varying land use in a watershed in Northern Thailand – Subproject B2.4 of SFB 564, in cooperation with the Chiang Mai University, Thailand.
- Fate of agrochemicals in integrated farming systems in the Son La province, North Vietnam – Subproject B5.1 of SFB 564, in cooperation with Hanoi Agricultural University, Vietnam. This project has been completed.
- Transport of agrochemicals in a watershed in Northern Vietnam – Subproject B5.2 of SFB 564, in cooperation with Hanoi University of Agriculture, Vietnam.
- A combined BaPS-13C stable isotope technique to study the interaction between C and N turnover in alkaline agricultural soils of the North China Plain - subproject 1.1 in the International Research Training Group "Modeling Material Flows and Production Systems for Sustainable Resource Use in Intensified Crop Production in the North China Plain", in cooperation with the Chinese Agricultural University, Peking.
- Assessment of non-point source pollution of soil and water resources using the AVSWAT model in an agricultural watershed in Eastern India. DFG-DST mobility project.

## Department of Landscape and Plant Ecology (320)

### Landscape Ecology and Vegetation Science (320a) Prof. Dr. Reinhard Böcker

The chair deals with the analysis and modelling of landscapes, and the field of botany. Also, the protection of the environment and nature play a significant role and urban ecology, limnology and the study of moorland are covered. Applied research of the group is concerned with documenting the changes in the landscapes and its vegetation and advising on the optimisation of land utilisation, considering overall objectives of nature conservation.

The following research projects with a subtropical background have been carried out during the years 2008/2009:

- Comparison of Mediterranean ecosystems at the example of transects in the coastal elevations of Lebanon and California. In cooperation with the Fullerton University California. and the American University Beirut, DAAD financed project.
- The vegetation of the mediterranean zone in Syria. Cooperation with the Universities of Aleppo and Djidda.
- Analysis of vegetation and land-use east of the Orontes valley in Syria.

### Plant Ecology and Ecotoxicology (320b)

Prof. Dr. A. Fangmeier

The Plant Ecology and Ecotoxicology group is working in two main areas: (i) global change effects on ecosystems, and (ii) the effects of air pollutants. Within the first area experimental research is performed on the effects of rising atmospheric carbon dioxide concentrations, alone and in combination with climatic change such as extreme drought, on terrestrial ecosystems. In the second area effects of air pollutants from agriculture, industry, traffic and other sources on ecosystems, including all organisational levels from physiology to ecosystem processes are investigated. The work contributes to the definition of thresholds to ensure a sustainable development in the tropical and subtropical regions. The following activities were performed in 2008/2009:

- Participation in the third phase of the SFB 564 (project B5.1, project leaders: Prof. T. Streck and Prof. A. Fangmeier).
- Participation in the DFG-IRTG (GK 1070, coordination: Prof. Dr. R. Doluschitz) with subproject 1.3

„The Contribution of Nitrogen Deposition to the Nitrogen Budget“ (subproject leader: Prof. Dr. A. Fangmeier).

## Department of Plant Nutrition (330)

### Fertilisation with Soil Chemistry (330c)

Prof. Dr. Torsten Müller

Research activities can be subdivided into six main areas: (1) Basic research on crop nutrient acquisition, (2) Environmentally sound, demand-oriented and sustainable fertilisation strategies, (3) Soil fertility management and fertilisation in organic farming, (4) Renewable raw materials and energy plants, (5) Global change (the reduction of negative impacts of agricultural production is one of the key issues e.g. trace gases relevant for climate change. Further issues are the adaptation of agriculture to changing environmental conditions (e.g. impact on humus dynamics, adapted fertilisation strategies) and (6) Toxic pollutants in soil and food chain.

Besides classical lab-, green house and field experiments including necessary analysis, specialised methodology is focussing on the investigation of rhizosphere processes, on the use of radioactive and stable isotopes, on the measurement of trace gases and on the use of computer modelling of nutrients and humus turnover processes in the soil-plant system. Within projects of practical relevance, cooperation with farmers, extension services, and companies is essential. Research projects with a tropical background:

- The Re-establishment of Human Resources, Curricula Systems and Institutions at the Agricultural Faculty of the Syiah Kuala University in Aceh (ACULTURE project). During the Tsunami in 2004, the Agricultural Faculty of the Syiah Kuala University

*Kids handling organic fertiliser*



(UNSYIAH) in Banda Aceh was severely damaged and lost approximately 80% of its research and teaching staff. The ACULTURE project is a collaborative action between three European and two Indonesian universities and aims at assisting UNSYIAH in the (re-)establishment of human resources, curricula, systems and institutions relevant to the prevailing agricultural problems after the Tsunami event (project ended October 2009).

- SFB 564, TP B3.2: Irrigation and fertilisation strategies for water saving and optimum nutrient supply in subtropical fruit orchards utilizing stress responses (project ended June 2009).
- Effect of sowing date and nitrogen fertilization on growth, yield and fungal diseases of different wheat cultivars in Egypt.
- P-mobilisation in medium and high pH soils: Mobilisation of P in medium and high pH soils under organic cultivation by soil tillage.
- Sorption of pollutants by organo-clay complexes: Different organo-clay complexes will be tested according to their efficiency to remove Pb, Cd and Cr, two types of pesticides and di-chlorophenol as organic pollutants from aqueous solutions.

## Department of Crop Sciences (340)

### Crop Physiology of Specialty Crops (340f)

Prof. Dr. Jens-Norbert Wünsche

The specialised research work focuses on the understanding of the physiology of perennial fruit tree species under different orchard management practices and environmental conditions in temperate, tropical and subtropical climates. Special expertise exists in developmental tree and fruit physiology and environmental stress (radiation and temperature) physiology with emphasis on carbon acquisition, partitioning and cropping efficiency of fruit trees. Moreover, long-term experience is available in studying hormonal responses to a range of plant stresses (e.g. low temperature, heat, salinity, mechanical impacts) and in relation to flower induction and thinning of apple and subtropical fruit crops.

Recently the sections research capability has been extended from crop physiology into the genetic aspects which will allow to investigate specific plant processes and gene functions but also to search for specific crop manipulations for productivity and quality gains. The following three research projects are carried out in tropical areas of Southeast Asia and Madagascar.

### Regulation of flowering in subtropical fruit crops

The limitations of flowering in fruit trees are thought to have a common physiological background. The attempt to clarify the process of flowering primarily in longan (*Dimocarpus longan* Lour.) involves characterizing the complex way genetics, plant processes, environment and crop management in mutual interactions which lead to flowering. Research specifically investigates the physiological basis of flower-bud induction; in particular the role of phytohormones, carbohydrates and the genetic control of this process. For example, there is now growing evidence that an alteration in the hormonal status triggers morphogenesis and induces the switch from vegetative to reproductive bud meristem in longan and possibly other crops. Based on this knowledge, the goal is to devise strategies and orchard management practices that enhance floral commitment; i.e. allow regular and uniform yields in on- and off-season.

### Causes, effects and prevention of premature fruit drop in mango

The research attempts to contribute to the understanding of specific plant processes involved in fruit drop of mango (*Mangifera indica* L.) in response to environmental and/or crop management triggers. The focus is on combining expertise in hormone, carbohydrate and molecular physiology and applying it to detailed field and laboratory studies. Excessive early fruit drop is presumably caused by unfavourable climatic conditions in combination with plant stresses during the fruit set period. This research project will help to understand the fruit drop mechanism of mango and to devise orchard management practices that enhance fruit retention and quality.

### Flower biology and propagation of *Jatropha curcas* in Madagascar

The genus *Jatropha* belongs to the family Euphorbiaceae and contains approximately 170 known species. This shrub like or small tree crop is native to Mexico and Central America. In recent years large plantations have been established worldwide. However, little basic research effort has been directed toward the appropriate crop management practices under specific natural climatic conditions. Thus there is a potential risk of quickly developing *Jatropha* plantations for commercial oil production without the necessary fundamental knowledge on crop physiology and tree management. Preliminary work begun to develop protocols to propagate *Jatropha curcas* primarily by tissue culture and has also been directed to evaluate the effect of climatic

factors and pollen sources on fertilisation and fruit set as well to manipulate the ratio of female to male flowers by plant growth regulators.

## Department of Plant Breeding, Seed Science and Population Genetics (350)

### Plant Breeding (350a)

Prof. Dr. Albrecht E. Melchinger

### Plant Breeding and Biotechnology (350c)

Prof. Dr. Gerd Weber

### Seed Science and Seed Technology (350d)

Prof. Dr. Michael Kruse

Staff members of the Department of Plant Breeding, Seed Science and Population Genetics work in close collaboration with national and international agricultural research institutes on applied plant breeding research projects related to the tropics and subtropics.

For the improvement of drought tolerance of maize for sub-Saharan Africa (Kenya) a collaborative project was started in 2007 with support from Dr. Dr. h.c. Eiselen and the Eiselen Foundation. Members of the department, (Prof. Dr. A.E. Melchinger, Prof. Dr. H.H. Geiger and Prof. Dr. G. Weber, coordinator) collaborate with the International Maize and Wheat Improvement Center (CIMMYT). This research is aimed at adopting and improving the doubled-haploid (DH) technique in maize breeding for Sub-Saharan Africa. Using doubled-haploid lines (DH lines) as components of hybrid maize cultivars has the potential to substantially increase the efficiency of maize breeding programmes. The in-vivo haploid technique has been adopted by maize breeders on a broad scale in Europe and North America. In contrast to anther- or microspore-derived DH plants, this technique does not require tissue culture, and therefore, is well suited for breeding programmes in developing countries.

At the chair of Prof. Dr. A.E. Melchinger, numerous projects with significance for plant breeding in the tropics and sub-tropics have been conducted: A project was started in 2009 to use precision phenotyping techniques to improve breeding for drought tolerance of maize for southern Asia and eastern Africa with the financial support of BMZ. Prof. Melchinger and Prof. Joachim Müller together with other national partners (University of Freiburg and Max Planck Institute) collaborate with several inter-

national institutions, including: the Yunnan Academy of Agricultural Science (China), the Kenyan Agricultural Research Institute (Kenya), the Nakhon Sawan Field Crops Research Center (Thailand) and CIMMYT (Mexico) to establish innovative techniques such as multi-spectral reflectance and digital imaging to predict grain yield and biomass accumulation of maize tropical hybrids grown in multi-location field trials under different water regimes. The aim is to develop fast and efficient screening methods which can be used to identify maize varieties at early stages of plant development with high yield potential and good drought tolerance.

A further project to investigate “Individual and combined effects of five quantitative trait loci on resistance to the parasitic weed *Striga hermonthica* in *Sorghum bicolor* under field conditions in Mali and Sudan” started in 2009. Over 20 million hectares in Africa are infested with *Striga hermonthica* and subsistence farmers are the most severely affected. In the past ten years, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and the Universität Hohenheim made significant progress in identifying molecular markers for striga resistance in sorghum (project funded by BMZ, concluded in September 2008). During this period, five genomic regions (Quantitative trait loci = QTL) associated with striga resistance were identified across a range of field trials in Africa and introgressed into five farmer preferred sorghum varieties (FPSVs) in Kenya, Mali, Eritrea and Sudan through marker assisted backcrossing. Multi-location trials in fields with artificial striga infestation will be conducted over two years in order to identify unequivocally the individual and combined effect of the striga resistance QTL.

Investigations regarding the “sustainable conservation and utilization of genetic resources of two underutilised crops – finger millet and foxtail millet – to enhance productivity, nutrition and income in Africa and Asia” are in progress since 2008 within an ICRISAT/BMZ project. The access of NARS partners to diverse finger and foxtail millet germplasm will be enhanced through development and joint evaluation of core and mini core collections. Enhanced cultivation by farmers of the superior and diverse finger and foxtail millet germplasm will increase productivity, availability of nutritional rich food, and marketing opportunities, and contribute to in-situ conservation of the two species. The NARS’ capacity to breed these high-value minor millets, to use genetic resources in breeding and to employ new molecular tools will be strengthened.

Together with the Agricultural Research Corporation (ARC) in Sudan, the project “Genetic characterization and evaluation of agronomic and nutritional traits of adapted pearl millet (*Pennisetum glaucum*) resources from West Sudan as basis for novel crop improvement strategies” started in 2009. The large genetic diversity of the diverse pearl millet resources is expected to include superior genotypes for most of the traits which limit production in the Western Sudan. Furthermore, a large variation for quality traits such as Fe, Zn, and  $\beta$ -carotene content is expected in these materials. Identified superior genotypes can be used as sources for consequent breeding activities. In addition, the characterization of all accessions using molecular markers shall provide information on the diversity present within the Western Sudan region and facilitate the creation of heterotic gene pools for future breeding activities such as synthetic varieties or top cross hybrids to exploit heterosis.

The availability of allele specific molecular markers for genes controlling photoperiod sensitivity of flowering time in pearl millet and sorghum in West Africa are investigated in a project which was initiated in collaboration with ICRISAT in 2006. Photoperiodic sensitivity is the key adaptation trait of local landraces because it assures flowering at the end of the rainy season, independent of variable dates of planting due to erratic rain-fall pattern (BMZ funded).

In 2008 and 2009, Dr. H.K. Parzies organised two international workshops at the chair of Plant Breeding (Prof. A.E. Melchinger). In July 2008, 25 scientists from seven mainly African countries participated in the workshop “Arresting the Scourge of Striga on Sorghum in Africa by Combining the Strengths of Marker-Assisted Backcrossing and Farmer-Participatory Selection”. It was held within the framework of a BMZ/GTZ funded project in collaboration with ICRISAT. In July 2009, a BMZ funded training workshop for „Application of molecular markers in genetic resources of finger and foxtail millet and new developments in plant breeding” was conducted with 15 participants from India and Africa as part of a collaboration between the Universität Hohenheim and ICRISAT and NARS partners from India, Tanzania, Kenya and Uganda.

In September 2009 the Universität Hohenheim hosted the third international conference on “Heterosis in Plants”. Nearly 250 participants from 25 countries shared their knowledge and experiences. The Conference was a big leap forward for better

understanding the molecular and the genetic bases of hybrid vigor or “heterosis” and for promoting its utilization in a wider range of species (see also page 19).

At the former chair of Population Genetics (Prof. Dr. H.H. Geiger) several projects on applied plant breeding research related to the tropics and subtropics have been conducted:

In 2009, two projects have been completed in regard to development and introduction of adapted sorghum varieties with resistance to the parasitic weed *Striga hermonthica*. In one of the projects, pollen dispersal and actual out-crossing rates of the farmer-preferred sorghum varieties were studied by a DAAD-funded Kenyan PhD student. Results of this study allow conclusions about the stability of the resistance transferred, and give recommendations on variety maintenance. In a second project, gene flow from cultivated to wild sorghum (*Sorghum* spp.) populations in two regions in Kenya has been investigated by a further Kenyan PhD student (DAAD-funded) in collaboration with ICRISAT and the Kenyan Agricultural Research Institute (KARI). This study was part of a larger project funded by US-AID/BBI with the main objective to assess the environmental risk of introducing genetically engineered sorghum in Kenya.

Another DFG/BMZ funded project on recurrent selection for increased outcrossing rates in caudatum-race sorghum from Sudan is still in progress. In this project, which started in April 2007, an existing laboratory at the Agricultural Research Corporation (ARC) in Wad Medani, Sudan was equipped to function as a high throughput molecular marker laboratory in order to employ molecular markers to select for higher outcrossing rates in local sorghum landraces.

The following research was conducted at the department of Plant Breeding and Biotechnology: The improvement of resistance against pathogenic fungi in papaya (*Carica papaya*) in Costa Rica is a project in collaboration with Prof. Dr. Victor Jiménez, Department of Plant Biotechnology, from the Universidad de Costa Rica (UCR). Transfer of resistance into papaya is being approached by using genetic transformation or alternatively somatic hybridization. Furthermore, molecular markers are being developed for improving papaya breeding in Costa Rica. In a collaborative project with the Universidad de Costa Rica methods for propagation of the oilpalm *Acrocomia totai* in Paraguay and Costa Rica by in vitro cloning are being developed. *Acrocomia*



serves as important source of oil and can be used as biodiesel. In 2008 a field trip to Costa Rica was conducted with ten students from the Universität Hohenheim together with students from the Universidad de Costa Rica and the Universidad de Talca (Chile).

## Department of Biological Chemistry and Nutrition (140)

### Biological Chemistry and Nutrition (140a)

*Prof. Dr. HK Biesalski*

### Biofunctionality and Food Safety (140f)

*Prof. Dr. med. Tilman Grune*

In 2008/09, the main research focus in developing countries was on micronutrient supplementation during pregnancy, nutrition rehabilitation of malnourished children, nutritional status of women and children, feeding practices, as well as migration and gender aspects of malnutrition. In addition, the effect of different processing methods and different baking temperatures on the nutritional value of cashew nuts and therapeutic biscuits were assessed.

Since 2004, two cross sectional surveys took place in Maela refugee camp, Northern Thailand, in collaboration with the Shoklo Malaria Research Unit (SMRU), where the supplementation of thiamine and iron during antenatal care and the introduction of micronutrient enriched flour as well as exposure to the DDT-insecticide were assessed respectively.

On Nias Island, in close collaboration with the research partners from Indonesia (University of Brawijaya, Malang, SEAMEO-TROPED Regional Centre for Community Nutrition, University of Indonesia, Jakarta, und Church World Service, Indonesia/New York), and from Germany (Prof. Qaim, Prof. Hoffmann, Prof. Bellows, Prof. Müller) the data collection period of two PhD projects in the field of therapy and prevention of malnutrition could be successfully completed. Simultaneously, a Master student was also involved in this research working on the comparison of vitamin and mineral content in locally produced Ready-to-Use Food (RUF) under different baking times and temperatures. In addition, the effect of different processing methods on the nutritional values of Cashew nuts from Flores, Indonesia, were studied within the frame of a Diploma thesis. In China, in collaboration with the Institute of Nutrition and Food Safety, Center for Disease

Control and Prevention a Master thesis was conducted to assess the malnutrition risk factors of rural-to-urban migrant children in comparison with urban children.

In 2009, field work of two Diploma theses were conducted in Samoa in close collaboration with the Ministry of Health, the Ministry of Education and the Hohenheim Gender and Nutrition Group of the Department of Social Sciences. The research focused on dietary pattern of pregnant and lactating women and risk factors of overweight/obesity of Samoan school children.

In Brazil, a survey performed analysed oxidative stress and micronutrients in elderly women. Since 2007, a project has been developed in cooperation with the Federal University of Tocantins, Brazil. The project has an interdisciplinary approach and is based on the Brazilian policy of Food and Nutritional Security, aiming at health enhancing traditional foods. A first community survey assessed the nutritional status of local people. Currently, analytical and biochemical assays are performed in order to investigate, at a preliminary level, possible positive effects of polyphenols from traditional foods on non-communicable diseases using in vitro models.

## Department of Plant Physiology and Biotechnology (260)

### Plant Physiology and Biotechnology (260a)

*Prof. Dr. Andreas Schaller*

The main research focus is on plant resistance mechanisms against biotic and abiotic stresses, aiming at a better understanding of how these stresses are perceived by the plant, and how appropriate responses are activated at genetic, molecular, and biochemical levels. A detailed understanding of these basic biological processes will allow us to develop strategies for the biotechnological enhancement of natural plant resistance traits. In this general framework, particular emphasis is put on the regulatory roles of proteolytic enzymes and the biosynthesis and signalling function of plant hormones of the oxylipin family.

In the reporting period research was conducted on the alleviation of oxidative stress and detoxification of lipid peroxidation products by flavin-dependent oxidoreductases by a postgraduate research project conducted by DAAD fellow Mahmoud Saleh Mohamed (Egypt).

## Animal Production

### Special: Enhancing Food Security through a BMBF Project, 'Fuel and Feed for Tomorrow'

The worldwide decline of ocean fisheries stocks has provided impetus for rapid growth in aquaculture. In recent decades, global aquaculture has been the fastest animal production system in the world, growing at 8.7% per annum. Fish produced from aquaculture currently accounts for over one-quarter of all fish directly consumed by humans. Almost every second fish consumed worldwide originates from aquaculture. As the human population continues to expand, its reliance on farmed fish production as an important source of protein is also increasing.

Protein is the vital and most expensive ingredient of formulated fish feeds. Quality and quantity of proteins in formulated fish feeds are of paramount importance in promoting marketable fish growth. Fish meal has traditionally been used in fish feeds as the major source of dietary protein. However, annual global fish meal production has been more or less constant for the past 15 years and is not expected to increase. Due to increase in demand of fish meal, its prices would also increase.

Ongoing intensification of aquaculture has made it essential to develop suitable diets for fish and shrimp using alternative protein sources. Among the potential substitutes, plant ingredients appear to be the best candidates, since they are widely available and reasonably priced. Substantial progress has been made towards the replacement of fish meal with a number of different plant ingredients, including soybean meal, lupin, ground nut cake, peas, rapeseed meal and sunflower. In addition, ingredients are used in feeds for pigs, poultry and ruminants.

Soybean meal is currently the most commonly used plant protein source in fish feeds, and its increased cultivation has led to extensive deforestation in Brazil and adjoining countries. Soybean meal and other commonly used plant resources compete with human food and their excessive use in animal agriculture could threaten food security and the environment. Hence there is a need to identify other protein rich plant resources that do not compete with human food.



Feeding experiments with *Jatropha* meal

*Jatropha curcas*, a multipurpose and drought-resistant shrub or tree, is widely distributed in the wild or semi-cultivated areas in Central and South America, Africa, India and South East Asia. It is a hardy plant, thrives on degraded land and requires limited amounts of nutrients and water. The first commercial application of *Jatropha* was reported from Lisbon, where the oil imported from Cape Verde was used for soap production and for lamps. The *Jatropha* seed kernel contains about 60% oil that can be used directly or converted into biodiesel of high quality upon transesterification and used as a substitute for diesel fuel. The kernel meal obtained after oil extraction is an excellent source of nutrients and contains 58 to 62 % crude protein of high quality and digestibility.

The levels of essential amino acids (except lysine) are higher in *Jatropha* kernel meal than soybean meal. The protein isolate obtained from the seed cake is also an excellent source of nutrients and contains 80 to 85% crude protein of the same quality and digestibility as in the kernel meal. However the presence of high levels of antinutrients, trypsin inhibitor, lectin and phytate and a major toxic component phorbol esters restrict their use in fish and shrimp feeds. Through the project, 'Fuel and Feed for Tomorrow', funded by the BMBF, a method for

detoxification of Jatropha kernel meal and protein isolate has been developed in our laboratory. It is based on extraction and inactivation of phorbol esters by solvents and inactivation of trypsin inhibitors and lectin by heat treatment.

The International Jatropha Organisation has projected that in 2017 there will be around 32.72 million hectares of land cultivated with Jatropha worldwide, producing 160 million tons of seeds; and 95% of the total production will be concentrated in Asia (mostly in China and India). The total projected annual Jatropha oil production in Asian countries will be 47 million tons. Jatropha plant can yield up to 5 tons seed per year from one hectare of plantation, which can produce approximately one ton of kernel meal and 0.3 to 0.4 ton of the protein isolate rich in protein. Based on these data the estimated productions of Jatropha kernel meal and protein isolate are 40 mmt and 12 mmt per annum respectively, while the total production of fish meal is 5 to 7 mmt per annum. This means that there is a possibility of producing enough Jatropha kernel meal and protein isolate to meet the growing demand of the aquaculture industry. It is worth noting that the crude protein contents of fishmeal and Jatropha kernel meals are almost similar (60 to 65%).

Interestingly, the studies conducted through the BMBF Project, have shown that detoxified Jatropha kernel meal is an excellent protein source for incorporation into the diets of common carp (*Cyprinus carpio* L.), rainbow trout (*Oncorhynchus mykiss*), Nile tilapia (*Oreochromis niloticus*), white leg shrimp (*Penaeus vannamei*) and turkey. Detoxified Jatropha kernel meal could replace 50% fish meal protein in fish and shrimp, without sacrificing growth and nutrient utilisation; and without affecting physiological and haematological parameters. Furthermore detoxified Jatropha protein isolate could also replace 75% fish meal protein in fish diet.

The results of these studies enlarge the portfolio of plant protein sources that can be used in fish and shrimp diets, and open a new market opportunity for by-products of Jatropha based biofuel industry for use as a new feed resource in the feed industry. In addition, the use of these byproducts would contribute to enhancing food security since they do not compete with human food, and also relieve the pressure on stock resources such as fish meal and soybean meal. The added advantages would be the prevention of over-fishing for fish meal production and associated ecological problems. The generation of value-added co-products using the concept of

bio-refinery would make a strong case for extensive planting of Jatropha for reclamation of marginal and degraded lands. This would also decrease investment risk, particularly for small scale farmers. The findings of the BMBF Project will contribute to alleviating poverty and enhancing food security while conserving the environment.

Prof. Dr. Harrinder P.S. Makkar  
Prof. Dr. Klaus Becker  
Department of Animal Production in the Tropics and Subtropics

## Department of Animal Production in the Tropics and Subtropics (480)

**Animal Breeding and Animal Husbandry (480a)** Prof. Dr. Anne Valle Zárate, Prof. em. Dr. Christian F. Gall

Analysis of animal husbandry systems and development of sustainable breeding programmes for marginal locations are a main focus of our research. In our opinion, a holistic approach on animal husbandry systems as an integral part of culture and economic operations of livestock keepers is the basis for optimisation of production techniques and stabilisation of systems. Modelling approaches are used for identification of intervention points and response-forecast of technical measures. Starting points are the investigation of productive adaptation potential of local breeds and an analysis of use-efficiency of available resources under (semi-)nomadic and smallholder conditions.

The development and promotion of village breeding programmes aim at the conservation and use of genetic variety through breeding and organisational measures, in cases where this is economically viable and socio-culturally intended. Participation of livestock keepers and cooperation with governmental (GO) and non-governmental-organisations (NGO) is an integral part in development and organisation of our research projects. Different modelling and planning programmes are used and further developed for the optimisation of breeding measures and for planning of breeding. The combination of animal identification, herd- and datamanagement is a prerequisite for breeding and quality assurance, also in marginal locations in the tropics, and therefore integral methodological part of different research projects. Safety of livestock products,

impacts of climatic change and limited water quality and quantity on livestock production and products are increasingly addressed as integral parts of breeding and husbandry projects.

Regional focal points are in South America, East Africa, South-East Asia and the Middle East. It comprises as well research projects related to research questions relevant for extensive husbandry systems, organic livestock, and technical methods to improve livestock's adaptability to warm climates and water scarce conditions.

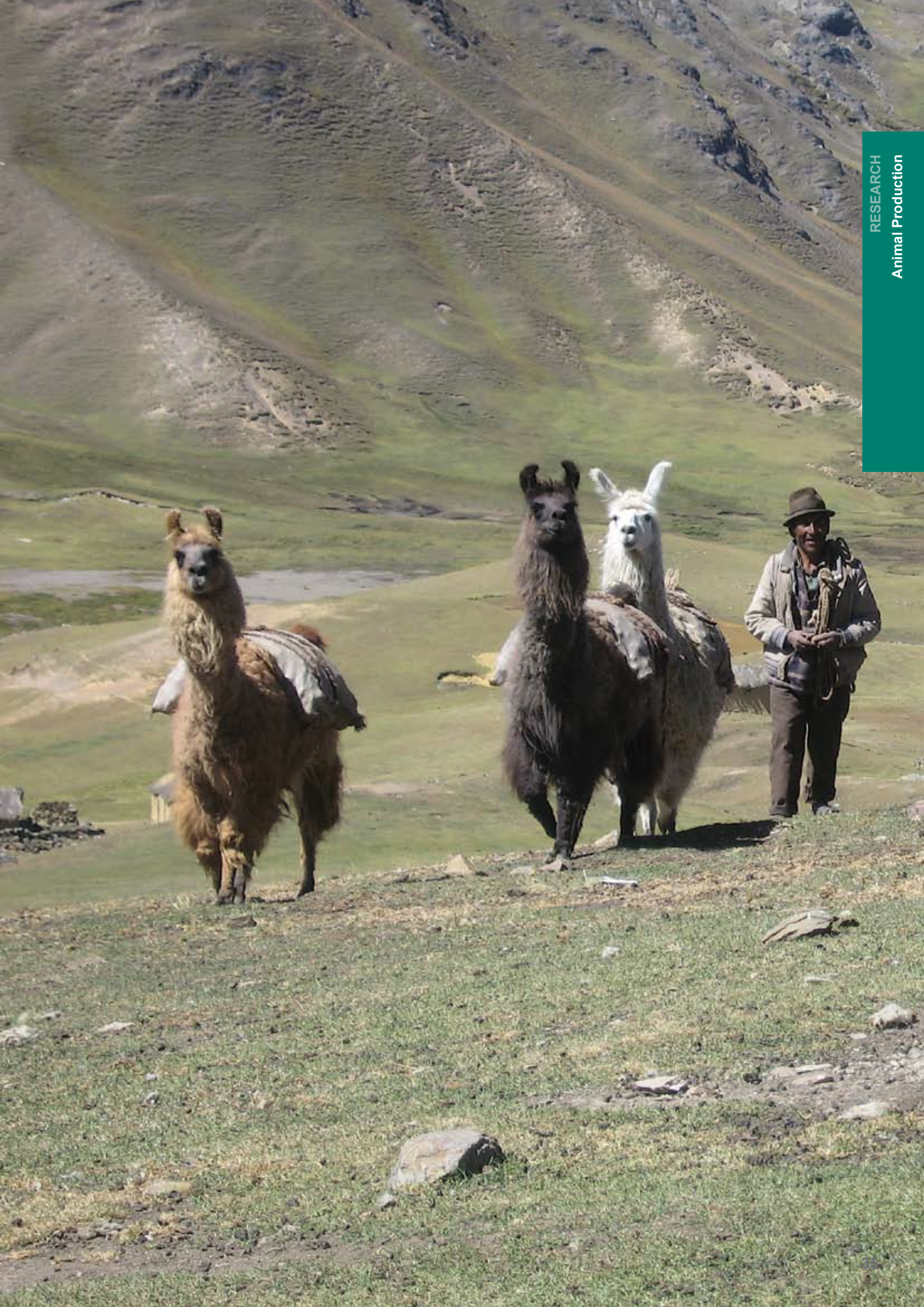
### Research projects:

#### Animal production systems and food safety

- Bio-economic optimisation of small ruminant husbandry in two production systems in the highlands of Ethiopia; cooperation with Hawassa University, Awassa.
- Perceived versus realised benefits of crossbred goats in the Kedida Gamela district of Southern Ethiopia; cooperation with Hawassa University, Awassa.
- Role and valuation of livestock farming in complex systems.
- Sheep husbandry systems and breed preferences of Bedouins; cooperation with Volcani Center, Bet Dagan (Israel), NRO Agricultural Engineers Home Society (Palestinian Authority) and National Center for Agricultural Research and Extension (Jordan) in the frame of a quadrilateral DFG-project.
- Socio-economic comparison between Bedouin sheep keepers in Jordan and the Palestinian Territories; cooperation with NRO Agricultural Engineers Home Society (Palestinian Authority) and National Center for Agricultural Research and Extension (Jordan) in the frame of a quadrilateral DFG-project.
- Suitability of different farm types for cattle development in Northern Vietnam; cooperation with NIAH, Hanoi in the frame of SFB 564, The Uplands Program.
- Optimisation of community-driven management programmes of smallholder pig keepers in Northern Vietnam; cooperation with NIAH, Hanoi in the frame of SFB 564, The Uplands Program.
- Introduction of beef production into smallholder systems on Ceram Island, Indonesia.
- Evaluation of production systems of llama husbandry in the high Andes of Bolivia; cooperation with Universidad Mayor de San Simón, Cochabamba, NGO ASAR.
- Geographical certification as production and certification strategy for smallholder sheep farming in Ceará, Brazil.
- Principles and strategies of organic livestock production in developing countries.
- Animal welfare approaches and the concept of naturalness in organic dairy calf farming management.
- Participatory risk analysis for safe food of animal origin in informal markets, RSA; cooperation with University of Pretoria, BMBF.
- Participatory risk analysis on game products marketed through formal and informal chains; cooperation with University of Pretoria, BMBF.
- Safe food, fair food: Building capacity to improve the safety of animal source foods and ensure continued market access for poor farmers in Sub-Saharan Africa; cooperation with ILRI, GTZ/BMZ-project.
- Husbandry practices and breed influencing safety of milk and milk products from small farms around Nairobi.
- Quality of camel milk.
- Use of treated water in agriculture: Impact on safety and quality of food from crops and livestock; pilot research in preparation of SFB/TRR with Hebrew University of Jerusalem, Israel.

#### Characterisation of animal genetic resources

- Improving the livelihoods of poor livestock keepers in Africa through community-based management of indigenous farm animal genetic resources; cooperation with ILRI, INRAB (Benin), Institut de l'Environnement et de Recherches Agricoles (Burkina), Association Gestion de l'Environnement & Développement, (Burkina), Oromiya Agricultural Research Institute (Ethiopia), Liban Woreda Agricultural Development Office (Ethiopia), Dept. of Agricultural Economics, University of Nairobi (Kenya), KARI (Kenya), Institute of Animal Breeding, University of Göttingen (Germany), NGO League for Pastoral Peoples/LIFE, GTZ.
- Determination of assessment criteria for animal genetic resources of traditional livestock keeper communities and application to camel breeding taking as example nomadic people in Northern Kenya; cooperation with KARI, NGO PEAR group, Nairobi.
- Contribution of endemic ruminants to the livelihoods of small farmers in the Gambia.
- Suitability of different Awassi lines for efficient sheep production of Bedouins in the Negev.
- Identification and analysis of special dairy traits in goats regarding milk ingredients and milk processing.



- Genetic improvement of chicken breeding lines with specific adaptation to tropical locations by utilisation of major genes (F, Na, dw, Fm, id, sc).
- Impact of major-genes for feather reduction on performance and survivability of broilers in hot climates; cooperation with HUJ, Rehovot.

### Development of breeding strategies and breeding programmes

- Planning of breeding and breeding organisation in small livestock populations in Germany and tropical countries.
- Optimising breeding programmes with local pig breeds in North Vietnam considering functions of pigs for smallholders and logistic determinants; cooperation project with NIAH, Hanoi in the frame of SFB 564, The Uplands Program.
- Improving lamb meat and milk production of fat-tailed sheep of the Middle East through breeding; cooperation project with Volcani Center, Bet Dagan (Israel), NGO Agricultural Engineers Home Society (Palestinian Authority), National Center for Agricultural Research and Extension (Jordan), quadrilateral DFG-project.
- Breeding objectives and selection schemes for Boran cattle in Kenya; cooperation with Egerton University.
- Genetics of performance traits of Sahiwal cattle in Kenya and prospects for genetic improvement using nucleus breeding schemes; cooperation with Egerton University.
- Development of a selection programme, identification of adequate methods to calculate economic weights and optimisation of breeding programmes for a llama population in the region Ayopaya, Department Cochabamba (Bolivia); cooperation with Universidad Mayor de San Simón, NGO ASAR, Cochabamba.
- Development of a breeding organisation and marketing cooperatives with llama breeders in the high Andes through utilisation and further development of llama populations with special fibre qualities; cooperation with Universidad Mayor de San Simón, NGO ASAR, Cochabamba.
- Optimisation of management and breeding of triple-purpose goats (milk, meat and fibre) in Bolivia; cooperation with Universidad Mayor de San Simón, Cochabamba.

### Aquaculture-Systems and Animal Nutrition in the Tropics and Subtropics (480b)

Prof. Dr. Klaus Becker

The activities of the chair aim to enhance aquaculture and domestic animal productivity and to increase farmers' income, while conserving the environment and natural resources. This is achieved through rational and effective utilisation of natural resources and agricultural by-products. The focus lies in research in the biochemistry and physiology of digestion and nutrient uptake in ruminants and fish.

The activities include quantification of microbial communities in the rumen as a function of different feeds and feed additives of plant origin; development of approaches and models for evaluation of nutritional quality of tropical feeds; development of feeding strategies to decrease environment pollutants such as methane, nitrogen and phosphorus from livestock; development and use of strategies based on non-conventional feed resources, for example *Jatropha* and *Moringa* by-products for livestock and fish rearing; nutrient budgeting and flows in aquaculture and livestock production systems; use of stable isotopes for analysis of food chains; plant secondary metabolites and other bioactive moieties and their effects on livestock and fish nutrition.

### Research projects:

- Production of feed grade protein concentrate and seed meal from *Jatropha curcas* seeds for inclusion in monogastric, fish and ruminant feeds.
- Isolation, characterization, stabilization and potential applications of phorbol esters from *Jatropha curcas*.
- Dietary inclusion of *Jatropha platyphilla* kernel meal in the diet of Nile Tilapia (*Oreochromis niloticus* L).
- Studies on propagation of non-toxic variety of *Jatropha curcas*.
- Biofuels from eroded soils.
- Studies on the cultivation and utilisation of *Jatropha curcas* in Madagascar.
- Aqueous enzyme-assisted oil extraction from *Jatropha curcas* seeds and quality evaluation of oil and the meal.
- Effects of saponins on the changes of protozoa and methanogen community structure, rumen fermentation and methane production.
- Reduction in Methane emissions from ruminants by plant secondary with a focus on tannins and



Aquaculture in Thailand

- saponins.
- Effect of ozone pollution on the feeding quality of rice straws.
- Increasing productivity and efficiency of Nile tilapia production using plant saponins and introduction of its culture in areas under the jurisdiction of the Palestinian Authority.
- Plant secondary metabolites in some medicinal plants of Mongolia used for enhancing animal health and production.
- Studies on productivity and environmental effects of the integration of semi-intensive fish culture in rice field ecosystems.
- Optimization of nutrient flow and environmental effects on integrated rice aquacultures with *Oreochromis niloticus*, *Cyprinus carpio*, and *Macrobrachium rosenbergii*.
- Development of improved techniques for the tracing of aquatic food chains by stable carbon isotopes.
- Studies on improved fish nutrition in upland aquaculture systems in Yen Chau, Son La Province, Vietnam.

## Department of Zoology (220)

### Parasitology (220b) Prof. Dr. Ute Mackenstedt

The work of the chair focuses on the epidemiology and molecular characterisation of parasites with veterinary or medical impact, including zoonotic agents. The following research projects related to developing countries were carried out:

SFB 564, subproject D4.1, Livestock parasites and parasitic zoonoses in smallholder farming systems in northern Vietnam had been completed in 2006. Work on collected material has continued and led to a better understanding of the taxonomy of various *Sarcocystis* species in cattle, water buffalo and pigs in northern Vietnam. This was achieved using a combination of molecular and electron microscopy techniques.

A funding proposal to DFG in the context of German-African cooperation in infectiology was finalised during a workshop in Nairobi and Lokichogio, Kenya, in April 2008. In April 2009 the project was approved under the title 'Epidemiology and clinical implications of the genetic diversity of *Echinococcus*

*spp.* in Sudan, Kenya, Uganda and South Africa'. The project is funded for an initial period of three years with the option of two additional periods. Cystic echinococcosis (CE) is an important zoonosis with a specific impact on disadvantaged pastoralist communities and is therefore a neglected disease even in high endemicity regions. Research objectives are

- (1) to characterise the epidemiological and clinical implications of the genetic diversity of *Echinococcus spp.* in the participating countries, and
- (2) to develop molecular tools for application in epidemiology. CE is caused by a highly diverse complex of species, usually assigned to *Echinococcus granulosus*. In Africa at least five independent genotypes exist, with highly different biological characteristics, e.g. infectivity to humans. Little data exist on the consequences for public health, livestock production, or control. Apart from research, the project includes the establishment of a training/support network linking the German and African institutions, which will provide African scientists with molecular, clinical and epidemiological expertise.

The project is jointly coordinated by Dr. Thomas Romig (Universität Hohenheim, Parasitology) and Prof. Peter Kern (Infectiology & Clinical Immunology Unit, University of Ulm). The African project partners are the Central Veterinary Laboratories and the Elshaab Teaching Hospital (Khartoum, Sudan), the University of Gezira (Wad Medani, Sudan), the Jomo Kenyatta University, the African Medical & Research Foundation, the Kenya Medical Research Institute (Nairobi, Kenya), and the Makerere University (Kampala, Uganda) and the University of the Witwatersrand (Johannesburg, South Africa). A coordination meeting was held in October 2009 in Nairobi. Most studies have already started and various institutes in Sudan, Kenya and Uganda have been equipped with molecular laboratories. Dr. Cecilia Mbae from the Kenya Medical Research Institute has received four weeks laboratory training in Hohenheim in October 2009.

Prof. Mario de la Rue (University of Santa Maria, Brazil) had a research stay in Hohenheim in October 2009, funded by DAAD. Subject of the work was molecular characterisation of parasite isolates from Brazil.



## Agricultural Economics and Social Sciences

### Special: Food security and right to adequate food in the context of land and agrarian reform in South Africa

The project explores the impact of land and agrarian reform on food and nutrition security in South Africa, in particular the impact on local food systems and marginalised vulnerable groups, among them emerging farmers, farm workers and especially the women among them. Emphasis is being laid on the perspectives and capacity of these groups.

The objective is to expand the context and understanding of food security and agrarian reform in countries in transition that face economic destabilisation in the wake of political change through comparative research. The issues addressed here, how to ensure food security at the national and local level and how to develop, assess and evaluate sustainable healthy local food systems, are not only relevant for South Africa and the sub-continent, but also for other regions, including the European Union.

Despite numerous global initiatives in the fight against hunger, the number of hungry people and the level of inequality have increased, especially in Sub-Saharan Africa and in countries experiencing a post-1989 transition. Mainstream policies, which are built on the assumption that an overall reduction of poverty will automatically lead to a reduction in the number of hungry and malnourished have failed (at least in large part) because they do not take into account the concerns, needs and rights of vulnerable groups.

The recent financial crisis exacerbates the situation. South Africa plays a key role for the economic development and stability of Sub-Saharan Africa and is therefore of high relevance in the context of development cooperation. The country on the one hand currently represents one of the most stable and wealthy economies in Africa, on the other there is widespread poverty and food insecurity, deriving both from previous inequalities and current failed policies. Land and agrarian reform is regarded as having the potential to contribute to food security and livelihoods in South Africa, especially among

previously disadvantaged groups, but has been criticised on a number of issues, such as the poor implementation of post-settlement support and the failure to integrate land reform within a wider programme of rural development, which has severely limited its contribution to livelihoods and to the revival of the rural economy. South African agriculture has a “missing middle” with large scale commercial and white-owned farms on the one side and small-scale black-led subsistence agriculture on the other.

Research will be carried out in the provinces Limpopo, North West and Western Cape on farms that have undergone restitution and within projects of land reform and rural development, in close collaboration with local Non-Governmental Organisations (NGOs), Civil Society Organisations (CSOs) and South African universities (i.a. North West University, Stellenbosch University).

The Sustainable Livelihoods Approach serves as a theoretical framework, taking into account social conditions, besides economic viability and environmental issues, and integrating a gender analysis. These aspects are crucial for development aimed at reducing poverty and hunger and improving rural livelihoods, as has also been highlighted in the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) Report (2008). The methodology will also integrate evolving rights-based approaches as introduced by the FAO and tested at this time by diverse academies (including the Universität Hohenheim and Heidelberg) and civil society organisations (e.g. FIAN International).

The research will be multi-level and intersectoral, applying a mix of qualitative and quantitative methods. Interviews will be conducted with experts, beneficiaries of land reform programmes, vulnerable groups concerned with land reform and other stakeholders. It is planned to perform network analysis of partnerships and linkages between national/provincial government, CSOs, NGOs and community-based organisations (CBOs) and households and individuals, employing Global Positioning System (GPS) technology and Geographic Information System (GIS) mapping methods.

Furthermore, participant observation and action research will be carried out. Household and community level assessments will be complemented by provincial, regional and national assessments, integrating quantitative structural data and statistics. Research activities will further be guided by a



*Agricultural training and skills development for women, Grootbos Foundation, Gansbaai, Western Cape*

transdisciplinary approach, integrating e.g. agriculture, nutrition, anthropology, economics, public administration, political sciences, sociology, geography and development studies. This research is expected to reveal the impact of various land and agrarian reform programmes on food security, livelihood options and power relationships between the relevant stakeholders in the selected areas. While the findings cannot be representative of South Africa, it is expected that they might be valid for other areas where similar problems are being experienced. Furthermore, through continuous evaluation and documentation this research will contribute to the work of local partners, which will result in recommendations to policy makers. The aim is to strengthen the position of targeted groups and empower them to actively claim their rights, which could enable them to engaging in sustainable livelihood strategies and developing sustainable, local food systems.

Duration: March 2010 - April 2014  
 Project leader: Dr. Stefanie Lemke  
 Collaborator: Prof. Dr. Anna Camilla Bellows  
 Department of Social Sciences in Agriculture,  
 Gender and Nutrition (430b)

Funding: Margarete von Wrangell-Habilitation-programm of the Ministry for Wissenschaft, Forschung und Kunst Baden Württemberg and Europäischer Sozialfonds Baden Württemberg, South Africa Netherland research Programme on Alternatives in Development (SANPAD), Foundation Fiat Panis

**Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics**

**Rural Development Economics and Policy (490a) Prof. Dr. Manfred Zeller**

The research focus lies on agricultural and rural development policies and institutions and their impact on the critical triangle of sustainability, i.e. on equity and the reduction of hunger and poverty, on economic growth, and on the environment. The majority of research projects carried out by doctoral and master students uses quantitative research methods, often mixed with qualitative methods. The projects mainly collect primary data at household, community and institutional levels in developing and transformation countries.

## Major research themes:

During the past two years, about 15 doctoral and post-doctoral researchers and about 20 Master and Bachelor students were involved the following areas with the main countries listed in parentheses:

- Food and social security (China, Guatemala, Laos, Madagascar, Malawi, Indonesia, Vietnam, Thailand).
- Vulnerability of and adaptation strategies of smallholder agriculture to shocks, such as climate change, landslides, and drought (Indonesia, Ethiopia, Thailand, Vietnam).
- Poverty and gender issues in agricultural and rural development (Malawi, Uganda, Bangladesh, Guatemala, Cambodia, Vietnam, Kenya, Thailand)
- Social performance and welfare impact of micro-finance institutions (Vietnam, Cambodia, China, Malawi, Uganda, Cameroon, Mexico).
- Welfare and productivity impacts of land policy reform (Vietnam, China, Philippines).
- Potential of biofuels for raising income of smallholder farmers (India, Madagascar and Tanzania)
- Role of cooperatives, contract farming, specialty marketing channels such as fair trade or organic agriculture, and agricultural market policy reform in enhancing agricultural productivity and improving welfare among rural households (Cuba, Tanzania, Vietnam, China, Russia, Nicaragua).
- Adoption of agricultural technologies and efficiency in smallholder agriculture (Vietnam, China, Nicaragua, Cuba, Indonesia, Zimbabwe).
- Policies for promoting environmental services of smallholder agriculture (Vietnam, Indonesia, in 2010 also in Laos).
- Participatory technology development: Identification, on-farm testing, and economic assessment of potential soil conservation technologies in northern Vietnam. This is an interdisciplinary outreach activity funded by the EnBW-Rainforest Foundation that is carried out in close collaboration with local farmers, the agricultural extension service, and other relevant stakeholders. Other departments involved are the Department of Plant Production and Agroecology in the Tropics and Subtropics (380a) and the Department of Social Sciences in Agriculture (430a).

In 2008 and 2009, seventeen diploma or master theses and one bachelor thesis were completed under the supervision of Prof. Manfred Zeller, Prof. Franz Heidhues, and Dr. Alwin Keil.

Prof. Zeller and Prof. Heidhues lead a sub-project in the International Graduate Research Training

Group on “Modeling Material Flows and Production Systems for Sustainable Resource Use in Intensified Crop Production in the North China Plain”, a programme of the Universität Hohenheim and the China Agricultural University in Beijing, funded by the DFG. This project was positively reviewed, and has been extended for another 3 years until 2013 (<https://rtgchina.uni-hohenheim.de/>).

Prof. Heidhues continues to be involved in the SFB564 “Sustainable Land Use and Rural Development in Mountainous Regions of Southeast Asia”. During the third phase (2006-2009), Prof. Zeller, Prof. Heidhues and Dr. Keil participated in the SFB 564 with a sub-project in Vietnam which sought to develop alternative lower-cost approaches for measuring poverty and to assess the impacts of agricultural policies, particularly land and credit market reform, on food security and income of farmers.

Since November 2007, Prof. Zeller leads a professional working group at the Universität Hohenheim to coordinate the preparation of a proposal for a new special research programme (SFB) in Eastern and Southern Africa that seeks to investigate mitigation and adaptation options of smallholder agriculture with respect to climate change. Financial support for this research initiative has been provided by the Ministry of Sciences, Research and Art of the State Baden-Württemberg, the Tropenzentrum, and the Rector’s office. Since May 2009, Dr. Abele is the scientific coordinator of the SFB initiative in Africa.

Since mid-2009, Prof. Zeller serves as Director of the Food Security Center. The Food Security Center (see page 10) is one of the five excellence centers under the EXCEED programme of DAAD with financial support by the BMZ. The managing director of the Food Security Center, Dr. Virchow, began his work in November 2009.

With the support of the German Ministry of Economic Cooperation and Development (BMZ) and GTZ/BEAF, a project using experimental research methods for analyzing the performance of alternative contractual arrangements in contract farming linking smallholders to agribusinesses has commenced in mid-2008. The project is led by the International Food Policy Research Institute (IFPRI), and field studies are carried out in Tanzania.

Apart from the Deutsche Forschungsgemeinschaft (DFG), funding for research and training activities were received by the German Academic Exchange Service (DAAD), IFPRI, the Eiselen Foundation, the

EnBW-Rainforest Foundation, the Universitätsbund Hohenheim, and the German Agency for Technical Cooperation (GTZ).

### International Agricultural Trade and Food Security (490b) *Prof. Dr. Martina Brockmeier*

Research at the chair of International Agricultural Trade and Food Security focuses on the analysis of global food and agricultural economic issues and their distinct implications for developing countries. Global agricultural trade liberalization has been an urgently pursued matter over the last decades. National agricultural policy reforms as well as implemented international trade agreements have indeed led to a noticeable decrease in agricultural protection. However, at the same time, national and international agricultural and food policies have become increasingly complex, and research and development of analytical tools were not able to keep up with the ingenuity of agricultural politicians. Accordingly, methods are partly still adequate and the implications of agricultural trade liberalization for developing and developed countries have not been thoroughly determined to date.

Global agricultural trade liberalisation and its implication for developing countries are analyzed utilizing the global general equilibrium model GTAP (Global Trade Analysis Project). Within different projects GTAP is extended in many respects to assess the research question at hand. Additionally, advanced econometric methods and gravity models are employed to enrich the capability of GTAP to analyze the impacts of non-tariff barriers in international food and agricultural trade.

Given this background, research projects at the chair particularly emphasise the following questions:

- What theoretical extensions are needed to represent market access and the corresponding tariff cuts of international trade negotiations in GTAP consistently? How do applied weighting schemes (e.g., import weights, weighting schemes using Trade or Mercantilist Trade Restrictiveness Index) influence simulation results when aggregating tariff lines from the 6-digit level of the harmonised system 96 (HS96) to model level? Do the weighting schemes change simulation results for developing countries significantly?
- How can the GTAP model be extended to better capture domestic support issues, especially the WTO classification of support including the Over-

all Trade Distorting Domestic Support (OTDS)? Is it possible to identify WTO domestic support measures (i.e., green, blue and amber boxes) within the GTAP model? What is necessary to create an AMS (Aggregated Measurement of Support) sub module for GTAP? How does the reduction in domestic support influence agricultural production in developing countries?

- How can non-tariff barriers be quantified and integrated in global trade models? Does the reduced importance of import tariff barriers invite politicians to substitute for non-tariff barriers to keep up the protection level, i.e., will we observe an amplified application of non-tariff barriers in international trade in the future and how does that affect developing countries trade?
- Is it still efficient to represent the complexity of agricultural policy by just one model or is it more appropriate to utilise model systems that capture macro and micro aspects of agricultural policies according to their comparative advantages? What types of model linkages are needed to analyze the impact of global agricultural trade liberalization on poverty?

In pursuing these projects the chair of International Agricultural Trade and Food Security contributes a global perspective to the research at the Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics.

### Farming and Rural Systems in the Tropics and Subtropics (490c) *Prof. Dr. Werner Doppler (retired September 2009)*

The objectives in research are the development and assessment of methodologies as well as the empirical analyses of problem-solving strategies. The research in methodologies focuses on the following objectives:

- Integrating farm management methods into a holistic concept which put emphasis on family decision-making by incorporating farm, household and off-farm activities as well as gender and socio-cultural related influences on decision-making. This will contribute to the definition and concepts of living standards of families and rural livelihoods.
- Incorporation of space and extending the methodologies in agricultural economics by integrating Remote Sensing and Geographical Information Systems.
- Developing mathematical simulation models which

combine the economic and social objectives of a decision-making process with the dynamics of development in social groups and spatial differentiation to assess the impact of future problem solving strategies at family and rural societies' level.

The empirical focus of the research differs in the various regional research zones in the Middle East, Southeast Asia, Central America and the Amazon region and in West and East Africa with the following main research projects:

Water resources development, re-use of water, irrigation economics and water pricing policies and its impact on family living standards and rural livelihoods in the Middle East covering countries such as Syria, Jordan, Palestinian Authority area (West bank and Gaza) and Israel. The programme is funded by different sources. Cooperating partners are ICARDA, the University of Aleppo, Syria; Technical University of Haifa, Israel; Jordan University in Amman, Jordan; Al-Azhar University in Gaza, Palestinian Authority and the Arab Agronomist Association/Palestinian Agricultural Relief Committee (PARC), Westbank, Palestinian Authority.

Resource management in mountain farming and rural livelihood in Southeast Asia. The programme started in 1989. The main topics are in the fields of (i) overuse of land resources and the economics of conservation and rehabilitation strategies, (ii) analyses of family living standard and rural livelihood, (iii) water resources and water pricing policies and (iv) the role of ethnic differentiation in rural development. The programme covers Vietnam, Thailand, Laos and Indonesia. A special programme on "Impact of water resources development and irrigation on rural livelihood in Thailand" is funded by the Eiselen Foundation. Cooperating partners are the Asian Institute of Technology (AIT) Bangkok, Universities of Chiang Mai and Kasetsart in Thailand, Thai Nguyen University in Vietnam and the Diponegoro University, Java, Indonesia.

The research on socio-economic development in forest margins of the Amazon rainforest covering Brazil, Guyana and Venezuela deals with the conflicting issues between the conservation and the economic use of the rainforest. Moreover with carbon sequestration and cost and quota quantification, with organic farming and bio-diesel economics and with the development opportunities of indigenous people in the forests. A second programme studies the impact of cross countries market relation on the development of different farming systems in

Nicaragua, Honduras and El Salvador. Cooperating partners are the International Centre of Tropical Agriculture (CIAT), Colombia, the University of Uberlandia, the Federal University of Tocantins, Palmas, the Lutheran University Centre of Palmas (CEULP/ULBRA) and Santarem, the Faculdade Boa Viagem (FBV) Recife, Pernambuco, Brazil and the University of Guyana, Caracas, Venezuela.

The research projects in West and East Africa deal with food security and gender issues as well as resource management and soil conservation economics. New sectors have started such as the overuse of land resources and the economics of conservation and rehabilitation strategies and the economics of organic farming and renewable energy concepts as well as the role of ethnic differentiation in rural development and the impact of social networks and institutions on living standard and livelihood. Cooperating partners are IITA (International Institute of Tropical Agriculture) Nigeria, the University of Cotonou, Benin, the University of Nairobi, Kenya, the Makerere University, Kampala, Uganda and the University in Addis Abba, Ethiopia.

### **Land Use Economics in the Tropics and Subtropics (490d) - Josef G. Knoll Professorship - Prof. Dr. Thomas Berger**

The professorship is primarily concerned with human-environment interactions in the areas of land use, water resources and renewable energy in the tropics and subtropics. Possible consequences of environmental, structural and policy changes are evaluated with respect to resource protection and food security.

Modern methods from computer and information technology are an integral part of the research. These methods are used to analyze the environmental effects of policies on the agent level and the adaptive ranges of those agents. Furthermore, the distributive effects of policies on diverse segments of the population are made visible.

The professorship especially deals with the following main areas:

- Global changes and their effects on resource protection at the regional/local level.
- Resource markets, over- and under-use of natural resources and sustainability strategies
- Rural land and water use planning.
- Methodology of spatially-explicit modelling of agro-ecosystems.



The contribution of the professorship to the agricultural research at Hohenheim lies in its integration of natural and social science process knowledge, as well as in research into methods that communicate the findings of systems science and the local knowledge of resource users. Thereby, the professorship offers a bridging function between basic agro-economic research and the applied natural and social sciences of Hohenheim.

### Research projects:

- Assessment of Innovations and Sustainability Strategies (SFB 564)
- Integrated DFG Project 'Regional Climate Change: Project on agent-based modelling and assessment of human-environment interactions and project on conceptual and technical integration of land system model components.
- Working together for market access: Strengthening rural producer organisations in Sub-Saharan Africa Multi-agent Systems (MAS) are models that can simulate agricultural related collective action problems allowing ex-ante evaluation of the implications of different policy scenarios for rural organisations.
- Integrating governance & modeling – project within the CGIAR Challenge Programme on Water and Food (Chile and Ghana). Research issues: Sustainable use of land and water resources, collective action; multi-stakeholder governance structures; planning/decision support based on multi-agent systems (completed project).
- The effect of HIV/AIDS on farming systems in Southeast Uganda (Research issues: investigation on the effects of mortality under HIV aids on cropping choices and patterns of production of agricultural producers in the region.
- Joint German-Chinese Research Project about Jatropha (China). Research issues: Optimising the extraction and use of Jatropha oil and the efficient utilization of Jatropha flour – financial and economic analysis along the value chain.

### Department of Farm Management (410)

#### Production Theory and Resource Economics (410a) *Prof. Dr. Stephan Dabbert*

Research focusses on two areas. The first area is the economics of organic farming. Single enterprises are analysed and organic farming policies are evaluated. Lately, the economic analysis of organic

certification systems and all factors influencing the spatial distribution of organic farming have moved into the centre of interest. Methodological approaches used cover participatory and qualitative methods as well as mathematical programming and econometric methods.

The second area of emphasis is interdisciplinary modelling. Based on the economic theory of farming enterprises models are developed which represent agriculture at the spatial scale of landscapes and regions. These models are used to analyse the effects of climate change on agriculture and to evaluate agri-environmental policy measures. Often the work is related to water issues. A methodological focus is on programming and agent modelling and the integration of such models with simulation. These approaches are complemented by econometric analyses of the effects of climate change on agriculture.

Consistently also topics relating to agriculture in the tropics and subtropics are dealt with. In the context of dissertations different projects have been implemented: An economic analysis of wastewater use in peri-urban agriculture of Addis Abeba (Ethiopia) was done. In Benin the determinants of water consumption in rural areas have been investigated and in the Philippines the adoption of rain forestation farming has been studied. A number of Master theses dealing with resource use in tropical and subtropical countries are supervised.

#### Computer Applications and Business Management in Agriculture (410c)

*Prof. Dr. Reiner Doluschitz*

The main research areas of the department are (I) the conception and development of adapted management forms for agricultural enterprises of different types of production plan and sizes, (II) the conception and development of strategies for the environmental management at enterprise level in enterprises of the agrarian and food production, (III) the GIS supported environmental management and methodical advancement of appropriate models to inter- and transdisciplinary environmental information systems on regional, national and international level, (IV) Sustainable Agriculture in the North China Plain, and (V) Quality Assurance and Food Safety in Agro-Food-Chains.

The following development-oriented research projects were worked on in the reporting period:

- International research training group “Modeling material flows and production systems for sustainable resource use in intensified crop production in the North China Plain” 2004 - 2013, financed by DFG, coordination: Dr. Diana Ebersberger, ten doctoral candidates and one postdoc.
- Modelling key factors at regional scales for sustainable agricultural development in the North China Plain: 2008 – 2010, sub-project of the IRTG Sustainable Resource Use in North China, financed by DFG.

## Department of Agricultural Policies and Agricultural Markets (420)

### Agricultural and Food Policy Group (420a)

*Prof. Dr. Harald Grethe*

The Agricultural and Food Policy Group works on the effects, the evaluation and the further development of agricultural and food policy of industrial countries, especially the EU, as well as developing countries. One specific focus is on international agricultural trade policy. The primary focus of the research group is on questions concerning socio-political relevance, e. g. the distributive effects of trade integration, the future design of the multilateral trade framework of the World Trade Organisation, as well as the increasing rivalry between the production of foods and the energetic and industrial use of biomass. A methodical focus is on the development and use of quantitative simulation models at various aggregation levels. For example, equilibrium models are generated for villages within the province Guizhou in Southwestern China to show distributive effects of the economic integration in China. Also, the European Simulation Model (ESIM), a global partial equilibrium model of the agricultural sector, is further developed and applied within various DFG- and EU-sponsored research projects. To analyse the effects of macroeconomic and sectoral developments at a microeconomic level, numerous projects for cross-linking models with a different level of aggregation are being worked on.

Research projects focusing on developing countries:

Economic analysis of movement and trade restrictions and the potential for increased economic integration of agricultural markets and trade in Israel

and the West Bank: (DFG funded trilateral project, 10/2009-9/2014) : Political tensions between Israel and Palestine have led to extensive border restrictions between these two countries and movement restrictions within Palestine. Hence, although Israel and Palestine maintain a customs union vis-à-vis third countries, they are not a free trade area, and cannot realise potential gains from trade in inputs and final products. The objective of this project is to foster cooperation between Palestine and Israel by analysing the potential benefits of removing these restrictions for agriculture and the economy as a whole.

The Impact of Trade Liberalisation on Migration, Poverty, and Income Distribution in Rural Communities in Southwestern China: In the late 1970s, China launched economic reforms that initiated the country’s transition from a planned economy toward a “socialist” market economy. In the course of these reforms, the foreign trade regime has been liberalised considerably. In 2001, these liberalisation efforts culminated in the accession of the country to the World Trade Organisation (WTO). The reforms led to a remarkable reduction in poverty; however, income inequality has increased steadily and is considered a primary challenge for China’s development. The aim of the project which is carried out in close cooperation with the IFPRI China Programme is to analyse the impact of further multilateral trade liberalization on poverty and inequality in rural communities in selected villages in Southwestern China.

Analysis of the effects of the agricultural world market price level on rural population groups in developing countries (supported and in cooperation with GTZ and the Eiselen Foundation): A series of master theses analyses the effect of recent world market price movements on rural population groups in developing countries (Vietnam, Thailand, Tanzania, Bolivia, Ethiopia).

## Department of Social Sciences in Agriculture (430)

### Rural Communication and Extension (430a)

*Prof. Dr. Volker Hoffmann*

The research of the department deals with farmers’ knowledge systems and their change over time, the development and applied research and adoption of participatory approaches. Research topics are, for example, the relationship between humans and nature, change processes within organisations,



methods for promoting adoption and problem solving processes, and rural livelihoods. The focus is mostly on rural development and includes also participatory research methods in agricultural research as study object.

The following topics have been tackled during the past years:

- Urban agriculture as an integrative factor of urban development in Casablanca. Partner organisations: BMBF, TU Berlin, Bergische Universität Wuppertal, Fachvereinigung Brauch- und Regenwassernutzung, Université Hassan II – Ain Chock de Casablanca, Faculté de Sciences, Institut National d'Aménagement et d'Urbanisme, Rabat.
- Determination of high-potential aquaculture development areas and impact in Africa and Asia. Countries (Bangladesh, China, Malawi, Cameroon). Partner organisations: WFC/ICLARM and BMZ.
- Seed system analysis in the frame of the research project on „Arresting the scourge of striga on sorghum in Africa by combining the strengths of marker-assisted backcrossing and farmer participatory selection in Kenya, South Sudan and Eritrea. Partner organisations: ICRISAT and BMZ
- Utilisation of non-wood forest products by farmers in China.
- Potentials and constraints of participatory research approaches for sustainable development in mountainous regions of Southeast Asia: Addressing issues of scale (Vietnam), Partner Organisations of SFB 564.
- Performance and reputation analysis of organisations. Measuring stakeholder perceptions and priorities to improve value chains of feed, forages, chickens and pigs in Nicaragua and Colombia. Partner Organisation: CIAT.
- Banana tissue culture: community dissemination pathways for delivery of high quality planting material to create markets for African farmers. Country: Uganda, Kenya, Burundi, Partner Organisation: IITA.
- Action research in extension programme development for irrigated production systems of the Central Asian lowlands as to improve water use efficiency, livelihood and environment (Uzbekistan), Partner Organisation: ZEF.
- Extension in the Northern Mountainous Region of Vietnam. Partner: SFB 564.
- Agricultural innovation systems in Vietnam's northern mountainous region. A critical assessment of the dynamic development in the second half of the twentieth century.

## Gender and Nutrition 430b

*Prof. Dr. Anne Camilla Bellows*

The main research focus in developing countries was on gender issues as they intersect with diverse food and nutrition topics including:

- the nutritional status of women, children, and families (Samoa).
- nutrition rehabilitation of malnourished children (Nias Island).
- food quality and feeding practices with an emphasis on WHO standards for breastfeeding and complementary feeding.
- the effectiveness of school feeding programmes (Ghana).
- the impact of land reform on household and community nutritional security and well-being.
- analyses of women's roles in the decision-making and the practice of family and community food security and public health.
- the impact of local civil society organisations on poverty reduction, human nutrition, and community well-being (Ethiopia).
- a realisation of the right to food, the right to feed, and the right to be fed (South Africa).
- mal/nutrition and well-being in the context of migration and changing food environments (Mexico).

Research undertaken in Mexico and the U.S. investigated cyclical migration through changing food environments and the related impact on nutrition, public health and well-being of families and communities as described by Oaxacan Mexican women on both sides of the migration divide. Funded by the Johnson and Johnson Foundation and the US Department of Agriculture, existing research has resulted in papers concerning nutrient analysis of home food environments (kitchen pantry audits; accepted for 2010 publication); food related behaviours and outcomes, gardening as a tool to foster health and cultural identity (both under review); and a preliminary study of dental practices and nutritional knowledge (in preparation).

In South Africa, research is being carried out on "Food security and right to adequate food in the context of land and agrarian reform" (see also page 39).

## Department of Economics (520)

### Environmental Economics, Regulatory and Consumer Policy (520f)

*Prof. Dr. Michael Ahlheim*

The department's research related to the tropics and subtropics focuses on the field of economic valuation of environmental goods and their changes using monetary valuation methods. Following the anthropocentric view of economics we investigate the question to what extent changes of the natural environment result in changes of social welfare, i. e. effects on the well-being of the population affected by environmental changes, where these welfare changes are measured in monetary units. In practice, there are three main fields of application of economic environmental valuation: the evaluation of publicly funded environmental projects using cost-benefit analysis, the assessment of environmental damages resulting from environmental accidents and the extension of the official statistics by taking changes in the stock of natural capital into account. The department is engaged in theoretical analysis and further development of the methods of environmental valuation on the one hand and in their practical application on the other, especially, among other regions, in the tropics. In addition to the traditional valuation methods based on individual interviews such as the Contingent Valuation Method (CVM) group-based, participatory valuation techniques, the Market Stall Method or Citizen Juries are integrated into these environmental valuation studies. Besides the various theoretical papers that were produced in the department, empirical research projects dealing with special aspects of reliability and validity of the approaches mentioned above are currently carried out.

Concerning the research done by the department in tropical regions in 2008-2009 subproject F1.3 within the SFB 564 was completed in June 2009 (partners: Chiang Mai University, Thailand). The empirical aim of this subproject was to use the CVM for an assessment of the social value accruing to the population of the city of Chiang Mai from a flood control programme that would lead to complete protection from flooding under such heavy rain conditions as experienced in 2005. Measures of this programme include widening and excavation of the Ping river in Chiang Mai as well as a number of reforestation and soil conservation measures in the upland watersheds surrounding Chiang Mai to control the runoff during heavy rain events. From a methodological point of view this subproject builds on the experi-

ences gained in the second phase of the SFB with participatory group meetings to improve the process of CVM survey design. Here, these techniques were further developed by intensifying the cooperation with the local population affected by the flood protection project in so-called citizen expert groups (CEGs). A generalised procedure to employ such CEGs in developing and emerging countries was developed in this project. Moreover, in a pilot study in the province of Son La in Vietnam CEGs were employed for the valuation of the social benefits associated with a reduction of landslides.

Starting in July 2009, subproject F1.4 began its research activities in the fourth phase of the SFB 564 in Thailand and Vietnam. In both countries, field experiments will be conducted to investigate the biasing effect of psychological factors such as fairness, reciprocity, altruism and social norms on results in CVM surveys and to develop methods to avoid potential biases when applying this method in developing and emerging countries.

Moreover, research in subproject ECON-A within the Sino-German research cooperation "Living Landscapes China (LILAC)" funded by the German Ministry of Science and Technology (BMBF) was continued. Within this interdisciplinary research cooperation the subproject aims at an assessment of the social value of a reduction of rubber cultivation in Xishuangbanna in the Southern tip of Yunnan province in China. Its methodological aim is to develop a valuation technology that is adapted to the specific socio-economic and cultural context of China as a transformation economy.

# Agricultural Engineering and Food Technology

## Special: Development of energy-efficient systems for high-quality fruit drying

Thailand is an agriculture-based economy with production of high value fruits as one of the main sources of crop revenue. Among them, longan and litchi have significant importance for the economy. Those fruits are produced mainly in the northern region. Litchi is grown primarily by smallholders in the mountainous areas. Because the profitability of litchi growers has been jeopardised by unstable prices and insufficient access to markets, the orchards are being substituted by seasonal field crops, resulting in increased levels of erosion, pesticide use and water demands.

Local production of dried fruits by small-scale industries or farmer cooperatives is a promising solution for upland growers. Such practice keeps the value adding process in the rural area, allows decoupling producer from the unstable fresh market and eliminates the middle man from the value chain. However, with rising fuel costs the profitability of this operation may be reduced. Particularly because the current drying technology used in small-scale food processing industries has low energy efficiency and yields a heterogeneous product, not allowing farmers to access the international market. Therefore small-scale fruit drying equipment has to be optimised to increase energy efficiency and to meet export quality standards.

Additionally, renewable sources like biomass or biogas produced from fruit processing wastes, e.g. pruning material, seeds, and peels, can provide energy for drying and replace fossil fuels. Therefore, biogas and biomass combustion should be integrated in the drying systems.

### Objectives

The general objective is to develop an energy-saving drying technology at affordable costs for producing high-quality dried fruits. This objective can be divided into following aims:

- Thermodynamic optimization of fixed-bed and tray drying systems
- Biogas production from fruit processing and integration of biogas combustion in the drying systems

In the SFB 564 subproject E1, drying behaviour of mango, litchi and longan was investigated with respect to quality effects. Analytical models have been established and integrated in computational fluid dynamics (CFD). The drying facilities should benefit from those simulation tools.

### Results until now

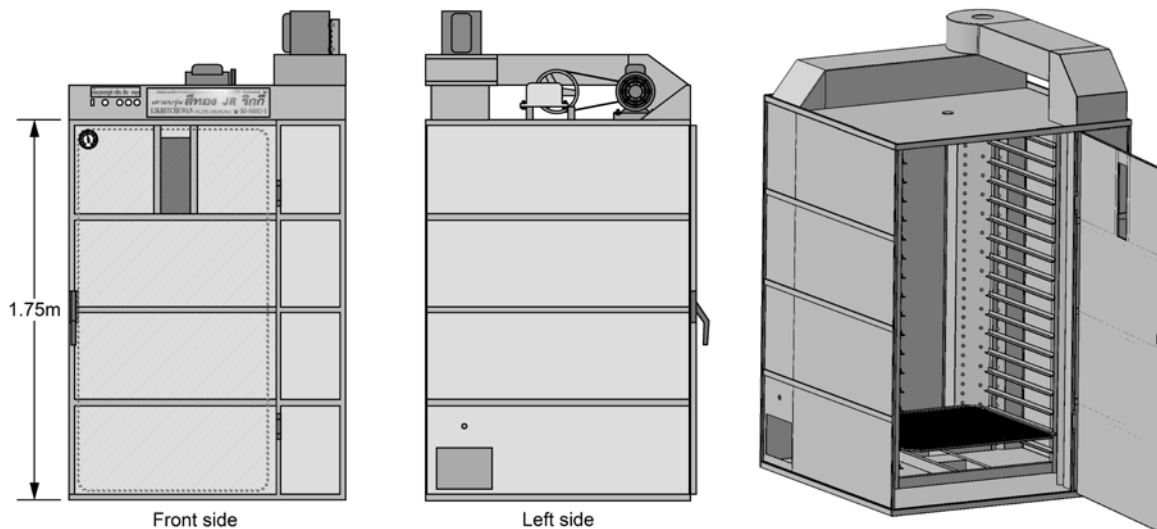
A survey of litchi drying facilities in Northern Thailand was conducted. Various types of cabinet tray dryers heated either with LPG or firewood were found and it was observed that, in general, producers face difficulties in achieving uniform batches. An additional survey was carried at the sites where the LPG-fueled tray dryer from the Likhitchewan company are used. Users mentioned its convenient operation, good temperature control and cost-capacity ratio as its main advantages. The high fuel consumption and non-uniformity of the drying batch were consistently regarded as drawbacks. The quality and energy performance of the Likhitchewan tray dryer was experimentally analyzed for litchi drying in a farmer's cooperative. Non-uniform temperature distribution in the drying chamber was observed, resulting in heterogeneous batches. Losses via exhaust air and convective losses were the main heat sinks identified. Furthermore the optimum physico-chemical properties of dried litchi for Thai consumers were investigated and results indicate that Thai consumers prefer golden-yellow, softer and sweeter than sour dried litchi.

### Methods

The thermodynamic optimization of fixed-bed and tray drying systems will be performed using computational fluid dynamics (CFD). Distribution of temperature and airflow in the dryers will be simulated to optimise the equipments in terms of energy consumption and spatial uniformity of drying conditions.

To allow the use of biomass in the drying process calorific value and combustion behaviour of pruning material of various fruit crops will be analyzed and a combustion unit will be developed and integrated in the equipment. To allow the use of biogas, temporal and spatial distribution of residues produced from farms and small scale food processing industries will be investigated and analyzed in chemical composition and energetic value. The quantity and quality of the gas produced will be evaluated and a gas burner for biogas will be developed.

The entire process will follow the Systematic Design Method VDI-2221. This discursive design method



Prototype dryer

starts with a comprehensive analysis of the problem and ends with an optimised and well documented prototype. The prototypes will be built with local manufacturers (Likhitchewan Co., Ltd.) and installed in farmer cooperatives for joint evaluation. By verification with manufacturers and technology user groups, the gap between fundamental research and practical application will be bridged.

Prof. Dr. Joachim Müller, Dr. Wolfram Spreer,  
Marcelo Precoppe  
Department of Agricultural Engineering

## Department of Agricultural Engineering (440)

### Agricultural Engineering in the Tropics and Subtropics (440e)

*Prof. Dr. Joachim Müller*

The chair of Agricultural Engineering in the tropics and subtropics is primarily engaged in interdisciplinary research in order to protect water as a natural resource and to conserve energy. Due to the fact that certain production processes such as drying are particularly high in energy consumption, post-harvesting technology demands special attention. The combination of fundamental and applied research – frequently in cooperation with the industry - enables the development of technology ready for market.

### Research projects:

- Development and optimisation of a drying process for mushrooms in regard to product quality.
- Optimisation of de-shelling and oil extraction of *Jatropha curcas* L. for direct use in plant oil stoves.
- SFB 564, B3.2: Irrigation and fertigation strategies for water saving and optimum nutrient supply in subtropical fruit orchards utilizing stress responses.
- SFB 564, E1.2: Multi-layer drying models for optimization of high value crop drying in small scale food industries (see special page 49).
- SFB 564, T1 – development of automated control systems for water saving irrigation of fruit orchards.
- SFB 564, T2 - Development of energy-efficient systems for high-quality fruit drying.
- Applicability of solar pumps for irrigation on small farms in remote areas of the Yellow River Basin.
- Precision phenotyping for improving drought stress tolerant maize in Southern Asia and Eastern Africa.
- IRTG 1070: SP 2.4 Precision irrigation and fertigation technology for improving water- and fertiliser-efficiency of North China Plain production systems.
- Development of a plant oil cooking stove.

## Department of Food Science and Biotechnology (150)

### Plant Foodstuff Technology (150d)

*Prof. Dr. habil. Dr. h.c. Reinhold. Carle*

The research area of the Plant Foodstuff Technology Section includes the optimisation of technologies for processing plant raw material into solid and fluid products together with the assessment of product-specific chemical quality parameters. Research activities aim at preservation of plant-based food, maintaining at the same time their nutritional and product-specific sensorial properties by gentle and sustainable processing technologies. Process development includes the chemical and physical characterisation of the technologically relevant properties of both raw material and final product. This includes the textural properties of solid foods and the rheology of fluid products, respectively. Another major research topic is dedicated to the removal of antinutritive and allergenic compounds from the plant material by adequate technological measures. The following research projects related to tropical foods have been carried out during the reporting period:

- Development of novel technologies for the quality improvement of plant foodstuffs: Shelf life extension and quality retention of fresh fruits and fresh-cut produce, manufacture and application of colouring food-stuffs from plants, development of alternative strategies for condiment processing
- Characterisation of food with special emphasis on bioactive compounds: Impact of food technology on contents and bioavailability of anthocyanins, betalains, carotenoids, and polyphenolics.
- Quality improvement of fruit juices and turbid fruit drinks: Investigations of the chemical quality and processing of exotic fruits.
- Sustainable food processing: Strategies for the recovery and utilisation of by-products from processing residues.
- Rheological characterisation of complex food systems: Hydrocolloid characterization in fluid, semi-solid, and solid food.

### Food Analysis (150h)

*Prof. Dr. Dr. h.c. Heinz-Dieter Isengard*

Water content has a great influence on the shelf life of foods. The analysis of water content and water activity is relevant for the control of raw materials, the production of foods and storage. This is particularly essential in tropical and subtropical envi-



*Colouring food-stuffs from pitaya*

ronments. Water content is very often measured by drying techniques. They do not detect water specifically but all substances volatile under the conditions applied. A complete evaporation of the water is often not possible, because the enthalpy of evaporation of the “last” layers of water is very high. A selective determination of water is possible by the Karl Fischer titration. The incomplete detection of water in foods has also economic implications. The price in some products is based on dry matter. If the water content is not determined completely, water can be sold at the price of the respective product. In cooperation with the International Dairy Federation (IDF) a method for determining water content of butter oil by Karl Fischer titration was developed and finally published as International Standard.

Frying and deep-frying are cooking techniques spread all over the world, including small stands in the streets in developing countries. The fats and oils used undergo deterioration during usage, forming undesired compounds. This makes a quality control and the exchange of oils from time to time necessary. The stability of fats and oils during deep-frying processes was therefore further investigated. The main focus was on the determination of polar substances which are formed in the fat during deep frying. The official method for determining this total polar material is extremely time-consuming. The new technique can be used instantaneously even in simple environments and could thus contribute to the safety of consumers. It needs neither chemicals nor laboratory equipment and specialised personnel, delivers results within a couple of minutes and allows, therefore for quick decisions and measures on the spot. An additional innovation was the replacement of preparative column chromatography by the technique of accelerated solvent extraction (ASE) to separate the polar and non-polar fraction of frying oils.

# Publications

## Peer reviewed papers

- ABEBE, G., IKE, A., SIEGMUND-SCHULTZE, M., MANÉ-BIELFELDT, A., VALLE ZÁRATE, A.** 2009. Prevalence of mastitis and brucellosis in cattle in Awassa and the peri-urban areas of two smaller towns. *Zoonoses and Public Health*. doi: 10.1111/j.1863-2378.2008.01214.x.
- ADHIKARINAYAKE, T.B., PALIPANE, K.B., MÜLLER, J.** 2006. Quality change and mass loss of paddy during airtight storage in a ferro-cement bin in Sri Lanka. *Journal of Stored Products Research* 42, 377-390.
- AHLHEIM, M., DINH, P.V., DUC, N.M., FRÖR, O., HEINKE, A., KEIL, A., SAINT-MACARY, C., ZELLER, M.** 2009. Landslides in mountainous regions of Northern Vietnam: Causes, protection strategies and the assessment of economic losses. *International Journal of Ecological Economics and Statistics* 15, 20-33.
- AHLHEIM, M., FRÖR, O., HEINKE, A., KEIL, A., DUC, N.M., VAN DINH, P., SAINT-MACARY, C., ZELLER, M.** 2009. Landslides in mountainous regions of Northern Vietnam: Causes, protection strategies and the assessment of economic losses. *International Journal of Ecological Economics & Statistics* 15, 20-33.
- ALENE, A. D., MANYONG, V.M., TOLLENS, E.F., ABELE, S.** 2009. Efficiency–equity tradeoffs and the scope for resource reallocation in agricultural research: evidence from Nigeria. *Agricultural Economics* 40, 1-14.
- ARNOLD, T., URIBEC, H., BERGER, T.** 2008. A distributed hydrological model of irrigation and agricultural land use at the Basin scale application to the VIITH region Chile. *American Society of Agricultural and Biological Engineers*, 185-195.
- AROUNA, A., DABBERT, S.** 2009. Determinants of Domestic Water Use by Rural Households Without Access to Private Improved Water Sources in Benin: A Seemingly Unrelated Tobit Approach. *Water Resources Management*. doi: 10.1007/s11269-009-9504-4.
- ASCH, F., BAHRUN, A., JENSEN, CR.** 2009. Root–shoot communication of field-grown maize drought-stressed at different rates as modified by atmospheric conditions. *Journal of Plant Nutrition and Soil Science* 172, 678-687.
- ASCH, F., HUELSEBUSCH, C.** 2009. Agricultural research for the Tropics: caught between energy demands and food needs. *Journal of Agriculture and Rural Development in the Tropics and Subtropics* 110, 75-91.
- ASTUTI, D.A., BECKER, K., RICHTER, N.** 2008. Utilization of methanol extracted of moringa and mulberry leaves to evaluate energy and protein balance of Nile tilapia. *Journal of Agriculture and Rural Development in the Tropics and Subtropics* 90, 70-82.
- BADRIDZE, G., WEIDNER, A., ASCH, F., BÖRNER, A.** 2009. Variation in salt tolerance within a Georgian wheat germplasm collection. *Genetic Resources and Crop Evolution* 56, 1125-1130.
- BALKHAUSEN, O., BANSE, M., GRETHE, H.** 2008. Modelling CAP Decoupling in the EU: A Comparison of Selected Simulation Models and Results. *Journal of Agricultural Economics* 59, 57–71.
- BASHA, S.D., FRANCIS, G., MAKKAR, H.P.S., BECKER, K., SUJATHA, M.** 2009. A comparative study of biochemical traits and molecular markers for assessment of genetic relationships between *Jatropha curcas* L. germplasm from different countries. *Plant Science* 176, 812-823.
- BECKER, K., MAKKAR, H.P.S.** 2008. *Jatropha curcas*: A potential source for tomorrow's oil and biodiesel. *Lipid Technology* 20, 104-107.
- BECKER, M., ASCH, F., CHIEM, NH., NI, DV., SALEH, E., TANH, KV., TINH, TK.** 2008. Decomposition of organic substrates and their effect on mungbean growth in two soils of the Mekong Delta. *Journal of Agriculture and Rural Development in the Tropics and Subtropics* 109, 95-108.
- BELLOWS, A. C., ONYANGO, B., DIAMOND, A., HALLMAN, W. K.** 2008. Understanding Consumer Interest in Organics: Production Values vs. Purchasing Behavior. *Journal of Agriculture & Food Industrial Organization* 6, 2.
- BEN SALEM, H., MAKKAR, H.P.S.** 2009. Defatted Moringa oleifera seed meal as a feed additive for sheep. *Animal Feed Science and Technology* 150, 27-33.
- BREITHAUPT, C., KURZBAUER, R., SCHALLER, F., STINTZI, A., SCHALLER, A., HUBER, R., MACHEROUX, P., CLAUSEN, T.** 2009. Structural basis of substrate specificity of plant 12-oxophytodienoate reductases. *Journal of Molecular Biology* 392, 1266-1277.
- BROCKMEIER, M., KLEINHANSS, W., OFFERMANN, F.** 2008. The challenges of model based policy advice. *Agrarwirtschaft* 57, 386-390.
- BROCKMEIER, M., PELIKAN, J.** 2008. Agricultural Market Access: A Moving Target in the WTO Negotiations. *Food Policy* 33, 250-259.
- BROCKMEIER, M., PELIKAN, J., KLEPPER, R.** 2008. WTO-Verhandlungen und die GAP, *Agrarwirtschaft* 57, 165-177.
- BRUECK, H.** 2008 Effects of nitrogen supply on water-use efficiency of higher plants. *Journal of Plant Nutrition Soil Science* 171, 210-219.
- BRUECK, H., ERDLER, K., GAO, YZ., GIESE, M., ZHAO, Y., PETH, S., LIN, S.** 2009. Effects of N and water supply on water use-efficiency of semiarid grassland in Inner Mongolia. doi: 10.1007/s11104-009-0128-5.
- BRUECK, H., SENBAYRAM, M.** 2009. Low nitrogen supply decreases water-use efficiency of oriental tobacco. *Journal of Plant Nutrition Soil Science* 172, 216-223.
- CAHANER, A., AJUH, J., SIEGMUND-SCHULTZE, M., AZOULAY, Y., DRUYAN, S., VALLE ZÁRATE, A.** 2008. Effects of the genetically reduced feather coverage in naked neck and featherless broilers on their performance under hot conditions. *Poultry Science* 87, 2517-2527.
- CALLES, T., SCHULTZE-KRAFT, R.** 2009. Una nueva especie venezolana de stylosanthes (leguminosae: papilionoideae: dalbergieae). *Acta Botánica Venezolana* 32, 153-157.
- CEDZICH, A., HUTTENLOCHER, F., KUHN, B.M., PFANNSTIEL, J., GABLER, L., STINTZI, A., SCHALLER, A.** 2009. The protease-associated (PA) domain and C-terminal extension are required for zymogen processing, sorting within the secretory pathway and activity of tomato subtilase 3 (SISBT3). *Journal of Biological Chemistry* 284, 14068-14078.
- COBO, J.G., DERCON, G., MONJE, C., MAHEMBE, P., GOTOSA, T., NYAMANGARA, J., DELVE, R. J., CADISCH, G.** 2009. Cropping strategies, soil fertility investment and land management practices by smallholder farmers in communal and resettlement areas in Zimbabwe. *Land Degradation and Development* 20, 492-508.
- COTTER, M., MARTIN, K., SAUERBORN, J.** 2009. How do renewable products “impact biodiversity and ecosystem services – The example of natural rubber in China” *Journal for Agriculture and Rural Development in the Tropics and Subtropics* 110, 9-22.

- DIMPKA, C., WEINAND, T., ASCH, F.** 2009. Plant-rhizobacteria interactions alleviate abiotic stress conditions. *Plant, Cell, and Environment* 32, 1682-1694.
- DONGMEZA, E.** 2008. Investigations on the digestibility and metabolisability of the major nutrients and energy of maize leaves and barnyard grass in grass carp (*Ctenopharyngodon idella*). *Aquaculture Nutrition*, doi:10.11365-2095.2009.00667.x.
- DONGMEZA, E., STEINBRONN, S., FOCKEN, U., BECKER, K.** 2009. Investigations on the nutrient and antinutrient content of typical plants used as fish feed in small scale aquaculture in mountainous Northern Vietnam. *Animal Feed Science and Technology* 149, 162-178.
- DORODNIKOV, M., BLAGODATSKAYA, E., BLAGODATSKY, S., MARHAN, S., FANGMEIER, A., KUZYAKOV, Y.** 2009. Stimulation of microbial enzyme activities by elevated atmospheric CO<sub>2</sub> depends on soil aggregates size. *Global Change Biology* 15, 1603-1614.
- DORODNIKOV, M., BLAGODATSKAYA, E., FANGMEIER, A., BLAGODATSKY, S., KUZYAKOV, Y.** 2009. Stimulation of r- vs. K- selected microorganisms by elevated atmospheric CO<sub>2</sub> depends on soil aggregate size. *FEMS Microbiology Ecology* 69, 43-52.
- DORODNIKOV, M., FANGMEIER, A., GIESEMANN, A., WEIGEL, H.-J., STAHR, K., KUZYAKOV, Y.** 2008. Thermal stability of soil organic matter pools and their turnover times calculated by  $\delta^{13}\text{C}$  under elevated CO<sub>2</sub> and two levels of N fertilization. *Isotopes in Environmental and Health Studies* 44, 365-376.
- DUNG, N.V., VIEN, T.D., LAM, N.T., TUONG, T.M., CADISCH G.** 2008. Analysis of the sustainability within the composite swidden agroecosystem in northern Vietnam. 1. Partial nutrient balances and recovery times of upland fields. *Agriculture Ecosystems and Environment* 128, 37-51.
- ELZEIN, A., BRÄNDLE, F., CADISCH, G., KROSCHER, J., MARLEY, P., THINES, M.** 2008. *Fusarium oxysporum* strains as potential *Striga* mycoherbicides: molecular characterization and evidence for a new forma "specialis". *Open Mycology Journal* 2, 89-93.
- ELZEIN, A., KROSCHER, J., CADISCH, G.** 2008. Efficacy of Pesta granular formulation of *Striga* mycoherbicide *Fusarium oxysporum* f. sp. *strigae* Foxy 2 after 5-year of storage. *Journal of Plant Diseases and Protection* 115, 259-262.
- ELZEIN, A., KROSCHER, J., MARLEY, P., CADISCH, G.** 2009. Does vacuum-packaging atmosphere or co-delivered amendments enhance shelf-life of *Striga* mycoherbicide products containing *Fusarium oxysporum* f.sp. *strigae* during storage? *Biocontrol Science and Technology* 19, 349-367.
- ENGELS, C., KNÖDLER, M., ZHAO, Y.-Y., CARLE, R., GÄNZLE, M.G., SCHIEBER, A.** 2009. Antimicrobial activity of Gallo tannins isolated from mango (*Mangifera indica* L.) kernels. *Journal of Agricultural and Food Chemistry* 57, 7712-7718.
- FAN, L., GAO, YG., BRUECK, H., BERNHOFER, C.** 2009. Investigating the relationship between NDVI and LAI in semi-arid grassland in Inner Mongolia using in-situ measurements. *Theoretical and Applied Climatology* 95, 151-156.
- FELGNER, A., SCHLINK, R., KIRSCHENBÜHLER, P., FAAS, B., ISENGARD, H.-D.** 2008. Automated Karl Fischer titration for liquid samples – Water determination in edible oils. *Food Chemistry* 106, 1379-1384.
- FELKER, P., STINTZING, F.C., MÜSSIG, E., LEITENBERGER, M., CARLE, R., VOGT, T., BUNCH, R.** 2008. Color inheritance in cactus pear (*Opuntia ficus-indica*) fruits. *Annals of Applied Botany* 152, 307-318.
- FELLMANN, T., MÖLLERS, J.** 2009. Structural Change in Rural Croatia - Is Early Retirement an Option? *International Advances in Economic Research* 15, 125-137.
- FERMONT, A.M., BABIRYE, A., OBIERO, H.M., ABELE, S., GILLER, K.E.** 2010. False beliefs on the socio-economic drivers of cassava cropping. *Agronomy for Sustainable Development*. doi: 10.1051/agro/2009044.
- FRANZARING, J., HOLZ, I., FANGMEIER, A.** 2008. Different responses of *Molinia caerulea* plants from three origins to CO<sub>2</sub> enrichment and nutrient supply. *Acta Oecol* 33, 176-187.
- FRÖR, O.** 2008. Bounded rationality in contingent valuation: Empirical evidence using cognitive psychology. *Ecological Economics* 68, 570-581.
- GAISER, T., STAHR, K., BILLEN, N., MOHAMMAD, M.A.-R.** 2008. Modeling carbon sequestration under zero tillage at the regional scale. The effect of soil erosion. *Ecological Modelling* 218, 110-120.
- GAO, Y.Z., GIESE, M., HAN, G., WANG, D.L., ZHOU, Z.Y., BRUECK, H., LIN, S., TAUBE, F.** 2008. Land use and drought interactively affect interspecific competition and species diversity at the local scale in a semiarid steppe ecosystem. *Ecological Research* 24, 627-635.
- GAO, Y.Z., GIESE, M., LIN, S., SATTELMACHER, B., ZHAO, Y., BRUECK, H.** 2008. Belowground net primary productivity and biomass allocation of a grassland in Inner Mongolia as affected by grazing. *Plant and Soil* 307, 41-50.
- GERMER, J., BOH, M.Y., SCHOEFFLER, M., AMOAH, P.** 2009. Temperature and deactivation of microbial faecal indicators during small scale co-composting of faecal matter. *Waste Management* 30, 185-191.
- GERMER, J., SAUERBORN, J.** 2008. Estimation of the impact of oil palm plantation establishment on greenhouse gas balance. *Environment, Development and Sustainability* 10, 697-716.
- GIESE, M., GAO, Y.Z., ZHAO, Z., PAN, Q., LIN, S., PETH, S., BRUECK, H.** 2009. Effects of grazing and rainfall variability on root and shoot decomposition in semi-arid grassland. *Applied Soil Ecology* 41, 8-18.
- GOEL, G., MAKKAR, H.P.S., BECKER, K.** 2009. Inhibition of methanogens by bromochloromethane: effects on microbial communities and rumen fermentation using batch and continuous fermentations. *British Journal of Nutrition*, 101, 1484-1492.
- GOEL, G., MAKKAR, H.P.S., BECKER, K.** 2008. Changes in microbial community structure, methanogenesis and rumen fermentation in response to saponin rich fractions. *Journal of Applied Microbiology* 105, 770-777.
- GOEL, G., MAKKAR, H.P.S., BECKER, K.** 2008. Effects of *Sesbania sesban* and *Carduus pycnocephalus* leaves and Fenugreek (*Trigonella foenum-graecum* L.) seeds and their extracts on partitioning of nutrients from roughage and concentrate-based feeds to methane. *Animal Feed Science and Technology* 147, 72-89.
- GOLAN, M., AVITAN, A., QUTOB, M., DWEIK, H., ABU-LAFI, S., FOCKEN, U., FRANCIS, G., BECKER, K., KEREM, Z., SIVAN, B.** 2008. *Quillaja* saponins inhibit tilapia aromatase activity *in vitro*. *Cybiium International Journal of Ichthyology* 32, 80-82.
- GÖLTENBOTH, F., HUTTER, C.-P., NEUBERGER, A.** 2008. Biologische Senken für Kohlendioxid - Eine Option für Agroforstsysteme in den Tropen. *Naturwissenschaftliche Rundschau* 61, 501-506.
- GONG, X.Y., BRUECK, H., GIESE, M., ZHANG, L.M., LIN, S.** 2008. Slope aspect has effects on productivity and species

- composition of hilly grassland in the Xilin River Basin, Inner Mongolia, China. *Journal of Arid Environments* 72, 483-493.
- GOOTWINE, E., ABDULKHALIQ, A., JAWASREH, K., VALLE ZÁRATE, A.** 2008. Screening for polymorphism at the prion protein (PrP) locus (PRNP) in Awassi and Assaf populations in Israel, the Palestinian Authority and Jordan. *Small Ruminant Research* 77, 80-83.
- GÖTZ, L., GRETHE, H.** 2009. The EU Entry Price System for Fresh Fruits and Vegetables – Paper Tiger or Powerful Market Barrier? *Food Policy* 34, 81-93.
- GRENZ, J., ISTOC, V., MANSCHADI, A.M., SAUERBORN, J.** 2008. Interactions of sunflower (*Helianthus annuus*) and sunflower broomrape (*Orobancha cumana*) as affected by sowing date, resource supply and infestation level. *Field Crops Research* 107, 170-179.
- GRETHE, H.** 2009. Developing Countries in the Doha Round – How Balanced is the Negotiation Position? *Quarterly Journal of International Agriculture* 3, 187-192.
- HEGELE, M., MANOCHAI, P., NAPHRM, D., SRUAMSIRI, P., WÜNSCHE, JN.** 2008. Flowering in longan (*Dimocarpus longan* L.) induced by hormonal changes following  $KClO_3$  applications. *European Journal of Horticultural Science* 73, 49-54.
- HEGELE, M., NAPHRM, D., MANOCHAI, P., SRUAMSIRI, P., WÜNSCHE, JN.** 2008. Effect of girdling and defoliation of longan shoots on hormonal changes during flower induction by  $KClO_3$ . *Acta Horticulturae* 774, 49-57.
- HEIDER, B., FISCHER, E., BERNDL, T., SCHULTZE-KRAFT, R.** 2009. Genetic relationships among accessions of four species of *Desmodium* and allied genera (*Dendrolobium triangulare*, *Desmodium gangeticum*, *Desmodium heterocarpon*, and *Tadehagi triquetrum*). *Tropical Conservation Science* 2, 52-69.
- HEIDHUES, F.** 2009 Why is development in Sub-Saharan Africa so difficult? Challenges and lessons learned. *Review of Business and Economics* LIV, 398-409.
- HEMWONG, S., CADISCH, G., TOOMSAN, B., LIMPINUNTANA, V., VITYAKON, P., PATANOTHAI, A.** 2008. Dynamics of residue decomposition and  $N_2$  fixation of grain legumes upon sugarcane residue retention as an alternative to burning. *Soil and Tillage Research* 99, 84-97.
- HEMWONG, S., TOOMSAN, B., CADISCH, G., LIMPINUNTANA, V., VITYAKON, P., PATANOTHAI, A.** 2009. Sugarcane residue management and grain legume crop effects on N dynamics, N losses and growth of sugarcane. *Nutrient Cycling in Agroecosystems* 83, 135-151.
- HIRSCH, A., FÖRCH (NÉE RESCH), K., NEIDHART, S., WOLF, G., CARLE, R.** 2008. Effects of thermal treatments and storage on pectinmethylesterase and peroxidase activity in freshly squeezed orange juice. *Journal of Agricultural and Food Chemistry* 56, 5691-5699.
- HOLST, J., LIU, C., YAO, Z., BRUEGGEMANN, N., ZHENG, X., GIESE, M., BUTTERBACH-BAHL, K.** 2008. Fluxes of nitrous oxide, methane and carbon dioxide during freezing-thawing cycles in an Inner Mongolian steppe. *Plant and Soil* 309, 105-117.
- HUET, Y., STRASSNER, J., SCHALLER, A.** 2008. Cloning, expression and characterization of insulin-degrading enzyme from tomato (*Solanum lycopersicum*). *Biological Chemistry* 308, 91-98.
- HÜNERBERG, M., MEYER, U., KAMMERER, D.R., CARLE, R., FLACHOWSKY, G.** 2009. Influence of different amounts of soybean meal on the isoflavone content in dairy cow's milk. *Proceedings of the Society of Nutrition Physiology* 18, 121.
- HÜTTNER, M., NAKAO, M., WASSERMANN, T., SIEFERT, L., BOOMKER, J.D.F., DINKEL, A., SAKO, Y., MACKENSTEDT, U., ROMIG, T., ITO, A.** 2008. Genetic characterization and phylogenetic position of *Echinococcus felidis* Ortlepp, 1937 (Cestoda, Taeniidae) from the African lion. *International Journal for Parasitology* 38, 861-868.
- HÜTTNER, M., ROMIG, T.** 2009. *Echinococcus* species in African wildlife. *International Journal for Parasitology* 136, 1089-1095.
- HÜTTNER, M., SIEFERT, L., MACKENSTEDT, U., ROMIG, T.** 2009. A survey of *Echinococcus* species in wild carnivores and livestock in East Africa. *International Journal for Parasitology* 39, 1269-1276.
- IGWE, C.A., ZAREI, M., STAHR, K.** 2008. Factors affecting potassium status of flood plain soils Eastern Nigeria. *Archives of Agronomy and Soil Science* 54, 309-319.
- INGWERSEN, J., SCHWARZ, U., STANGE, C.F., JU, X., STRECK, T.** 2008. Shortcomings in the commercialized Barometric Process Separation measuring system. *Soil Science Society of American Journal* 72, 135-142.
- ISENGARD, H.-D.** 2008. Water determination - Scientific and economic dimensions. *Food Chemistry* 106, 1393-1398.
- JANJAI, S., INTAWEE, P., TOSING, K., MAHAYOTHEE, B., BALA, B.K., ASHRAF, M. A., MÜLLER, J.** 2009. Neural network modelling of sorption isotherm of longan. *Journal of Computer and Electronics in Agriculture* 66, 209-214.
- JANJAI, S., LAMLERT, N., INTAWEE, P., MAHAYOTHEE, B., BALA, B.K., NAGLE, M., MÜLLER, J.** 2009. Experimental and simulated performance of a PV-ventilated greenhouse solar dryer for drying of peeled longan and banana. *Solar Energy* 83, 550-556.
- JANJAI, S., LAMLERT, N., INTAWEE, P., MAHAYOTHEE, B., HAEWSUNGCHAROEN, M., BALA, B.K., NAGLE, M., LEIS, H., MÜLLER, J.** 2009. Solar drying of peeled longan using a side loading type solar tunnel dryer: experimental and simulated performance. *Drying Technology* 27, 595-605.
- JANJAI, S., LAMLERT, N., INTAWEE, P., MAHAYOTHEE, B., HAEWSUNGCHAROEN, M., BALA, B.K., MÜLLER, J.** 2008. Finite element simulation of drying of mango. *Biosystems Engineering* 99, 523-531.
- JANJAI, S., LAMLERT, N., MAHAYOTHEE, B., BALA, B.K., HAEWSUNGCHAROEN, M., NAGLE, M., LEIS, H., MÜLLER, J.** 2008. Finite element simulation of drying of longan fruit. *Drying Technology* 26, 666-674.
- JANOWIAK, F., MAŚLAK, J., ASCH, F.** 2009. Hormonal, hydraulic, and pH signals from chilled roots to shoots in maize plants. *Acta Biologica Cracoviensia* 51, 55.
- JAYANEGARA, A., TOGTOKHBAYAR, N., MAKAR, H.P.S., BECKER, K.** 2008. Tannins determined by various methods as predictors of methane production potential of plants by an *in vitro* rumen fermentation system. *Animal Science* 150, 230-237.
- JEHLE, C., DINKEL, A., SANDER, A., MORENT, M., ROMIG, T., LUC, P.V., DE, T.V., THAI, V.V., MACKENSTEDT, U.** 2009. Diagnosis of *Sarcocystis* spp. in cattle (*Bos taurus*) and water buffalo (*Bubalus bubalis*) in Northern Vietnam. *Veterinary Parasitology* 166, 314-320.
- KAEWPRADIT, W., TOOMSAN, B., CADISCH, G., VITYAKON, P., LIMPINUNTANA, V., SAENJAN, P., JOGLOY, S., PATANOTHAI, A.** 2009. Mixing groundnut residues and rice straw to improve rice yield and N use efficiency. *Field Crops Research* 110, 130-138.
- KAEWPRADIT, W., TOOMSAN, B., VITYAKON, P., LIMPINUNTANA, V., SAENJAN, P., JOGLOY, S., PATANOTHAI, A., CADISCH, G.** 2008. Regulating mineral N



- release and greenhouse gas emissions by mixing groundnut residues and rice straw under field conditions. *European Journal of Soil Science* 59, 640-652.
- KAHL, G., INGWERSEN, J., NUTNIYOM, P., TOTRAKOOL, S., PANSOMBAT, K., THAVORNYUTIKARN, P., STRECK, T.** 2008. Loss of pesticides from a litchi orchard to an adjacent stream in Northern Thailand. *European Journal of Soil Science* 59, 71-81.
- KAMMESHEIDT, L., BERHAMAN, A., TAY, J., ABDULLAH, G., AZWAL, M.** 2009. Liana abundance and diversity in the Imbak Canyon Conservation Area, Sabah, Malaysia. *Journal of Tropical Forest Science* 21, 265-271.
- KEIL, A., TEUFEL, N., GUNAWAN, D., LEEMHUIS, C.** 2009. Vulnerability of smallholder farmers to ENSO-related drought in Indonesia. *Climate Research* 38, 155-169.
- KEIL, A., ZELLER, M., WIDA, A., SANIM, B., BIRNER, R.** 2008. What determines farmers' resilience towards ENSO-related drought? An empirical assessment in Central Sulawesi, Indonesia. *Climatic Change* 86, 291-307.
- KNÖDLER, M., KAISER, A., CARLE, R., SCHIEBER, A.** 2008. Profiling of alk(en)yl-resorcinols in cereals by HPLC-DAD-APCl-MS<sup>n</sup>. *Analytical and Bioanalytical Chemistry* 391, 221-228.
- KNÖDLER, M., REISENHAEUER, K., SCHIEBER, A., CARLE, R.** 2009. Quantitative determination of allergenic 5-alk(en)ylresorcinols in mango (*Mangifera indica* L.) peel, pulp, and fruit products by high-performance liquid chromatography. *Journal of Agricultural and Food Chemistry* 57, 3639-3644.
- KO, J. H.** 2009. A Study on Economic Effects of Liberalization of Services Industry in the Korea-U.S. FTA: A Dynamic CGE Model (in Korean). *International Area Studies Review* 12, 695-728.
- KOHLSCHEMID, E., MÜLLER-STÖVER, D., SAUERBORN, J.** 2008. Mitigation of *Orobanche ramosa* by *Fusarium oxysporum* and induced resistance. *Journal of Plant Diseases and Protection* 21, 473-478.
- KOHLSCHEMID, E., SAUERBORN, J., MÜLLER-STÖVER, D.** 2009. Impact of *Fusarium oxysporum* on the holoparasitic weed *Phelipanche ramosa*: biocontrol efficacy under field-grown conditions. *Weed Research* 49, 56-65.
- KRATZEISEN, M., MÜLLER, J.** 2009. Effect of fatty acid composition of soybean oil on deposit and performance of plant oil pressure stoves. *Renewable Energy* 34, 2461-2466.
- KRATZEISEN, M., MÜLLER, J.** 2009. Influence of free fatty acid content of coconut oil on deposit and performance of plant oil pressure stoves. *Fuel*. doi:10.1016/j.physletb.2003.10.071.
- KÜHLMANN, K.-J., FOCKEN, U., COLOSO, R.M., BECKER, K.** 2009. Diurnal feeding pattern and gut content of milkfish, *Chanos chanos* (Forsskal), cultured semi-intensively during the wet and dry season in brackish ponds in the Philippines. *Aquaculture Research* 40, 2-12.
- KUMAR, V., SAHU, N.P., PAL, A.K., KUMAR, S., SHARMA, P., CHETTRI, J.K., SINHA, A.K.** 2008. Non-gelatinized starch influences the deposition of n-3 fatty acids in the muscle of a tropical freshwater fish, *Labeo rohita*. *Journal of Animal Physiology and Animal Nutrition* 93, 659-668.
- LANGENBERGER, G., LIU, J.** 2009. Waldvernichtung im "Goldenen Dreieck": Weißes Gold -- Gummiabau in Xishuangbanna, Yunnan, China. *AFZ der Wald* 19, 1022-1024.
- LANGENBERGER, G., PRIGGE, V., MARTIN, K., BELONIAS, B., SAUERBORN, J.** 2009. Ethnobotanical knowledge of Philippine lowland farmers and its application in agroforestry. *Agroforestry Systems* 76, 173-194.
- LEGESSE, G., ABEBE, G., SIEGMUND-SCHULTZE, M., VALLE ZÁRATE, A.** 2008. Small ruminant production in two mixed-farming systems of southern Ethiopia: Status and prospects for improvement. *Experimental Agriculture* 44, 399-412.
- LEMKE, S., HEUMANN, N., BELLOWS A. C.** 2009. Gender and sustainable livelihoods: Case study of South African farm workers. *International Journal of Innovation and Sustainable Development* 4, 195-205.
- LEMKE, U., VALLE ZÁRATE, A.** 2008. Dynamics and developmental trends of smallholder pig production systems in North Vietnam. *Agricultural Systems* 96, 207-223.
- LIPPERT, C.** 2009. Fraud and Free Riding in Tropical Forests - On the Potential for Certification to Enforce Sustainable Resource Use Indirectly. *Agrarwirtschaft* 58, 144-154.
- MAHAYOTHEE, B., UDOMKUN, P., NAGLE, M., HAEWSUNGCHAROEN, M., JANJAI, S., MÜLLER, J.** 2009. Effects of pretreatments on colour alterations of litchi during drying and storage. *European Food Research and Technology* 229, 329-337.
- MAKKAR, H.P.S.** 2008. A review of the use of isotopic and nuclear techniques in animal production. *Feed Science Technology* 140, 418-443.
- MAKKAR, H.P.S., BECKER, K.** 2009. *Jatropha curcas* an exciting future crop for generation of biofuel and value-added products with a focus on comparison between toxic and non-toxic genotypes. *European Journal of Lipid Science and Technology* 111, 773-787.
- MAKKAR, H.P.S., BECKER, K.** 2009. Removal and degradation of phorbol esters during pre-treatment and transesterification of *Jatropha curcas* oil. *Journal of the American Oil Chemists* 86, 173-181.
- MAKKAR, H.P.S., FRANCIS, G., BECKER, K.** 2008. Protein concentrate from *Jatropha curcas* screw-pressed seed cake and toxic and antinutritional factors in protein concentrate. *Journal of the Science of Food and Agriculture* 88, 1542-1548.
- MAKKAR, H.P.S., MARTINEZ-HERRERA, J., BECKER, K.** 2008. Variations in seed number per fruit, seed physical parameters and contents of oil, protein and phorbol ester in toxic and non-toxic genotypes of *Jatropha curcas*. *Journal of Plant Science* 3, 260-265.
- MAKKAR, H.P.S., NOROV SAMBUU, T., LKHAGVATSEREN, S., BECKER, K.** 2009. Plant secondary metabolites in some medicinal plants of Mongolia used for enhancing animal health and production. *Tropicultura* 27, 159-167.
- MARKEMANN, A., STEMMER, A., SIEGMUND-SCHULTZE, M., PIEPHO, H.-P., VALLE ZÁRATE, A.** 2009. Stated preferences of llama keeping functions in Bolivia. *Livestock Science* 124, 119-125.
- MAŚLAK, J., ASCH, F., JANOWIAK, F.** 2008. Signaling from roots to shoots under drought conditions in maize plants. *Acta Physiologiae Plantarum* 31, 29-30.
- MATHLOUTHI, M., ISENGARD, H.-D.** 2008. Water in food (Editorial). *Food Chemistry* 106, 1313.
- MAURER, T., HERRMANN, L., STAHR, K.** 2009. The effect of surface variability factors on wind-erosion susceptibility: A field study in SW Niger. *Journal of Plant Nutrition Soil Science* 172, 789-807.
- MCCULLAGH, J., GAYE-SIESSEGGER, J., FOCKEN, U.** 2008. Determination of underivatized amino acid  $\delta^{13}\text{C}$  by liquid chromatography/isotope ratio mass spectrometry for nutritional studies: the effect of dietary non-essential amino acid profile on the isotopic signature of individual amino acids in fish. *Rapid Communications in Mass Spectrometry*

- 22, 1817-1822.
- MENG, Y., CAIYAN, L., FRANCIS, G., MAKKAR, H.P.S.** 2009. Current Situation and Prospects of *Jatropha curcas* plantation and use as a multipurpose tree in China. *Agroforestry Systems* 76, 497.
- MUETZEL, S., LAWRENCE, P., HOFFMANN, E.M., BECKER, K.** 2009. Evaluation of a stratified continuous rumen incubation system. *Animal Feed Science and Technology* 151, 32-43.
- MUHAMMAD, S., MÜLLER, T., JOERGENSEN, R.G.** 2008. Relationships between soil biological and other soil properties in saline and alkaline arable soils from the Pakistani Punjab. *Journal of Arid Environment* 72, 448-457.
- MÜLLER-STÖVER, D., KOHLSCHMID, E., SAUERBORN, J.** 2009. A novel strain of *Fusarium oxysporum* from Germany and its potential for biocontrol of *Orobanche ramosa*. *Weed Research* 49, 175-182.
- MUTEGI, E., SAGNARD, F., MURAYA, M., KANYENJI, B., RONO, B., MWONGERA, C., MARANGU, C., KAMAU, J., PARZIES, H., DE VILLIERS, S., SEMAGN, K., SIBIRY TRAORÉ, P., LABUSCHAGNE, M.** 2009. Ecogeographical distribution of wild, weedy and cultivated *Sorghum bicolor* in Kenya: implications for conservation and crop-to-wild gene flow. *Genetic Resources and Crop Evolution*. doi: 10.1007/s10722-009-9466-7.
- NAGLE, M., GONZÁLEZ AZCÁRRAGA, J.C., PHUPAICHITKUN, S., MAHAYOTHEE, B., HAEWSUNGCHAROEN, M., JANJAI, S., LEIS, H., MÜLLER, J.** 2008. Effects of operating practices on performance of a fixed-bed convection dryer and product quality of longan. *International Journal of Food Science & Technology* 43, 1979-1987.
- NDUFA, J.K., GATHUMBI, S.M., KAMIRI, H.W., GILLER, K.E., CADISCH, G.** 2009. Do mixed-species legume fallows provide long-term maize yield benefit compared with monoculture legume fallows? *Journal of Agronomy* 101, 1352-1362.
- NEEF, A., HEIDHUES, F.** 2008. Sustainable development in mountainous regions of Southeast Asia: The case of Thailand and Vietnam. *Geographische Rundschau, International Edition* 4, 12-15.
- NEGESSE, T., MAKKAR, H.P.S., BECKER, K.** 2009. Nutritive value of some non-conventional feed resources of Ethiopia determined by chemical analyses and *in vitro* gas method. *Animal Feed Science and Technology* 154, 204-217.
- NOLAN, J., PARKER, D., VAN KOOTEN, G.C., BERGER, T.** 2009. An overview of computational modeling in agricultural and resource economics. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie* 57, 417-429.
- NOLTE, S., GRETHE, H.** 2009. Der Markt für Zucker. *German Journal of Agricultural Economics (Agrarwirtschaft)* 58, 26-35.
- OTTMANN, C., ROSE, R., HUTTENLOCHER, F., HAUSKE, P., KAISER, M., HUBER, R., SCHALLER, A.** 2009. Structural basis for calcium-independence and activation by dimerization of tomato subtilase 3. *Proceedings of the National Academy of Sciences USA* 106, 17223-17228.
- PANSAK, W., HILGER, T.H., DERCON, G., KONGKAEW, T., CADISCH, G.** 2008. Changes in the relationship between soil erosion and N loss pathways after establishing soil conservation systems in uplands of Northeast Thailand. *Agriculture, Ecosystems and Environment* 128, 167-176.
- PARZIES, H.K., FOSUNG NKE, C., ABDEL-GHANI, A.H., GEIGER, H.H.** 2008. Outcrossing rate of barley genotypes with different floral characteristics in drought-stressed environments in Jordan. *Plant Breeding* 127, 536-538.
- PELIKAN, J., BROCKMEIER, M.** 2008. Im Dschungel der Importzölle. *Agrarwirtschaft* 57, 119-129.
- PELIKAN, J., BROCKMEIER, M.** 2008. Methods to Aggregate Import Tariffs and their Impacts on Modeling Results. *Journal of Economic Integration* 23, 685-708.
- PELIKAN, J., BROCKMEIER, M.** 2008. To What Extent do Tariff Aggregation Measures Influence the Outcome of Empirical Analyses? *Canadian Journal of Agricultural Economics* 56, 413-427.
- PHUPAICHITKUN, S., MAHAYOTHEE, B., WALDENMAIER, T., MÜLLER, J.** 2008. Generalized single-layer model for drying kinetics of unpeeled-longan. *International Journal of Agricultural and Biological Engineering* 1, 64-71.
- PICKEL, B., CONSTANTIN, M.-A., PFANNSTIEL, J., CONRAD, J., BEIFUSS, U., SCHALLER, A.** 2010. An enantiocomplementary dirigent protein for the enantioselective, laccase-catalyzed oxidative coupling of phenols. *Angewandte Chemie, International Edition* 49, 202-204.
- PIIKKI, K., DE TEMMERMAN, L., HÖGY, P., PLEIJEL, H.** 2008. The open-top chamber impact on vapour pressure deficit and its consequences for stomatal ozone uptake. *Atmospheric Environment* 42, 6513-6522.
- RASUL, G., KHAN, K.S., MÜLLER, T., JOERGENSEN, R.G.** 2008. Soil microbial response to the addition of sugarcane filter cake, biogenic waste compost and their mixture treatments. *Journal of Plant. Nutrition and Soil Science* 171, 355-360.
- RICHTER, H., FOCKEN, U., BECKER, K.** 2008. A first test of a new modelling approach to estimate food consumption in particle-feeding fish. *Journal of Applied Ichthyology* 24, 38-43.
- ROEHRS, M., J. VALENTINI, R. BULCAO, J.C. MOREIRA, H. BIESALSKI, R.P. LIMBERGER, T. GRUNE, S.C. GARCIA.** 2009. The plasma retinol levels as pro-oxidant/oxidant agents in hemodialysis patients. *Nephrology Dialysis Transplantation* 24, 2212-2218.
- ROESSLER, R., DRUCKER, A., SCARPA, R., MARKEMANN, A., LEMKE, U., THUY, L.T., VALLE ZÁRATE, A.** 2008. Using choice experiments to assess smallholder farmers' preferences for pig breeding traits in different production systems in North-West Vietnam. *Ecological Economics* 66, 184-192.
- ROESSLER, R., HEROLD, P., WILLAM, A., PIEPHO, H.-P., THUY, L.T., VALLE ZÁRATE, A.** 2009. Modelling of a recording scheme for market-oriented smallholder pig producers in Northwest Vietnam. *Livestock Science* 123, 241-248.
- ROMÁN, F., NAGLE, M., LEIS, H., JANJAI, S., MAHAYOTHEE, B., HAEWSUNGCHAROEN, M., MÜLLER, J.** 2009. Potential of roof-integrated solar collectors for preheating air at drying facilities in Northern Thailand. *Renewable Energy* 34, 1661-1667.
- ROMANO, G., BARANYAI, L., GOTTSCHALK, K., ZUDE, M.** 2008. An approach for monitoring the moisture content changes of drying banana slices with laser light backscattering images. *Food and Bioprocess Technology* 1, 410-414.
- ROSE, R., HUTTENLOCHER, F., CEDZICH, A., KAISER, M., SCHALLER, A., OTTMANN, C.** 2009. Purification, crystallization and preliminary X-ray diffraction analysis of a plant subtilase. *Acta Crystallographica F* 65, 522-525.
- RUDI, T., GUTHAUSEN, G., BURK, W., REH, C.T.,**

- ISENGARD, H.-D.** 2008. Simultaneous determination of fat and water content in caramel using time domain NMR. *Food Chemistry* 106, 1375-1378.
- SAINT-MACARY, C., KEIL, A., ZELLER, M., HEIDHUES, F., DUNG, P.T.** 2010. Land titling policy and soil conservation in northern uplands of Vietnam. *Land Use Policy* 27, 617-627.
- SATIENPERAKUL, K., MANOCHAI, P., ONGPRASERT, S., SPREER, W., MÜLLER, J.** 2009. Economic evaluation of different irrigation regimes in mango production in Northern Thailand. *Acta Horticulturae* 831, 293-300.
- SCHALLER, A., STINTZI, A.** 2009. Enzymes in jasmonate biosynthesis - structure, function, regulation. *Phytochemistry* 70, 1532-1538.
- SCHERBAUM V, BELLOWS AC.** 2009. Stillförderung – ein Beitrag zur Prävention von Übergewicht. *Ernährungsumschau* 7, 388-394.
- SCHERBAUM, V., SHAPIRO, O., PURWESTRI, R.C., INAYATI, D.A., NOVIANTY, D., STÜTZ, W., YUSRAN, MÜLLER, T., WIRAWAN, N.N., SURYANTAN, J., BLOEM, M.A., KOENIGER, M., PANGARIBUAN, R.V., QAIM, M., GRUNE, T., HOFFMANN, V., BELLOWS, A.C., BIESALSKI, H.K.** 2009. Locally produced ready-to-use therapeutic food (RUTF). *Sight and Life* 1, 29-37.
- SCHNITZLER, P., SCHNEIDER, S., STINTZING, F.C., CARLE, R., REICHLING, J.** 2008. Efficacy of an aqueous *Pelargonium sidoides* extract against herpesvirus. *Phytomedicine* 15, 1108-1116.
- SCHREINEMACHERS, P., BERGER, T., SIRIJINDA, A. & PRANEETVATAKUL, S.** 2009. The diffusion of greenhouse agriculture in northern Thailand: Combining econometrics and agent-based modeling. *Canadian Journal of Agricultural Economics*, 513-536.
- SCHULER, U., HERRMANN, L., STAHR, K.** 2009. A gamma-ray spectrometry approach to field separation of illuviation type WRB reference soil groups in a limestone area of northern Thailand". *Journal of Plant Nutrition and Soil Science*, 321.
- SCHULTE, M.J., MARTIN, K., BÜCHSE, A., SAUERBORN, J.** 2009. Fungus (*Beauveria bassiana* (Bals.) Vuill.) and entomopathogenic nematode (*Steinernema carpocapsae* (Weiser)) for the biological control of *Indarbela dea* (Swinhoe) in litchi in northern Thailand. *Pest Management Science* 65, 105-112.
- SCHWEIGGERT, R.M., VILLALOBOS-GUTIERREZ, M.G., ESQUIVEL, P., CARLE, R.** 2009. Development and optimization of low temperature enzyme-assisted liquefaction for the production of colouring foodstuff from purple pitaya (*Hylocereus* sp. [Weber] Britton & Rose). *European Food Research and Technology* 230, 269-280.
- SCHWEIGGERT, U., HOFMANN, S., REICHEL, M., SCHIEBER, A., CARLE, R.** 2008. Enzyme-assisted liquefaction of ginger rhizomes (*Zingiber officinale* Rosc.) for the production of spray-dried and pasty-like ginger condiments. *Journal of Food Engineering* 84, 28-38.
- SEEBERG-ELVERFELDT, C., SCHWARZE, S., ZELLER, M.** 2009. Carbon finance options for smallholders' agroforestry in Indonesia. *International Journal of the Commons* 3, 108-130.
- SHEN, J.L., TANG, A.H., LIU, X.J., FANGMEIER, A., GOULDING, K.T.W., ZHANG, F.S.** 2009. High concentrations and dry deposition of reactive nitrogen species at two sites in the North China Plain. *Environmental Pollution* 157, 3106-3113.
- SIEGMUND-SCHULTZE, M., RISCHKOWSKY, B., VEIGA, J.B., KING, J.M.** 2009. Valuing cattle on mixed smallholdings in the Eastern Amazon. *Ecological Economics* 69, 857-867.
- SIMTOWE, F., DIAGNE, A., ZELLER, M.** 2008. Who is credit constrained? Evidence from rural Malawi. *Agricultural Finance Review* 68, 255-272.
- SIMTOWE, F., ZELLER, M., DIAGNE, A.** 2009. The impact of credit constraints on the adoption of hybrid maize in Malawi. *Review of Agricultural and Environmental Studies*, 90, 5-22.
- SIRISAKULWAT, S., NAGEL, A., SRUAMSIRI, P., CARLE, R., NEIDHART, S.** 2008. Yield and quality of pectins extractable from peels of Thai mango cultivars depending on fruit ripeness. *Journal of Agricultural and Food Chemistry* 56, 10727-10738.
- SMILEY, G.L., KROSCHEL, J.** 2008. Temporal change in carbon stocks of cocoa-gilicidia agroforests in Central Sulawesi, Indonesia. *Agroforestry Systems* 73, 219-231.
- SPREER, W., MÜLLER, J., HEGELE, M., ONGPRASERT, S.** 2009. Effect of deficit irrigation on fruit growth and yield of mango (*Mangifera indica*, L.) in Northern Thailand. *Acta Horticulturae* 820, 357-364.
- SPREER, W., ONGPRASERT, S., HEGELE, M., WÜNSCHE, J.N., MÜLLER, J.** 2009. Yield and fruit development in mango (*Mangifera indica* L., cv. Chok Anan) under different irrigation regimes. *Agricultural Water Management* 96, 574-584.
- SPREER, W., ONGPRASERT, S., HEGELE, M., WÜNSCHE, J.N., MÜLLER, J.** 2008. Yield and fruit development in mango (*Mangifera indica* L., cv. Chok Anan) under different irrigation regimes. *Agricultural Water Management*. doi: 10.1016/j.agwat.2008.09.020.
- SRICHAROEN, T., BUCHENRIEDER, G. AND DUFHUES, T.** 2008. Universal health care demand in rural northern Thailand: Gender and ethnicity. Submitted to *Asia-Pacific Development Journal* 15, 65-95.
- STEFFENS, M., KÖLBL, A., GIESE, M., HOFFMANN, C., TOTSCHKE, KU., BREUER, L., KÖGEL-KNABNER, I.** 2009. Spatial variability of topsoils and vegetation in a grazed steppe ecosystem in Inner Mongolia (PR China). *Journal of Plant Nutrition and Soil Science* 172, 78-90.
- STRUVE, C., HENNING, C.H.C.A., BROCKMEIER, M.** 2008. Die Logik der Europäischen Agrarpolitik: Politische Macht oder ökonomische Gesetzmäßigkeiten? *Agrarwirtschaft* 57, 179-193.
- THIPPAYARUGS, S., TOOMSAN, B., VITYAKON, P., LIMPINUNTANA, V., PATANOTHAI, A., CADISCH, G.** 2008. Interactions in decomposition and N mineralization between tropical legume residue components. *Agroforestry Systems* 72, 137-148.
- TREYDTE, A.C., HEITKÖNIG, I.M.A., LUDWIG, F.** 2008. Modelling ungulate dependence on higher quality forage under large trees in African savannas. *Basic and Applied Ecology*. doi:10.1016/J.BAAE.2008.03.003.
- TREYDTE, A.C., LOORINGH VAN BEECK, F., LUDWIG, F., HEITKÖNIG, I.M.A.** 2008. Improved beneath-crown grass quality in South African savannas varying locally and over season. *Journal of Vegetation Science* 19, 663-670.
- TRIPATHI, L., MWANGI, M., ABELE, S., ARITUA, V., TUSHEMEREIRWE, W., BANDYOPADHYAY, R.** 2009. Xanthomonas wilt: a threat to banana production in East and Central Africa. *Plant Disease* 93, 440-451.
- URIBE, H., ARNOLD, T., ARUMÍ J., BERGER, T., RIVERA, D.** 2009. Modificación del modelo WaSiM-ETH para mejorar su aplicación en áreas regadas. *Ingeniería Hidráulica en México* 24, 23-36.
- URIBE, H., ARNOLD, T., BERGER, T., ARUMÍ, J.** 2008. Hydrological modeling of a complex irrigation district in the

- central valley of Chile. American Society of Agricultural and Biological Engineers, 319-327.
- VALLES DE LA MORA, B., CADISCH, G., CASTILLO GALLEGOSA, E.** 2008. Nitrogen mineralization from soils under *Arachis pintoi*-based pastures. *Tecnica Pecuaria en Mexico* 46, 91-105.
- VASTA, V., MAKKAR, H.P.S., MELE, M., PRIOLO, A.** 2009. Ruminant biohydrogenation as affected by tannins *in vitro*. *British Journal of Nutrition* 102, 82-92.
- WALKER, A. P., VAN NOORDWIJK, M., CADISCH, G.** 2008. Modelling of planted legume fallows in Western Kenya. 2. Productivity and sustainability of simulated management strategies. *Agroforestry Systems* 74, 143-154.
- WAN, Y.J., JU, X.T., INGWERSEN, J., SCHWARZ, U., STANGE, C.F., ZHANG, F.S., STRECK, T.** 2009. Gross nitrogen transformations and related nitrous oxide emissions in an intensively used calcareous soil. *Soil Science Society of American Journal* 73, 102-112.
- WARBURTON, M. L., REIF, J.C., FRISCH, M., BOHN, M., BEDOYA, C., XIA, X.C., CROSSA, J., FRANCO, J., HOISINGTON, D., PIXLEY, K., TABA, S., MELCHINGER, A.E.** 2008. Genetic diversity in CIMMYT nontemperate Maize germplasm: Landraces, open pollinated varieties and inbred lines. *Crop Science* 48, 617-624.
- WEBER-JONKHEER, R., VALLE ZÁRATE, A.** 2009. Bewertung von Wohlbefinden in der praktischen Nutztierhaltung - Diskussion der Kriterienauswahl am Beispiel Mastschweinhaltung. *Archiv für Tierzucht* 52, 378-394.
- WELDESILASSIE, A.B., FRÖR, O., BOELEEE, E., DABBERT, S.** 2009. The Economic Value of Improved Wastewater Irrigation: A Contingent Valuation Study in Addis Ababa, Ethiopia. *Journal of Agricultural and Resource Economics* 34, 428-449.
- WELDESILASSIE, A., FRÖR, O., BOLOEE, E., DABBERT, S.** 2009. The Economic Value of Improved Wastewater Irrigation: A Contingent Valuation Study in Addis Ababa, Ethiopia. *Journal of Agricultural and Resource Economics* 34, 428-449.
- WILDE, P., MANAL, A., STODDEN, M., SIEVERDING E., HILDEBRANDT, U., BOTHE, H.** 2009. Biodiversity of arbuscular mycorrhizal fungi in roots and soils of two salt marshes. *Environmental Microbiology* 11, 1548-1561.
- WURZINGER, M., WILLAM, A., DELGADO, J., NUERNBERG, M., VALLE ZÁRATE, A., STEMMER, A., UGARTE, G., SOELKNER, J.** 2008. Design of a village breeding programme for a llama population in the high Andes of Bolivia. *Journal of Animal Breeding and Genetics* 125, 311-319.
- XIANGPING, J., GUO, P.** 2008. Evolution of rural finance in China: Institutional "Lock In" or gradualism? *Savings and Development* 4, 279-299.
- YILMA, T., BERG, E., BERGER, T.** 2008. The Agricultural Technology-Market Linkage under Liberalization in Ghana: Evidence from Micro Data. *Journal of African Economies* 17, 62-84.
- ZAHARAN, E., KOHLSCHMID, E., SAUERBORN, J., ABBASHER, A. A., MÜLLER-STÖVER, D.** 2008. Does an application as seed coating stabilize the efficacy of biocontrol agents against *Striga hermonthica* under field conditions? *Journal of Plant Diseases and Protection* 21, 467-471.
- ZAHARAN, E., SAUERBORN, J., ABBASHER, A., AHMED, E A., MOHUKKER, R.I., KARLOVSKY, P., MOHAMED, E.A., MÜLLER-STÖVER, D.** 2008. "Pesta" and alginate delivery systems of *Fusarium* spp. for biological control of *Striga hermonthica* (Del.) Benth. under Sudanese field conditions. *Biological Control* 44, 160-168.
- ZAHARAN, E., SAUERBORN, J., ABD ELMAGID, A., ABBASHER, A. A., MÜLLER-STÖVER, D.** 2008. Granular formulations and seed coating: delivery options for two fungal biological control agents of *Striga hermonthica* (Del.) Benth. *Journal of Plant Diseases and Protection* 115, 178-185.
- ZELLER, M., GRASS, M.** 2008. Biofuel boom or doom: Opportunities and constraints for biofuels in developing countries. *Quarterly Journal of International Agriculture* 47, 285-305.
- ZHANG, Y., LIU, X., FANGMEIER, A., GOULDING, K., ZHANG, F.** 2008. Nitrogen inputs and isotopes in precipitation in the North China Plain. *Atmospheric Environment* 42, 1436-1448.
- ZHANG, Y., ZHENG, L., LIU, X., JICKELLS, T., CAPE, J.N., GOULDING, K., FANGMEIER, A., ZHANG, F.** 2008. Evidence for organic N deposition and its anthropogenic sources. *Atmospheric Environment* 42, 1035-1041.
- ZIA, S., SPOHRER, K., MERKT, N., WENYONG, D., HE, X., MÜLLER, J.** 2009. Non-invasive water status detection in grapevine (*Vitis vinifera* L.) by thermography. *International Journal of Agricultural and Biological Engineering* 2, 46-54.

## Non-reviewed papers

- ADHIKARINAYAKE, T.B., MÜLLER, J., OOSTDAM, J.** 2008. Design and construction of the airtight ferrocement bin for on-farm storage of paddy. *Agricultural Mechanization in Asia, Africa and Latin America* 39, 52-56.
- AHLHEIM, M., FRÖR, O., HEINKE, A., KEIL, A., DUC, N.M., VAN DINH, P., SAINT-MACARY, C., ZELLER, M.** 2008. Landslides in mountainous regions of Northern Vietnam: Causes, protection strategies and the assessment of economic losses. Discussion paper No. 298/2008, Stuttgart-Hohenheim, Germany.
- ALCARAZ V. G., ZELLER, M.** 2008. Use of household food insecurity scales for assessing poverty in Bangladesh and Uganda. *Research in Development Economics and Policy Discussion Paper no. 01/2008*, Stuttgart-Hohenheim, Germany.
- ALCARAZ, V.G., ZELLER, M.** 2008. Use of household food insecurity scales for assessing poverty in Bangladesh and Uganda. *Research in Development Economics and Policy, Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Discussion Paper No. 1/2008*. Universität Hohenheim. Stuttgart
- ALOO, F.O., VALLE ZÁRATE, A., KAUFMANN, B.** 2008. Milk offtake of Rendille Camels in the mobile and settlement Camps in Northern Kenya. *Bulletin of Animal Health and Production in Africa* 56, 353-356.
- BIERNATH, C., GAYLER, S., HÖGY, P., FANGMEIER, A., PRIESACK, E.** 2009. Entwicklung eines Pflanzenwachstumsmodells zur Berücksichtigung des Einflusses der Klimaänderung auf die Qualität von agrarischen Kulturpflanzenarten. Workshop "Modellierung des Systems Nutzpflanze-Boden - Herausforderungen des 21. Jahrhunderts", 26.-27.02.2009 in Kiel. *Berichte der Gesellschaft für Pflanzenbauwissenschaften* 4, 67-72.
- BRETAG, J., VALET, R., CARLE, R.** 2008. Kakao – Von der Bohne zum Stoff für bitter-süße Genüsse. *Ernährung im Fokus* 8, 217-223.
- BROCKMEIER, M., KLEPPER, R.** 2008. Die Entwicklung

- der Nahrungsmittelpreise und ihre Auswirkungen auf die Welternährungssituation, Forschungsreport 2008, 2.
- FISCHER, I., BUCHENRIEDER, G.** 2008. Insurance preferences of smallholders: Results from an adaptive conjoint analysis in northern Vietnam. Research in Development Economics and Policy Discussion Paper No. 5/2008, Stuttgart-Hohenheim, Germany.
- HEROLD, P.** 2008. Ziegenzüchtung in Baden-Württemberg. Neues aus der Ökologischen Tierhaltung 2008, Praxis trifft Forschung (Sonderheft 320), 27-29.
- HOFFMANN, V., GERSTER-BENTAYA, M.** 2009. Education – poverty – hunger: How do we deal with it? Rural 21(43), 8-11
- HOFFMANN, V., GERSTER-BENTAYA, M.** 2009. l'éducation, la pauvreté et la faim: que faisons-nous pour en venir à bout ? Rural 21 (16), 42-44.
- HOUSSOU, N., ZELLER, M.** 2009. Targeting the poor and smallholder farmers - empirical evidence from Malawi. Research in Development Economics and Policy Discussion Paper No 1/2009, Stuttgart-Hohenheim, Germany.
- ISENGARD, H.-D.** 2009. Determination of the water content in food. Food Science and Technology 23, 17-19.
- ISENGARD, H.-D.** 2009. Wasser, eine Substanz in allen Lebensmitteln. GIT Laborfachzeitschrift 53, 780
- ISENGARD, H.-D.** 2008. Wasser, einer der bedeutsamsten Inhaltsstoffe in Lebensmitteln. GIT Labor-Fachzeitschrift 52, 242-243.
- ISENGARD, H.-D., LANDENDÖRFER, T.** 2009. Schnelle Bestimmung des Verdorbenheitsgrades von Frittierfetten. Lebensmittelchemie 63, 2-3.
- ISENGARD, H.-D., MERKH, G.** 2008. Wasserbestimmung in Milchpulver – nicht nur ein analytisches Problem. Lebensmittelchemie 62, 40.
- ISENGARD, H.-D., LABUZA, T.P., LILLFORD, P.J., REID, D.S.** 2008. Taking the measure of water. International Union of Food Science and Technology: IUFoST Scientific Information Bulletin August 2008 [http://www.iufost.org/reports\\_resources/bulletins/IUF.SIB.Waterinfood.pdf](http://www.iufost.org/reports_resources/bulletins/IUF.SIB.Waterinfood.pdf)
- JARADRATTANAPAIBOON, A., SRUAMSIRI, P., REINTJES, K., LEITENBERGER, M., JÖNS, B., NEIDHART, S., CARLE, R.** 2008. Method validation and investigation of paclobutrazol in soil using SPME-GC-MS technique. Chiang Mai University, Journal of Natural Sciences 7, 279-293.
- KAMMERER, D.R., CARLE, R.** 2008. Schonende Gewinnung färbender Konzentrate. Der Deutsche Weinbau Nr. 6, 28-30.
- KAMMESHEIDT, L.** 2009. Afrikanische Tropenwälder als Kohlenstoffsenken. Naturwissenschaftliche Rundschau, Jhrg. 62, 537-539.
- KAMMESHEIDT, L.** 2009. Primärwälder der Nordhemisphäre als Kohlendioxid-Senken. Naturwissenschaftliche Rundschau, Jhrg. 62, 428-429.
- KAMMESHEIDT, L.** 2009. Salztolerante Nutzpflanzen für versalzten Böden. Naturwissenschaftliche Rundschau, Jhrg. 62, 598-599.
- KAMMESHEIDT, L.** 2008. Agrotreibstoffe können Klimawandel anheizen. Naturwissenschaftliche Rundschau, Jhrg. 61, 528-529.
- KAMMESHEIDT, L.** 2008. Biodiesel aus Jatropha. Naturwissenschaftliche Rundschau, Jhrg. 61, 301-302.
- KAMMESHEIDT, L.** 2008. Mangroven als Kinderstube. Naturwissenschaftliche Rundschau, Jhrg. 61, 584-585.
- KAMMESHEIDT, L.** 2008. Nachhaltige Ölpalmpflanzen? Naturwissenschaftliche Rundschau, Jhrg. 61, 252-253.
- KARAJ, S., MÜLLER, J.** 2009. Optimierung der mechanischen Ölgewinnung aus Jatropha-Kernen (Optimization of mechanical extraction of *Jatropha curcas* seeds). Landtechnik 64, 164-167.
- KEIL, A., SAINT-MACARY, C., ZELLER, M.** 2008. Maize boom in the uplands of Northern Vietnam: economic importance and environmental implications. Research in Development Economics and Policy Discussion Paper No 4/2008. Stuttgart-Hohenheim, Germany.
- KIENZLE, S., NEIDHART, S., CARLE, R.** 2008. Smoothies – trendig und gesund?. Ernährung im Fokus 8, 488-493.
- KNÖDLER, M., CARLE, R.** 2008. Antibiotika-Alternativen – auf der Suche nach phyto-genen Futterzusätzen. Labor & More 4, 12-13.
- KNÖDLER, M., CARLE, R.** 2008. Gesund durch Abfall – Natürliche Leistungsförderer. Hundkatzeperd 2, 2-4.
- KRATZEISEN, M., MÜLLER, J.** 2009. Energie aus Samenschalen von *Jatropha curcas* (Energy from seed shells of *Jatropha curcas*). Landtechnik 64, 391-393.
- KRATZEISEN, M., STARCEVIC, N., MÜLLER, J.** 2009. Den Eigenschaften der Reststoffe auf der Spur. Erneuerbare Energien 19, 80-82.
- KRISHNA BAHADUR, K.C.** 2009. Mapping soil erosion susceptibility using remote sensing and GIS. A Case of the Upper Nam Wa Watershed, Nan Province, Thailand. Environmental Geology 57, 695-705.
- KURZ, C., CARLE, R.** 2008. Smoothies – bottled fruits. Fruit Processing 18, 136-142.
- LEGESSE, G., ABEBE, G.** 2008. The effect of breed type and feeding system on yields of edible and saleable components of Somali and Arsi-Bale goats. Livestock Research for Rural Development 20, <http://www.lrrd.org/lrrd20/6/lege20091.htm>
- LEMKE, U., MERGENTHALER, M., ROESSLER, R., HUYEN, L.T.T., HEROLD, P., KAUFMANN, B., VALLE ZÁRATE, A.** 2008. Pig production in Vietnam - a review. CAB Reviews: Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources 3, 1-15.
- MAIER, T., KAMMERER, D.R., SCHIEBER, A., CARLE, R.** 2008. Functional Food - Lebensmittel des 21. Jahrhunderts? Deutsche Lebensmittelrundschau 104, 53-59.
- MAIER, T., VALET, R., KAMMERER, D.R., CARLE, R.** 2008. Margarine - vom Butterersatz zum Trendprodukt. Ernährung im Fokus 8, 141-147, 223.
- MERKH, G., DAMBACHER, M., ISENGARD, H.-D.** 2009. Rapid moisture determination with microwave resonance technology in infant formulas. Journal of Agroalimentary Processes and Technologies 15, 4-11.
- OFFERMANN, F., BROCKMEIER, M., GÖMANN, H., KLEINHANß, W., KREINS, P., VON LEDEBUR, O., OSTERBURG, B., PELIKAN, J., SALAMON, P.** 2009. Vti-Baseline:2008.Landbauforschung Völknerode, Sonderheft 325, Braunschweig.
- PANSAK, W., HILGER, T., DERCON, G., KONGKAEW, T., CADISCH, G.** 2009. Soil Conservation and Nitrogen Dynamics in Hillside Maize Cropping in tropical mountainous regions. FAO/IAEA Soils Newsletter 31, 6-8.
- PELIKAN, J., BROCKMEIER, M., KLEINHANß, W., TIETZ, A., WEINGARTEN, P.** 2009. Auswirkungen eines EU-Beitritts der Türkei. Landbauforschung Völknerode, Sonderheft 329, Braunschweig.
- REIBER, C., SCHULTZE-KRAFT, R., PETERS, M., HOFFMANN, V.** 2009. Potential and Constraints of Little Bag Silage For Smallholders-Results and Experiences From Honduras. Experimental Agriculture 45, 209-220.
- REWE, T.O., HEROLD, P., KAH, A.K., VALLE ZÁRATE, A.** 2009. Breeding indigenous cattle genetic resources for beef

- production in sub-Saharan Africa. *Outlook on Agriculture* 38, 317-326.
- RÜCKERT-JOHN, J., JOHN, R.** 2009. Essen macht Geschlecht. Zur Reproduktion der Geschlechterdifferenz durch kulinarische Praxen. *Ernährung im Fokus* 9, 174-179.
- SAINT-MACARY, C., KEIL, A., ZELLER, M., HEIDHUES, F., MY DUNG, P.T.** 2008. Land tilling policy and soil conservation in the Uplands of Northern Vietnam. *Research in Development Economics and Policy Discussion Paper No 3/2008*, Stuttgart-Hohenheim, Germany.
- SCHERBAUM, V., SHAPIRO, O., PURWESTRI, RC., INAYATI, DA., NOVIANTY, D., STÜTZ, W., YUSRAN, Y., MÜLLER, T., WIRAWAN, NN., SURYANTAN, J., BLUEM, MA., KOENIGER, M., PANGARIBUAN, RV., QAIM, M., GRUNE, T., HOFFMANN, V., BELLOWS, AC., BIESALSKI, HK.** 2009. Locally produced Ready-to-Use Food (RUF). Piloting in mild and moderately wasted children, Nias Island, Indonesia. *Sight and Life* 1, 29-37.
- SCHMITT, J., POKORNY, B., YING, L.** 2008. Certification of Non-Timber Forest Products in China: Effects on Food Quality, Forest Conservation and Rural Development. *Forests, Trees and Livelihoods* 18, 81-89.
- SEEBERG-ELVERFELDT, C., SCHWARZE, S., ZELLER, M.** 2008. Payments for environmental services - incentives through carbon sequestration compensation for cocoa-based agroforestry systems in central Sulawesi, Indonesia. *Research in Development Economics and Policy Discussion Paper No 2/2008*, Stuttgart-Hohenheim, Germany.
- SIAM, P., DIEGO, B., SUJATHA, M., MAKKAR, H.P.S., MANISH, R.L., REDDY, A.R., PALCHETTI, E., GATEHOUSE, A.M.R.G., SYERS, K.J., O'DONNELL, A., KOHLI, A.** 2009. Narrow genetic and apparent phenetic diversity in *Jatropha curcas*: initial success with generating low phorbol ester interspecific hybrids. *Nature Precedings*, <http://precedings.nature.com/documents/2782/version/1>
- SIART, S., WELTZIEN, E., KANOUTÉ, M., HOFFMANN, V.** 2008. Provenances des semences de sorgho après une année de sécheresse au sud du Mali. *Cahiers d'études et de recherches francophones / Agricultures* 17, 195-198.
- STEMMER, A., SIEGMUND-SCHULTZE, M., GALL, C.F., VALLE ZÁRATE, A.** 2009. Development and worldwide distribution of the Anglo Nubian goat. *Tropical and Subtropical Agroecosystems* 11, 185-188.
- STRITTMATTER, K., FUNK, R., LÜRING, R., VALLE ZÁRATE, A.** 2009. Merkmale der Mast- und Schlachtleistung sowie von Wollqualität und -ertrag von Lämmern und weiblichen Jungschafen. *REKASAN* 16, 94-97.
- STUETZ, W., CARRARA, V., BIESALSKI, H.K., NOSTEN, F.** 2009. Iron, thiamine and micronutrient status in pregnant and breast-feeding women: assessment of food rations and supplementation in Maela refugee camp, Northern Thailand. *Annals of Nutrition and Metabolism* 5, 380.
- WELTZIEN, E., KANOUTÉ, M., ABOUBACAR, T., RATTUNDE, F., DIALLO, B., SISSOKO, I., SANGARÉ, A., SIART, S.** 2008. Sélection participative des variétés de sorgho à l'aide d'essais multilocaux dans deux zones cibles. In: *Cahiers d'études et de recherches francophones / Agricultures* 17, 134-139.
- YUSRAN, WEINMANN, M., MÜLLER, T., RÖMHELD, V.** 2008. Biological control of fusarium crown and root rot disease in four varieties of tomato using *Pseudomonas fluorescens* and *Bacillus amyloliquefaciens* I. Germination and growth of seedlings. *Journal of Plant Pathology* 90, 427.
- ZELLER, M., BEUCHELT, T., FISCHER, I., HEIDHUES, F.** 2008. Linkages between poverty and sustainable agricultural and rural development in the uplands of Southeast Asia. Submitted for review for a possible publication in Series Research Development Economics and Policy Discussion Paper No 6/2008, Stuttgart-Hohenheim, Germany.

## Books and book chapters

- AHMED ABU SHABAN.** 2009. Socio- economic assessment of using treated wastewater in irrigated agriculture- evidence from Northern Gaza. In: W. DOPPLER, M. MAJDALAWI and S. ALMOHAMED (Eds.): *Farming and Rural Systems Economics*, Margraf Verlag, Weikersheim, pp. 119- 132.
- AKOUËGNON, G-E., HOFFMANN, V., SCHULTZE-KRAFT, R.** 2008. Farmers' perspectives on local feedstuffs and introduced forages: case study of four villages in northern Nigeria. In: *Multifunctional Grasslands in a Changing World*. Vol. II, Guangdong People's publishing House. pp. 11-21
- ALEKSANOV, D., KOSHELEV, V., HOFFMANN, V.** 2008. *Economic Consulting in Agriculture (Text-books for the students of higher education institutions)*, Lehrbuch in russischer Sprache, KolosS, Moskau, 256 p.
- ALMOHAMED, S.** 2009. Sozioökonomische Wirkung der Bewässerung auf die landwirtschaftlichen Betriebssysteme in Syrien. In: W. DOPPLER, M. MAJDALAWI and S. ALMOHAMED. (Eds.): *Farming and Rural Systems Economics*, Margraf Verlag, Weikersheim, pp.199- 222.
- AMANI AL-ASSAF.** 2009. The impact of resource use on family income in different ecological environments in Jordan. In: W. DOPPLER, M. MAJDALAWI and S. ALMOHAMED (Eds.): *Farming and Rural Systems Economics*, Margraf Verlag, Weikersheim, pp. 223- 232.
- ASCH, F., BENS, O., BESTAJOWSKY, J., GATTINGER, A., GERWIN, W., HATTIG, T., HOOGEN, V., HÜTTL, R.F., RODIONOV, A., SCHAAF, W., SCHNEIDER, B.U., TRIMBORN, M., SCHILLEM, S.** 2009. Bodenmelioration und Anbauverfahren für trockenheitsgefährdete Standorte. Institut der Deutschen Wirtschaft Köln Medien GmbH, Köln; Klimaschutz und Anpassung an die Klimafolgen; pp. 287-294
- ATTALAH, Y.** 2007. *Vegetation Structure and Biodiversity in Mediterranean Ecosystems-- A comparative study between Lebanon and California*. Diss. Bot. 405. Cramer, Stuttgart, 99 p.
- BEUCHELT, T.** 2008. Support networks of rural households - A case study of risk-management in Northern Vietnam. *Sozialwiss. Schriften zur Landnutzung und ländlichen Entwicklung* Nr. 86, In: BOLAND, H., HOFFMANN, V., U. J. NAGEL (Eds.): Margraf Publishers, Weikersheim.
- CADISCH, G.** 2008. Klimawandel - Patentrezepte für die Schwellen- und Entwicklungsländer? , Mendel-Kolloquium: Klimawandel - Herausforderung für die Pflanzenzüchtung. Gregor Mendelstiftung, Bonn, Berlin, pp. 51-58.
- CADISCH, G., MAROHN, C.,** 2008. Land use after the Tsunami. In: PERNER, H., GEORGE, A., ZAITUN, SYAHABUDDIN (Eds.): *Land Use after the Tsunami - Supporting Education, Research and Development in the Aceh Region*. Humboldt University, Department of Vegetable and Ornamental Crops, Berlin, Germany, Syiah Kuala University, Banda Aceh, Indonesia, pp. 193-198.
- CALLES, T.** 2008. *Stylosanthes Sw.* In: HOKCHE, O., P.E.

- BERRY, O. HUBER. (Eds.): Nuevo Catálogo de la Flora Vasculare de Venezuela. Fundación Instituto Botánico de Venezuela (FIBV), pp. 390-391.
- CAPE, J.N., VAN DER EERDEN, L., FANGMEIER, A., AYRES, J., BAREHAM, S., BOBBINK, R., BRANQUINHO, C., CRITTENDEN, P., CRUZ, C., DIAS, T., LEITH, I., MARTINS-LOUÇÃO, M.A., PITCAIRN, C., SHEPPARD, L., SPRANGER, T., SUTTON, M., VAN DIJK, N., WOLSELEY, P.** 2009. Critical levels for ammonia. *In*: SUTTON, M.A., REIS, S., BAKER, S.M.H (Eds.): Atmospheric Ammonia, Springer, pp. 375-382.
- CHRISTINCK, A., WELTZIEN, E., HOFFMANN, V.** 2009. Définition d'objectifs de sélection et création de systèmes semenciers en collaboration avec les paysans. Un manuel pratique pour les projets de sélection participative des plantes. Margraf Publishers, Weikersheim, 196 p.
- DOPPLER, W., ALMOHAMED, S., MAJDALAWI, M.** 2009. Economics of resource use and farming systems development in the Middle East and East Africa. Margraf Verlag, Weikersheim, 298 p.
- DOPPLER, W., ALMOHAMED, S., MAJDALAWI, M.** 2009. Evaluation of Development Projects (in Arabic language). Margraf Verlag, Weikersheim, 280 p.
- DOPPLER, W., DINH NGOC LAN.** 2008. Quản lý và đánh giá dự án (Project Management and Evaluation). Margraf Publishers, Weikersheim, 236 p.
- DOPPLER, W., KRISHNA BAHADUR, K.C., KITCHAICHAROEN, J.** 2009. Water resources development and its impact on rural livelihood in Northern Thailand - Integrating GIS into farming systems economics. Margraf Verlag, Weikersheim, 240 p.
- DUNG, N.V., VIEN, T.D., CADISCH, G., LAM, N.T., PATANOTHAI, A., RAMBO, T., TUONG, T.M.** 2009. A nutrient balance analysis of the sustainability of the composite swiddening agroecosystem. *In*: VIEN, T.D., RAMBO, T., LÂM, N.T. (Eds.): Farming with Fire and Water: The Human Ecology of a Composite Swiddening Community in Vietnam's Northern Mountains. Kyoto University Press and Trans Pacific Press, Kyoto, pp. 243-283.
- FISCHER, I., SALEHIN, M.M.** 2009. Health and poverty as challenges for human, health and livelihood security: Two case studies on Northern Vietnam and Bangladesh. *In*: BRAUCH, H. G. et al. (Eds.): 2009. Facing global environmental change: environmental, human, energy, food, health and water security concepts. Hexagon Series on Human and Environmental Security and Peace. Vol. 4, Springer Verlag, Berlin, Heidelberg, New York, Hong Kong, London, Milan, Paris, and Tokyo.
- GEORGIADIS, P.** 2008. Local Plant Knowledge for Livelihoods – An Ethnobotanical Survey in the Garhwal Himalaya, Uttarakhand, India. Reihe: Kommunikation und Beratung 82, Margraf Verlag, Weikersheim, 108 p.
- GERMER, J.** 2008. Urin und Fäzes als Quelle von Pflanzennährstoffen. *In*: BERGER, W., LORENZ-LADENER, C. (Hrsg.): Kompost-Toiletten. Ökobuch, Staufen, Germany
- GÖLTENBOTH, F., GONZAL, L.R., CENIZA, M.J.C., BANDE, M.J.M.** 2008. Establishment of sustainable abaca production systems. PPP Abaca Project Publishers, Visayas State University, Baybay, Leyte, Philippines.
- GRENZ, J. AENIS, T., AHLHEIM, M., FRÖR, O., HENSEL, O., HERRMANN, S., HOFFMANN, V., HÜLSEBUSCH, C., KORFF, R., LANGENBERGER, G., MARTIN, K., NUPPENAU, E.-A., SAUERBORN, J., SCHLECHT, E.** 2008. The Sino-German Project Living Landscapes-China: Rural development by land use diversification – actor-based strategies and integrative technologies for agricultural landscapes in mountainous Southwest China. *In*: WEIß, M. M., DALITZ, H., KÜPPERS, M., PFIZ, M., ZIMMERMANN, R. (Eds.): Consequences of Climate Change on Tropical Ecosystems, Eugen Ulmer KG, Stuttgart.
- HAUSSMANN, B.I.G., PARZIES, H.K.** 2009. Methodologies for generating variability. Part 1: Use of genetic resources in plant breeding. *In*: S. CECCARELLI, E.P. GUIMARAES and E. WELTZIEN (Eds.): Plant Breeding and Farmer Participation, FAO, Rome, pp. 107-128.
- HERA, C., HOFFMANN, V., RIVŽA, B.** (Eds.) 2008. Renewable Energy Resources, Production and Technologies – Proceedings of the 5th UEAA General Assembly and the Associated Workshop, Riga, Latvia, 28-31 May 2008, Zinātne Publishers, Riga, pp. 191
- HEROLD, P.** 2009. 100 Jahre Ziegenzuchtverband Baden-Württemberg e.V. Ziegenzuchtverband Baden-Württemberg e.V., Druckerei Stöckl GmbH, Mannheim, 210 p.
- HOFFMANN, V., CHRISTINCK, A., LEMMA, M.** 2009. Rural Extension, Volume 2: Examples and Background Material. 3rd edition. Margraf Publishers, Weikersheim, 555 p.
- HOFFMANN, V., GERSTER-BENTAYA, M., CHRISTINCK, A., LEMMA, M.** 2009. Rural Extension, Volume 1: Basic Issues and Concepts. 3rd edition. Margraf Publishers, Weikersheim, 251 p.
- HOWE, G.A., SCHALLER, A.** 2008. Direct defenses in plants and their induction by wounding and insect herbivores. *In*: A. SCHALLER (Ed.): Induced Plant Resistance against Herbivory, Springer, pp. 7-29.
- ISENGARD, H.-D.** 2009. Water Determination in Food. *In*: C.E. BOISROBERT, A. STJEPANOVIC, S. OH, H.L.M. LELIEVELD (Eds.): Ensuring Global Food Safety, Academic Press, Oxford, United Kingdom, pp. 109-123,
- ISENGARD, H.-D.** 2008. The influence of reference methods on the calibration of indirect methods. *In*: J. IRUDAYARAJ and C. REH (Eds.): Nondestructive testing of food quality, Blackwell Publishing and the Department of Food Technologists (IFT Press), Oxford, Ames (Iowa), pp. 33-43.
- ISENGARD, H.-D., BREITHAUPT, D.** 2009. Food Analysis. *In*: G. CAMPBELL-PLATT (Ed.): Food Science and Technology, John Wiley & Sons, Chichester, West Sussex, United Kingdom, pp 33-56.
- ISENGARD, H.-D., MATHLOUTHI, M.** (Guest editors) 2008. Food Chemistry Vol. 106, issue 4, 15 February 2008, Special issue 4<sup>th</sup> International Workshop on Water in Foods, ISSN 0308-8146
- KAM, S. P., BARTH, H., PEMSL, D. E., KRIESEMER, S. K., TEOH, S. J., BOSE, M. L.** 2008. Recommendation Domains for Pond Aquaculture, World Fish Center, Penang, 40 p.
- KATWIJUKYE, A.K.** 2009. Can Conservation Agriculture work for a small holder farmer? A Socio-Economic Assessment in Eastern Uganda. Margraf Verlag, Weikersheim, 58 p.
- KNÖDLER, M.** 2009. Alk(en)ylresorcinols in Mango (*Mangifera indica* L.) and Cereals – Studies into Structure, Anti-inflammatory Activity, and Use as Marker Compounds in Authenticity Control. Diss. Universität Hohenheim. *In*: CARLE, R. (Ed.): Schriftenreihe des Lehrstuhls Lebensmittel pflanzlicher Herkunft; Vol. 22. Shaker Verlag, Aachen, Germany.
- KRIESEMER, S., GRÖTZ, P.A.** 2008. Fish for All? - The Adoption and Diffusion of Small-Scale Pond-Aquaculture in Africa with Special Reference to Malawi. Reihe: Kommunikation und Beratung 83, Margraf Verlag, Weikersheim, 158 p.
- MAERTENS, M., ZELLER, M.** 2009. How spatially-disaggregated land-use models can inform land-use policy:

- Theory and an empirical application for Indonesia. *In: A.C. DENMAN AND O.M. PENROD (Eds.): Land Use Policy.* Nova Science Publishers (in press).
- MAJDALAWI, M. 2009.** Economics of irrigated crops production and water use efficiency across arab countries. *In: W. DOPPLER, M. MAJDALAWI and S. ALMOHAMED (Eds.): Farming and Rural Systems Economics,* Margraf Verlag, Weikersheim, pp.85-104.
- MAJDALAWI, M., ALMOHAMED, S. 2009.** Comparing farm efficiencies in main irrigation zones in Syria. *In: W. DOPPLER, M. MAJDALAWI and S. ALMOHAMED (Eds.): Farming and Rural Systems Economics,* Margraf Verlag, Weikersheim, pp.105-118.
- MÜLLER, J. 2009.** Agrartechnik in den Tropen/Subtropen und in Transformationsländern (Agricultural Engineering in Tropics/Subtropics and in Transformation Countries). *In: H.-H. HARMS and F. MEIER, (Eds.): Jahrbuch Agrartechnik Band 21.* Deutscher Landwirtschaftsverlag GmbH, Frankfurt, Germany, pp. 213-218.
- NEIDHART, S., SIRISAKULWAT, S., NAGEL, A., SRUAMSIRI, P., CARLE, R. 2009.** Which mango processing residues are suitable for pectin recovery in terms of yield, molecular and techno-functional properties of extractable pectins? *In: H.A. SCHOLS, R.G.F. VISSER, and A.G.J. VORAGEN (Eds.): Pectins and Pectinases,* Wageningen Academic Publishers, Wageningen, The Netherlands, pp. 177-195.
- NWAJIUBA, CH. 2008.** Climate Change and Adaption in Nigeria. Published in: DOPPLER, W. and BAUER, S.(Eds.): *Farming and Rural Systems Economics, Vol. 95.* Margraf Verlag, Weikersheim, 168 p.
- NWAJIUBA, CH., NWOSU, C., EJOGU, A. 2008.** A Re-Examination of Food Production and Population Pressure. Evidences from Southeast Nigeria. Nwajiuba, Ch. (2008): *Climate Change and Adaption in Nigeria.* *In: DOPPLER, W. and BAUER, S. (Eds.): Farming and Rural Systems Economics, Vol. 93.* Margraf Verlag, Weikersheim, 65 p.
- PIOTROWSKI, S., BÖBER, C. 2009.** Characteristics of the rural land rental market in China: A village-level study. *In: BECKMANN, V., NGUYEN HU DUNG, SPOOR, M., XIAOPING, S. WESSELER, J. (Eds.): Economic transition and natural resource management in East and Southeast Asia.* Shaker Publishers, Aachen.
- RICHTER, M. 2008.** Everyday Life in Chieng Khoi, Vietnam - An Essay of Assessment by Using Biographic Interviews. *Kommunikation und Beratung, Band 88,* Margraf Publishers, Weikersheim, 139 p.
- SADILOVÁ, E. 2009.** Chemical Characterization of Coloring Foodstuffs and Studies into the Thermal Degradation of Anthocyanins. Diss. Universität Hohenheim. *In: CARLE, R. (Ed.): Schriftenreihe des Lehrstuhls Lebensmittel pflanzlicher Herkunft, Vol. 21.* Shaker Verlag, Aachen, Germany.
- SAUERBORN, J., MÜLLER-STÖVER, D. 2009.** Application of natural antagonists including arthropods to resist weedy *Striga* in tropical agroecosystems.. *In: R. MUNIAPPAN, G.V.P. REDDY, A. RAMAN (Eds.): Biological Control of Tropical Weeds using Arthropods.* Cambridge University Press, UK, pp. 423-437.
- SCHALLER, A., STINTZI, A. 2008.** Jasmonate biosynthesis and signaling for induced plant defense against herbivory. *In: A. SCHALLER (Ed.): Induced Plant Resistance against Herbivory,* Springer, pp. 349-366.
- SCHERBAUM V. 2008.** Beitrag des Stillens zur Prävention von Übergewicht. *In: Handbuch Gesund aufwachsen in Baden-Württemberg, Landesgesundheitsamt (Eds.):* pp. 71-73.
- SCHIEBER, A., CARLE, R. 2008.** Stability of carotenoids in vegetables, fruits, functional foods and dietary supplements with particular reference to *trans-cis*-isomerization. *In: C.A. CULVER, and R.E WROLSTAD. (Eds.): Color Quality of Fresh and Processed Foods,* ACS Symposium Series 983, American Chemical Society, Washington, DC, pp. 140-150.
- STINTZING, F.C., CARLE, R. 2008.** 2.4: N-Heterocyclic Pigments: Betalains. 4.4: Betalains in Food: Occurrence, Stability, and Postharvest Modifications. 6.4: Analysis of Betalains. *In: C. SOCACIU. Et al. (Eds.): Food Colorants: Chemical and Functional Properties.* CRC Press Boca Raton, Florida, pp. 87-99, 277-299, 507-520.
- STINTZING, F.C., HERBACH, K.M., MOSSHAMMER, M.R., KUGLER, F., CARLE, R. 2008.** Betalain pigments and color quality. *In: C.A. CULVER, and R.E WROLSTAD. (Eds.): Color Quality of Fresh and Processed Foods,* ACS Symposium Series 983, American Chemical Society, Washington, DC, USA, pp. 82-101.
- UNKONVICH, M., HERRIDGE, D., PEOPLES, M., CADISCH, G., BODDEY, B., GILLER, K.E., ALVES, B., CHALK, P., 2008.** Measuring plant-associated nitrogen fixation in agricultural systems. Australian Center for Agricultural Research, Canberra, Australia
- VAN NOORDWIJK, M., KHASANAH, N., HAIRIAH, K., SUPRAYOGO, D., MACANDOG, D., LUSIANA, B., CADISCH, G., 2008.** Chapter 6: Agroforestation of Grasslands in Southeast Asia: WaNuLCAS Model Scenarios for Shade-Based Imperata Control During Tree Establishment. *In: SNELDER, D.J., LASCO, R.D. (Eds.): Smallholder Tree Growing for Rural Development and Environmental Services.* Springer, Science and Business Media B.V, pp. 139-159
- WEIGEL, H.-J., MANDERSCHIED, R., FANGMEIER, A., HÖGY, P. 2008.** Mehr Kohlendioxid in der Atmosphäre: Fluch oder Segen für die Landwirtschaft? *In: WARNSIGNAL KLIMA, J.L. LOZÁN, GRASSL, H., JENDRITZKY, G., KARBE, L., REISE, K., (Eds.): Wissenschaftliche Auswertungen,* Hamburg, pp. 273-277.
- WELTZIEN, E., CHRISTINCK, A. 2008.** Participatory Plant Breeding: Developing Improved and Relevant Crop Varieties with Farmers. *In: SNAPP, S., POUND, B. (Eds.): Agricultural Systems – Agroecology & Rural Innovation for Development,* Elsevier, Amsterdam, pp. 211-251.
- ZELLER, M., BEUCHELT, T., FISCHER, I., HEIDHUES, F. 2009.** Linkages between poverty and sustainable agricultural and rural development in the uplands of Southeast Asia. *In: TSCHARNTKE, T., LEUSCHNER, C., VELDKAMP, E., FAUST, H., GUHARDJA, E. (Eds.): Tropical Rainforests and Agroforests under Global Change.* Springer-Verlag, Berlin.

## Conference contributions

- ABASS, A. B., ABELE, S., MLINGI, N., RWEYENDELA, V., NDUNGURU, G. 2009.** An assessment of the potential efficiency and profitability of value-addition and marketing innovations involving smallholder farmers under a pilot system in Tanzania. International conference "Towards Priority Action for Market Development for African Farmers", 13-15 May 2009, Nairobi, Kenya.
- ABDULAI, L.A., KOURRESSY, M., VAKSMANN, M., BRÜCK, H., ASCH, F. 2009** Responses of sorghum varieties to climatic variability: A case study within the RISOCAS project.



- In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p.223.
- AHLHEIM, M., VAN DINH, P. DUC, N., FRÖR, O., HEINKE, A., KEIL, A., SAINT-MACARY, C., ZELLER, M.** 2008. Economic losses due to landslides in upland areas of Yen Chau district in Vietnam: Causes, protection strategies and willingness to pay. In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management". 1-4 April 2008, Stuttgart-Hohenheim, Germany.
- AKOUËGNON, G-E., HOFFMANN, V. & SCHULTZE-KRAFT, R.** 2008. Options for improving soil fertility in the southern part of the Republic of Bénin: Where does Mucuna find its niche? 16th IFOAM Organic World Congress 2008: Cultivate the Future, 16-20 June 2008, Modena Italy.
- ALCARAZ V. G., ZELLER, M.** 2009. Insights from the Guatemalan food system: an application of exploratory spatial data analysis techniques for food security analysis. 27th International Association of Agricultural Economists (IAAE), 16-22 August 2009, Beijing, China.
- ALMOHAMED, S., DOPPLER, W.** 2008. Impact Assessment of Maskana Irrigation Project on Economic Situation of Farming Families in Northern Syria. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 82.
- ANTONOVA, M., ZELLER, M.** 2008. A time series analysis of the beef livestock supply in Russia: Implications for agricultural sector development policies. Proceedings of the IAMO Seminar , 6-8 September 2007, Budapest, Hungary, Book of Abstracts, pp. 193-203.
- ARGYROPOULOS, D., HEINDL, A., MÜLLER, J.** 2008. Evaluation of processing parameters for hot-air drying to obtain high quality dried mushrooms in the mediterranean region. In: Tielkes, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 153.
- ARGYROPOULOS, D., KUDADAM, J., MÜLLER, J.** 2009. Color degradation of lemon balm (*Melissa officinalis* L.) as affected by the drying process. Proceedings of the 5th CIGR VI Section Symposium on Food Processing, Monitoring Technology in Bioprocesses and Food Quality Management, 31 August–2 September 2009, Potsdam, Germany, Book of Abstracts, pp. 730-736.
- ARGYROPOULOS, D., MONTOYA, J. M. C., MAURER, C., MÜLLER, J.** 2009. Convective hot-air drying of banana in Uganda. In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 452.
- AROUNA, A., DABBERT, S.** 2009. Estimating Households' Willingness to Pay for Rural Water Supply: a Semiparametric Bivariate Probit Approach. Water Policy 2009: Water as a Vulnerable and Exhaustible Resource. Session V: Economics and Social Issues in Face of Water Scarcity. 22-26 June 2009, Czech University of Life Sciences, Prague, Book of Abstracts, pp. 267-270.
- AROUNA, A., DABBERT, S.** 2008. Domestic Water Use by Rural Households without Access to Private Improved Water Sources: Determinants and Forecast in a Case Study for Benin. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 473.
- ARTAVIA, M., GRETHE, H., MÖLLER, T., ZIMMERMANN, G.** 2009. Correlated Order Three Gaussian Quadratures in Stochastic Simulation Modelling. Twelfth Annual Conference on Global Economic Analysis, Chile.
- ASCH, F.** 2009. Klimawandel und Pflanzenzüchtung: Eine trans-disziplinäre Herausforderung. DLG/GFP-Symposium - Forschung gestaltet Zukunft - Klimawandel: Züchtung für extreme Umwelten. 25.-26. März 2009, Bonn, Vorträge für Pflanzenzüchtung 81, Book of Abstracts, pp. 25-40.
- ASCH, F.** 2008. Marginale Standorte für nachwachsende Rohstoffe – Widerspruch oder Wirklichkeit? Deutsch-Französisches Symposium Klimawandel, Bioenergie und Biodiversität, 31. März 2008, Stuttgart-Hohenheim, Germany.
- ASCH, F., RAJAONA, A.** 2008. Potential für Bioenergieproduktion auf degradierten Flächen - ein Beispiel aus Madagascar. Symposium II Montpellier - Hohenheim: Agro-Biodiversität im Konflikt zwischen Nahrungsmittel- und Energiesicherheit. Agropolis Montpellier 6. Nov. 2008,
- AYANU, Y., MAROHN, C., DUNG, N.V., LAM, N.T., VIEN, T.D., CADISCH, G.** 2009. Simulating Consequences of Land Use Change on Hydrological Landscape Functions and Sustainability of Crop Production in Northwest Vietnam. In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of Natural Resources. Tropentag 2009, Hamburg, Germany, Book of abstracts, p. 31.
- AZEEZ, K., ZELLER, M., BEUCHELT, T.** 2009. Foreign direct investment in agricultural production: win-win deals or neocolonialism? In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p 394.
- AZUHNWI, B., HOFFMANN, E.M., BECKER, K.** 2008. Competition for resources in a changing world: New drive for rural development. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 428.
- BAKONYI, N., DONATH, S., WEINMANN, M., NEUMANN, G., MÜLLER, T., RÖMHELD, V.** 2008. Assessing commercial bio-fertilizers for improved phosphorus availability: Use of rapid screening tests. Jahrestagung der Deutschen Gesellschaft für Pflanzenernährung 2008. Limburgerhof/ Speyer, Germany, Kurzfassung der Poster, p. 1.
- BANSE, M., GRETHE, H.** 2008. Top Down, and a Little Bottom Up: Modelling EU Agricultural Policy Liberalization with LEITAP and ESIM. 11th Annual Conference on Global Economic Analysis, Helsinki, Finland.
- BANSE, M., GRETHE, H.** 2008. Effects of the New Biofuel Directive on EU Land Use and Agricultural Markets. EAAE-Seminar Modelling Agricultural and Rural Development Policies, 31 January – 1 February 2008, Seville, Spain.
- BATISTEL, C., MAROHN, C., AGUS, F., JOSHI, L., CADISCH G.** 2008. Changes in Carbon Stock as Affected by Land Use Change in West Aceh, Sumatra. . In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 504.
- BAUER, V., BURKART, S., ABELE, S., KAHANGI, E., DUBOIS, T., COYNE, D., HOFFMANN, V.** 2009. Financing, handling, hardening and marketing of tissue culture-derived planting material through nurseries: the case of banana

- in Kenya, Uganda and Burundi. *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p 395.
- BAYDE, B.B., HILGER, T., CADISCH, G.** 2008. *Artemisia annua* ANAMED, a Medicinal Plant for Malaria Treatment: A Study on Growth Performance and Artemisinin Content under Tropical Highland Conditions of SW Ethiopia. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 178.
- BECKER, K.** 2009. Biofuel from *Jatropha curcas* - Perspectives for the tropical regions. AFECG Kongreß "Tropical oils: socio-economy production and applications, 7-8 April 2009, Paris, France.
- BECKER, K.** 2008. Biofuel from *Jatropha curcas* - Perspectives for tropical regions. 21st Annual Meeting society for Tropical Ecology (Gtö), Consequences of climate change on tropical ecosystems, 19 February 2008, Stuttgart-Hohenheim, Germany.
- BECKER, M., ENGEL, K, ASCH, F** 2008 Adaptation mechanisms in rice cultivars of different origin to iron toxic conditions. *In*: Competition for resources in a changing world: New drive for rural development. Tropentag 2008, Cuvillier Verlag, Göttingen, p 231.
- BECKER, K., MAKKAR, H.P.S.** 2009. Sustainable land development and ecosystem conservation through enhancing economic viability of the *Jatropha curcas* based biodiesel production chain using a bio-refinery concept. ERSEC International Conference: Sustainable Land Use and Ecosystem Conservation, 4-7 May 2009, Beijing, China, Book of Abstracts, p. 57.
- BELLOWS, A. C.** 2009. Community Health and Urban Agriculture. Landscape and Urban Horticulture Conference, 9-13 June 2009, Bologna.
- BELLOWS, A. C.** 2009. Human Rights and the Contribution of the Academy in the Era of Economic and Food Crises. International Geographic Union (IGU) Gender and Geography Conference, 22-24 May 2009, Szeged and Timisoara.
- BELLOWS, A. C.** 2008. "Who knows? Who cares? Who benefits and how!? Research in Community Food Environments." on Panel, Food Environments III: Access and Race. Association for American Geography, Annual Conference. 15-19 April 2008, Boston.
- BELLOWS, A. C.** 2008. Urban-based Women and Men Help Ground Food Sovereignty: Economic Security and Cultural Integrity in Mexican-US Migration. Annual Joint Meeting of the Agriculture, Food and Human Values Society (AFHVS) and the Association for the Study of Food and Society (ASFS), 4-7 June 2008. New Orleans, United States.
- BEN SALEM, H., MAKKAR, H.P.S.** 2009. Cost-effective and environmentally friendly options to improve livestock performance in dry areas. FAO/IAEA International Symposium on Sustainable Improvement of Animal Production and Health, 8-11 June 2009, Vienna, Austria, Book of Abstracts, pp. 172-173.
- BERKHOFF, K., COTTER, M., HERRMANN, S., SAUERBORN J.** 2009. Use of remote sensing data as basic information for applied land use change modelling. *In*: Proceedings of the ERSEC International Conference on „Sustainable Land Use and Water Management“, 8-10 October 2008, Beijing, UNESCO Office Beijing, P.R. China, pp. 36-45.
- BEUCHELT, T.** 2008. Kaffee-Kleinbauern in Nicaragua - Erfahrungen mit Biolandbau und Fairem Handel. Vortrag im Rahmen der Fairen Woche in Stuttgart, September 17, 2008, Stuttgart, Germany.
- BEUCHELT, T., ZELLER, M.** 2009. Profitability of certified small-scale coffee production systems in Nicaragua? *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p 497.
- BEUCHELT, T., ZELLER, M., OBERTHÜR, T.** 2008. Do Certification Schemes Influence the Role of Nicaraguan Women in Small-Scale Coffee Production Systems? *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 105.
- BEUCHELT, T., ZELLER, M., OBERTHÜR, T.** 2009. Justified hopes or utopian thinking? The suitability of coffee certification schemes as a business model for small-scale producers. 27th International Association of Agricultural Economists (IAAE), 16-22 August 2009, Beijing, China.
- BEUCHELT, T., ZELLER, M., OBERTHÜR, T.** 2008. Organic coffee, fairtrade and small-scale producers – is certification a way to reduce poverty in Nicaragua? *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p 44.
- BHATTA, G.D.** 2008. Problems and Potentials of Organic Agriculture Development in Nepal. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 256.
- BHATTA, G.D., DOPPLER, W., KRISHNA BHADUR, K.C.** 2008. Problems and Potentials of Organic Agriculture Development in Nepal. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 256.
- BÖBER, C.** 2009. The Use of Carbamide Fertilizer in Hebei Province: Farmers' Practice and Awareness of Environmental Consequences. ERSEC International Conference-Sustainable Land Use and Ecosystem Conservation, 4-7 May 2009, Beijing, China.
- BÖBER, C.** 2008. Farming in Transition - Evidence and Experience from Hebei Province, PR of China. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 614.
- BÖBER, C.** 2008. Impact of Off-farm Income on Nitrogen Use - Case Study results from the North China Plain. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 106.
- BÖBER, C., KÜHL, Y., RUMBAUR, C.** 2009. Land degradation in the North China Plain (NCP): Recent evidence, farmers concerns and policy implications. 27th International Association of Agricultural Economists (IAAE), 16-22 August 2009, Beijing, China.
- BÖBER, C., ZELLER, M.** 2009. Overuse of Agricultural Inputs and Awareness of Environmental Consequences – The Case of Hebei Province, PR of China. *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p 503.
- BOLL, L., SCHMITTER, P., HILGER, T., CADISCH, G.,** 2008. Spatial Variability of Maize-Cassava Productivity in Uplands of Northwest Vietnam *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural

- Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 312.
- BROCKMEIER, M.** 2008. Global Economic Analysis: An Application of the GTAP Model to Assess the WTO Negotiations. Modern Agriculture in Central and Eastern Europe (MACE), 22-24 July 2008, Warschau, Polen.
- BROCKMEIER, M.** 2008. The challenges of model based policy advice. XII EAAE Konferenz, 26-29 August 2008, Ghent, Belgium.
- BROCKMEIER, M., URBAN, K.** 2008. Assessing the Impacts of Agricultural Policies on the Global, National and Farm Level - A Survey of Model Systems. 11th Annual Conference on Global Economic Analysis, 10-14 June 2008, Helsinki, Finland.
- CADISCH, G.** 2008. Klimawandel - Patentrezepte für die Schwellen- und Entwicklungsländer? , Mendel-Kolloquium: Klimawandel - Herausforderung für die Pflanzenzüchtung. Gregor Mendelstiftung, Bonn, Berlin, Book of Abstracts, pp. 51-58.
- CADISCH, G., BERGER, T., SCHREINEMACHERS, P., MAROHN, C., LIPPE, M., HUGENSCHMIDT, C., SCHULER, U., SAINT-MACARY, C., HILGER, T.** 2008. Integrated Modelling Approaches. In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management". 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 113-114.
- CALBERTO SANCHEZ, G., MAROHN, C., LIPPE, M., SCHREINEMACHERS, P., HILGER, T., CADISCH, G.** 2008. Parameterisation and Calibration of the Tropical Soil Productivity Calculator (TSPC) for Cabbage, Sweet Pepper and Litchi in Mae Sa Watershed, Northern Thailand. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 224.
- CALLES, T. R., SCHULTZE-KRAFT.** 2008. Genetic Diversity of the Tropical Legume Genus *Stylosanthes* in Venezuela: An ongoing Project. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 593.
- CALLES, T., GUENNI, O., WALLE, E.M.** 2008. Geographical Distribution of the Species *Schoenocaulon officinale* in Venezuela. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 596.
- CARLE, R.** 2009. Betalains in food: occurrence, stability and functional properties. IV Congreso Nacional de Ciencia y Tecnología de Alimentos: Alimentos, Innovación y Salud, 27-29 October 2009, San José, Costa Rica.
- CARLE, R.** 2008. Investigación sobre la obtención de pectinas, carotenoides y polifenoles de *Mangifera indica* (mango) y su respectivo uso en alimentos funcionales, realizada en Tailandia. Tercera Jornada sobre Medicinas Complementarias y su Respaldo Científico, 22.-23. November 2008, Universidad Salvadoreña Alberto Masferrer, San Salvador, El Salvador.
- CARLE, R.** 2008. Mango processing: carotene retention and pectin recovery. HortResearch (since Dec. 2008: Plant & Food Research), 14 October 2008, Auckland, New Zealand.
- CARLE, R.** 2008. Schokolade – Rohware und Technologie (Teil: Kakao). 7. DGE-BaWü-Forum Schokolade, 06. March 2008, Stuttgart-Hohenheim, Germany.
- CARRARA, V., STUETZ, W., NOSTEN, F., MCGREADY, S.** 2009. Growth velocity of term infants born in Maela camp for displaced population along the Thai-Myanmar border. Annals of Nutrition & Metabolism. 19th International Congress of Nutrition, October 2009, Bangkok, Thailand, p.259.
- CHOTRUANGPRASERT, K., BEUCHELT, T., ZELLER, M.** 2009. The benefit of fairtrade coffee to Karen coffee farmers living in national parks in Northern Thailand. In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 321.
- CHUKWUMAH, I., WALKER, A., PLACE, F., KEIL, A., CADISCH, G.** 2008 Economic Assessment of Different Improved Fallow (IF) Strategies Using the Water, Nutrient and Light Capture in Agroforestry Systems (WaNuLCAS) Model. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 464.
- COBO, J.G., DERCON, G., DELVE, R., CADISCH, G.** 2008. Assessing the Variability of Soil Quality and Crop Productivity at Different Spatial Scales in three Settlement Schemes in NE Zimbabwe by Integrating Mid-Infrared Spectroscopy and Geostatistical Tools. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 492.
- COBO, J.G., DERCON, G., DELVE, R., CADISCH, G.** 2008. Scaling-up nutrient balances from plot to village level under small-holder settlement schemes in sub-humid Zimbabwe. EUROSOL: Soil, Society & Environment, University of Technology, 25-29 August 2008, Vienna, Austria.
- COTTER, M., GRENZ, J.** 2009. Introducing a biodiversity evaluation tool for the Greater Mekong Subregion (GMS), In: Impacts of Global Change on Tropical Ecosystems - Cross-cutting the Abiotic, Biotic and Human Spheres. 27-30 July 2009, Marburg, Germany. Society for Tropical Ecology (gtö) and Association for Tropical Biology and Conservation (ATBC), Germany, Book of Abstracts p. 380.
- DEMYAN, S., RASCHE, F., BECKER-FAZEKAS, S., SCHULZ, E., MÜLLER, T., CADISCH, G.** 2009. Soil organic matter characterization by DRIFT-MIRS and thermal analyses. Soil Organic Matter Dynamics Conference, 11-12 November 2009, Witzzenhausen, Germany.
- DEVAPPA, R.K., MAES, J., MAKKAR, H.P.S., DE GREYT, W., BECKER, K.** 2009. Isolation of phorbol esters from *Jatropha curcas* oil and quality of produced biodiesel. 2nd International Congress on Biodiesel: The Science and the Technologies, November 15-17, 2009, Munich, Germany.
- DEVAPPA, R.K., MAKKAR, H.P.S., BECKER, K.** 2009. Fate of phorbol esters in soil. 13th Annual Green Chemistry & Engineering Conference, 23-25 June 2009, College Park, Maryland, USA.
- DOLUSCHITZ, R.** 2009: Erstes IRTG mit China (GRK 1070) – „Lessons Learned“, Stärken und Schwächen in der Kooperation mit China und Empfehlungen für die Zukunft. Expertengespräch anlässlich der Perspektiven und Strategien in der Kooperation mit China. DFG-Geschäftsstelle.12. Mai 2009, Bonn.
- DOLUSCHITZ, R., ZHANG, F., EBERSBERGER, D., MÜLLER, T.** 2009: The Sino-German International Research Training Group „Sustainable Resource Use in the North China Plain“. Sustainable Land Use and Water Management, International Conference (UNESCO Publication), Proceedings of the ERSEC 2008 International Conference, 8-10 October 2008,

- Peking, China, Book of Abstracts, pp 326-333.
- ELZEIN, A., KROSCHEL, J., MARLEY, P., FEN, B., AVOCANH, A., CADISCH, G.** 2009. Progress on *Striga* Mycoherbicide Research: Time for Scaling-Up? *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p.118.
- ENGELS, C., KNÖDLER, M., ZHAO, Y., CARLE, R., GÄNZLE, M.G., SCHIEBER, A.** 2009. Isolation and characterization of antimicrobial polyphenols from mango (*Mangifera indica* L.) kernels. IV Congreso Nacional de Ciencia y Tecnología de Alimentos: Alimentos, Innovación y Salud, 27-29 October 2009, San José, Costa Rica.
- ERDENEBOGOR, B., HOFFMANN, V.** 2009. Feasibility and implementation strategies of dairy extension in Ulaanbaatar/Mongolia. *In*: SCHAFT, F. & BALMANN, A. (Hrsg.): Multi-level Processes of Integration and Disintegration – Proceedings of the Third Green Week Scientific Conference, Studies on the Agricultural and Food Sector in Central and Eastern Europe Vol. 52, IAMO, pp. 91-98
- ESPAÑA, M., BRUNE, T., RASCHE, F., RODRIGUEZ, B., KANDELER, E., CADISCH, G.** 2008. 15N-DNA-Based Stable Isotope Probing a Suitable Tool to Link Microbial Activity with Identity in Plant Residue Decomposition Process. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 508.
- FEIKE, T., MÜLLER, J., CLAUPEIN, W.** 2008. Examining germination rates of seeds of physic nut (*Jatropha curcas* L.) from Philippines and Viet Nam. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p.173.
- FOCKEN, U.** 2008. Application of stable isotopes in aquaculture nutrition research. IX International Symposium on Aquaculture Nutrition, 24-27 November 2008, Ensenada/BC, Mexico.
- FOCKEN, U., MAMUN, S.M.** 2009. Comparative Studies on Nutritional and Physiological Aspects of Conventional Nile Tilapia, Genetically Improved Nile Tilapia and Genetically Male Nile Tilapia. 1st International Conference on "Aquatic Biotechnology and Environmental Safety", 14-16 April 2009, Dokki/Gizah, Egypt.
- FOCKEN, U., MCCULLAGH, J., GAYE-SIESSEGGER, J.** 2008. Effect of dietary amino acid profile on the  $\delta^{13}\text{C}$  of selected amino acids in rainbow trout, *Oncorhynchus mykiss* (Einfluss des Aminosäureprofils in der Nahrung auf den  $\delta^{13}\text{C}$ -Werte einzelner Aminosäuren bei der Regenbogenforelle *Oncorhynchus mykiss*). 62. Tagung der Gesellschaft für Ernährungsphysiologie, 1.-3. April 2008, Göttingen, Germany, Book of Abstracts, p.153.
- FOCKEN, U., MCCULLAGH, J., GAYE-SIESSEGGER, J.** 2008. Tracing amino acids from the diet to tissues by LC-IRMS: a feeding trial with rainbow trout, *Oncorhynchus mykiss*, using purified diets partly enriched with  $^{13}\text{C}$ -glutamate. 6th International Conference on the application of stable isotope techniques to ecological studies (ISOECOL6), 24-29 August 2008, Honolulu, Hawaii.
- FOCKEN, U., SCHOBBER GONCALVES LIMA, J., COPER RIVERA, E.** 2008. Comparison of environmental impact of conventional and organic shrimp farming in Guaraira Lagoon, Brazil, by emergent analysis. Society for Tropical Ecology: Consequences of Climate change on Tropical Ecosystems, 18-22 February 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 47.
- GAO, H., ET AL.** 2009. Assessment of infant feeding policies and practices in Deyang City, Sichuan Province, China, immediately after the earthquake (May-July 2008). Annals of Nutrition & Metabolism, 19th International Congress of Nutrition, October 2009, Bangkok, Thailand, Book of Abstracts, p. 437.
- GERMER, J., SAUERBORN, J.** 2008. Material cycles in ecologically sustainable sanitation: The Accra experience, Ghana. Coupling Sustainable Sanitation and Groundwater Protection. BGR Symposium to the International Year of Sanitation 2008, 14-17 October 2008, Hannover.
- GERMER, J., SAUERBORN, J.** 2008. Urine diverting dehydration toilets to harness nutrients: An estimation for Ghana. Coupling Sustainable Sanitation and Groundwater Protection. BGR Symposium to the International Year of Sanitation 2008, 14-17 October 2008, Hannover.
- GERMER, J., SAUERBORN, J., ADDAI, S.** 2008. Leaf area and yield response of urine fertilised sorghum: A field trial in Ghana Coupling Sustainable Sanitation and Groundwater Protection. BGR Symposium to the International Year of Sanitation 2008, 14-17 October 2008, Hannover.
- GERMER, J., YONGHA BOH, M., SAUERBORN, J.** 2008. Efficiency of different sanitisation methods on nutrient preservation and pathogen destruction in faecal matter: Report on ongoing research in Ghana. Coupling Sustainable Sanitation and Groundwater Protection. BGR Symposium to the International Year of Sanitation 2008, 14-17 October 2008, Hannover.
- GHOORBANI, A., SAUERBORN, J., LANGENBERGER, G.** 2009. Wild Resource Use among Dai People in Nabanhe National Nature Reserve (NNNR): Cultural Importance of Medicinal and Food Plants. *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 98.
- GHOORBANI, A., SAUERBORN, J., LANGENBERGER, G.** 2008. Plant Biodiversity Use in Southwest China: Preliminary Results of an Ethnobotanical Research. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 588.
- GIESE, M., BRUECK, H., DINGKUHN, M., KIEPE, P., ASCH, F.** 2009. Developing rice and sorghum crop adaptation strategies for climate change in vulnerable environments in Africa RISOCAS. *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 158.
- GOEL, G., MAKKAR, H.P.S., BECKER, K.** 2009. Effects of plant materials, their saponins and bromochloromethane on rumen fermentation and methanogenesis. Animal Nutrition World Conference 2009, 14-17 February 2009, New Delhi, India, Book of Abstracts, pp. 174-177.
- GÖLTENBOTH, F.** 2008. Die Autoindustrie und der Klimaschutz. Landesstiftung f. Polit. Bildung, 10. Oktober 2008, Bad, Urach.
- GÖLTENBOTH, F.** 2008. Rainforestation Farming - an innovative application in the framework of global carbon dioxide reduction. SAP, 31 March 2008, Horchheim.
- GOOTWINE, E., ABU SIAM, M., REICHER, S., AL BAQAIN, A., VALLE ZÁRATE, A.** 2009. Introducing the prolific Afec-Awassi strain to semi extensive Bedouin sheep flocks in Israel as a mean to secure their economic success. *In*: EAAP (Ed.): 60th Annual Meeting of the European Association for

- Animal Production, 24-27 August 2009, Barcelona, Spain, Book of Abstracts , p. 74.
- GOOTWINE, E., AL BAQAIN, A., SIAM ABU, M., LEIBOVICH, H., HEROLD, P., REICHER, S., VALLE ZÁRATE, A.** 2008. Impact of introducing new technologies on Bedouin sheep production in the Negev in Israel. *In: PACHECO F. & MORAND-FEHR, P. (Eds.): Changes in sheep and goat farming systems at the beginning of the 21st century: Research, tools, methods and initiatives in favour of a sustainable development. Proceedings of the 6th International Seminar of the FAO-CIHEAM Network on Sheep and Goats, Sub-Network on Production Systems, 15-17 November 2007, Ponte de Lima, Portugal, Book of Abstracts, pp. 145-148.*
- GORIM, L., ASCH, F., TRIMBORN, M.** 2009. Seed coating with hydro-absorbent properties as possible mitigation strategy for unreliable rainfall patterns in early-sown Sorghum. *In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 221.*
- GORIM, L., TRIMBORN, M., ASCH, F.** 2009. Remobilisation efficiency of coated cereal seeds during germination depends on coat composition and size. Plants for the future. Botanikertagung Leipzig 2009, Book of Abstracts, p.15.
- GÖSELE, U., ZAINAL, ISENGARD, H.-D.** 2009. Ist der Einsatz von natürlichen Fettschutzmitteln beim Frittieren sinnvoll? GDL-Kongress Lebensmitteltechnologie 2009, 22.-24. Oktober 2009, Lemgo, Germany.
- GÖTZ, L., GRETHE, H.** 2009. The Relevance of the EU Entry Price System for Fresh Fruit and Vegetable Exports from China to the EU. Conference of the International Association of Agricultural Economists, 16-22 August 2009, Beijing, China.
- GÖTZ, L., GRETHE, H.** 2008. How Effective is the EU Entry Price System for Fresh Fruits and Vegetables? XIIth EAAE Congress. 26-29 February 2008, Ghent, Belgium.
- GRENZ, J. ET AL.** 2008. The Sino-German Project Living Landscapes China "LILAC". *In: WEISS, M. et al. (Eds.): Consequences of Climate Change on Tropical Ecosystems. Verlag Eugen Ulmer, Stuttgart, Book of Abstracts, pp. 52-54.*
- GRETHE, H., NOLTE, S., BANSE, M.** 2008. Modelling the Effects of EU Sugar Market Liberalization on Area Allocation, Production and Trade. *In: BARTOVE, L., GIL, J. M., M'BAREK, R., RATINGER, T., (Eds.), Modelling Agricultural and Rural Development Policies, Proceedings of the 107th EAAE Seminar, Seville, Spain. Book of Abstracts, pp. 209-222.*
- HAI, VT., HUONG, PT., SRUAMSIRI, P., HEGELE, M., WÜNSCHE, JN.** 2008. Fruit maturity and quality at-harvest and ex-store of selectively picked mangos (*Mangifera indica* L., cvs. 'Tron' and 'Hôi'). *In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management". 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 151-152.*
- HAU, N.V., PIEPHO, H.-P., THUY, L.T., VALLE ZÁRATE, A.** 2008. The effect of the oestrogen receptor (ESR) gene on the reproductive performance of two local Vietnamese pigs reared under household conditions in Son La Province, Northwest Vietnam. 7<sup>th</sup> Global Conference on the Conservation of Animal Genetic Resources "Impact of the Globalisation on the Animal Genetic Resources", 14-18 September 2008, Hanoi, Vietnam.
- HAU, N.V., THUY, L.T., KAUFMANN, B., VALLE ZÁRATE, A.** 2008. Carcass characteristics and meat quality of Mong Cai and Ban pig breeds reared under smallholder conditions in Son La province. Conference on Development of Animal Husbandry and Breeding of Special Local Breeds in Smallholder Production Systems in Northern Mountainous Areas in Vietnam. Research, Application and Extension, 19-21 September 2007, Son La, Vietnam.
- HEGELE, M., TIYAYON, P., SRINGARM, K., SRITONTIP, C., MANOCHAI, P., NAPHRON, D., SRUAMSIRI, P., WÜNSCHE, JN.** 2008. Hormonal control of flower induction in litchi and longan. 3<sup>rd</sup> International Symposium on Longan, Lychee and Other Fruit Trees in Sapindaceae Family, 25-29 August 2008, Fuzhou, China. Book of Abstracts, p. 80-81.
- HEIDHUES, F.** 2009. The world food crisis: Causes and challenges. Proceedings of the Jeju Peace Institute - Friedrich Naumann Foundation for Liberty Joint Workshops 2007-2008. *In: Challenge and response in northeast Asia: Fulfilling the Jeju Process. JPI, Seoul, Korea, Book of Abstracts, pp. 105-110.*
- HEROLD, P.** 2009. Praktische Zuchtarbeit für eine wirtschaftliche Milcherzeugung. Oral: Voneinander lernen! Internationale Schaf- und Ziegentagung, 30 November – 2. Dezember 2009, Bad Waldsee, Germany.
- HEROLD, P., WENZLER, J.-G., JAUDAS, U., VALLE ZÁRATE, A.** 2009. User specific breeding goals in dairy goat breeding. *In: EAAP (Ed.): 60th Annual meeting of the European Association for Animal Production, 24-27 August 2009, Barcelona, Spain, Book of Abstracts, p. 4.*
- HEUMANN, N., LEMKE, S., LEONHAEUSER, I.U., KRUGER, A.** 2009. Ernährungssicherheit von Farmarbeiter-Haushalten in Südafrika – Eine qualitative Untersuchung auf der Mikro- und Meso-Ebene. Congress of the Nutrition Society of Germany (Deutsche Gesellschaft für Ernährung e.V.). Proceedings of the German Nutrition Society 13, p. 22.
- HEUMANN, N., LEMKE, S., LEONHÄUSER, I.-U., KRUGER, A.** 2009. Food insecurity among South African farm workers – examining the right to food from a microsocial and gender perspective. Annals of Nutrition and Metabolism, 19<sup>th</sup> International Congress of Nutrition (ICN 2009), "Nutrition Security for All", 4-9 October 2009, Bangkok, Thailand. p.567.
- HEUMANN, N., LEMKE, S., LEONHAEUSER, I.U., KRUGER, A.** 2008. Qualitative research exploring the influence of household composition and intra-household dynamics on nutrition security among farm workers, North West Province, South Africa. South African Journal of Clinical Nutrition, Nutrition Congress 2008, 28 September-02 October 2008, Pretoria, Südafrika. Book of Abstracts, p. 195.
- HOFFMANN, V.** 2009. Extension Science: What was it, what is it and what might it be in the future?. *In: PAFFARINI, C., SANTUCCI, F. M., (Eds.): Theory and Practice of Advisory Work in a Time of Turbulences, Proceedings, 19th European Seminar on Extension Education, DSEEA, Perugia, Book of Abstracts, pp. 17-21*
- HÖGY, P., WIESER, H., KÖHLER, P., SCHWADORF, K., BREUER, J., ERBS, M., WEBER, S., FANGMEIER, A.** 2008. Does Elevated Atmospheric CO<sub>2</sub> Allow For Sufficient Crop Quality In The Future? Proceedings of the German Society for Quality Research on Plant Foods (DGQ), Quedlinburg, Vol. 43, pp. 27-28.
- HOUSSOU, N., ZELLER, M.** 2009. Operational models for improving the targeting efficiency of agricultural and development policies and projects: A systematic comparison of different estimation methods using out-of-samples tests.

- 27th International Association of Agricultural Economists (IAAE), 16-22 August 2009, Beijing, China.
- HÜTTNER, M., NAKAO, M., WASSERMANN, T., SIEFERT, L., BOOMKER, J.D.F., DINKEL, A., SAKO, Y., MACKENSTEDT, U., ITO, A., ROMIG, T.** 2008. *Echinococcus felidis* Ortlepp, 1937 (Cestoda, Taeniidae), a wildlife parasite of the African lion. 23. Tagung der Deutschen Gesellschaft für Parasitologie, 5-7 March 2008, Hamburg, Germany.
- HUYEN, L.T.T., HEROLD, P., VALLE ZÁRATE, A.** 2008. Cattle keeping in northern mountains of Vietnam depending on lowland and highland local resources. *In*: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management", 1-4 April 2008, Stuttgart-Hohenheim, Germany.
- HUYEN, L.T.T., HEROLD, P., VALLE ZÁRATE, A.** 2008. Cattle performances and socio-economic contribution in different farming systems in northern mountainous Vietnam. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 414.
- HUYEN, L.T.T., HEROLD, P., VALLE ZÁRATE, A.** 2008. Resource use and socio-economic contribution of cattle production in different farm types in northern mountainous regions of Vietnam. Improved Productivity and Meat Quality of Beef Cattle Production in Vietnam. Laos and Cambodia (NUFU) (Annual Workshop), 29 November - 5th December 2008, Siem Riap, Cambodia.
- HUYEN, L.T.T., VAN, D.T.T., HEROLD, P., VALLE ZÁRATE, A.** 2009. Smallholder cattle production in northern mountainous Vietnam in relation with the poverty status of the household. *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 242.
- INAYATI DA, SCHERBAUM V, PURWESTRI RC, WIRAWA NN, SURYANTAN J, BLOEM MA, PANGARIBUAN RV, BIESALSKI HK, BELLOWS AC, HOFFMANN V.** 2009. Effectiveness of Micronutrient Powder for in-Home Use and/or Intensive Nutrition Education on the Nutritional Status of Mildly Wasted Children in Nias, Indonesia. *Annals of Nutrition & Metabolism*, 19th International Congress of Nutrition, October 2009, Bangkok, Thailand, Book of Abstracts, pp.147-148.
- ISENGARD, H.-D.** 2008. Determination of water content in food. 14<sup>th</sup> World Congress of Food Science and Technology, 19-23 October 2008, Shanghai, China, Book of Abstracts, p. 6.
- ISENGARD, H.-D.** 2008. Methods to determine the degradation of fats during deep-frying. XIV<sup>th</sup> Symposium „New Trends in Food Safety and Processing“, 15-16 May 2008, Timișoara, Romania.
- ISENGARD, H.-D., LANDENDÖRFER, T.** 2008. Rapid determination of the degradation of deep-frying fats. Annual Meeting of the Department of Food Technologists Chicago (IFT), 28 June – 1 July 2008, New Orleans, Louisiana, USA, Book of Abstracts, p. 47.
- ISENGARD, H.-D., LANDENDÖRFER, T.** 2008. Schnelle Bestimmung des Verdorbenheitsgrades von Frittierfetten. Lebensmittelchemische Gesellschaft, Fachgruppe der Gesellschaft Deutscher Chemiker (GDCh), Regionalverband Süd-West, Arbeitstagung 2008, 3.-4. März 2008, Stuttgart-Hohenheim, Germany.
- ISENGARD, H.-D., MERKH, G., DUBOIS, C.** 2008. The influence of the reference method on the results of the secondary method via calibration. 5<sup>th</sup> Conference on Water in Food, 6-8 April 2008, Nürtingen, Book of Abstracts p. 29.
- ISENGARD, H.-D., MERKH, G., SCHREIB, K., DUBOIS, C.** 2008. Warum eine „richtige“ Kalibrierung für NIR-Analysen so wichtig ist. Bruker Optik Anwendertreffen, 11.-12. November 2008, Ettlingen.
- JANJAI, S., LAMLERT, N., BOONROD, Y., BALA, B. K., MAHAYOTHEE, B., HAWSUNGCHAROEN, M., NAGLE, M., LEIS, H., MÜLLER, J.** 2008. Solar drying of peeled longan using solar tunnel dryer. *In*: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between Upland and Lowland Agriculture and Resource Management", 1-4 April 2008, Stuttgart, Germany, Book of Abstracts, pp. 149-150.
- JAYANEGARA, A., GOEL, G., MAKKAR, H.P.S., BECKER, K.** 2009. Methane reduction properties of tannin containing plants, simple phenols and purified tannins in *in vitro* rumenfermentation system. FAO/IAEA International Symposium on Sustainable Improvement of Animal Production and Health, 8-11 June 2009, Vienna, Austria, Book of Abstracts, pp. 92-93.
- JAYANEGARA, A., MAKKAR, H.P.S., BECKER, K.** 2009. Evaluation of lacticin 3147 to reduce *in vitro* ruminal methane production. 63. Tagung der Gesellschaft für Ernährungsphysiologie, 10.-12. März 2009, Göttingen, Germany, Book of Abstracts, p.100.
- JAYANEGARA, A., MAKKAR, H.P.S., BECKER, K.** 2009. Methane reduction effect of simple phenolic acids evaluated by *in vitro* Hohenheim gas production method. 63. Tagung der Gesellschaft für Ernährungsphysiologie, 10-12 March 2009, Göttingen, Germany, Book of Abstracts, p. 98.
- JAYANEGARA, A., MAKKAR, H.P.S., BECKER, K.** 2008. Methane reduction potential of tannin-containing plants using an *in vitro* rumen fermentation system. 62. Tagung der Gesellschaft für Ernährungsphysiologie, 1-3 April 2008, Göttingen, Germany, Book of Abstracts, p. 159.
- JENSEN, H. G., URBAN, K., BROCKMEIER, M.** 2009. OTDS Reductions in the GTAP Database/Model: What can be done and how? 12th Annual Conference on Global Economic Analysis, 10-12 June 2009, Santiago, Chile.
- JUNGE, B., DERCON, G., ABAIDOO, R., CHIKOYE, D., STAHR, K.** 2008. Estimation of Medium-Term Soil Redistribution Rates in Ibadan, Nigeria, by using the <sup>137</sup>Cs Technique. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 503
- KAMMESHEIDT, L.** 2008. Perspectives for sustainable natural forest management in Cambodia. Asia Forest Workshop 2008: Interdisciplinary and Transnational Discussion on Multiple Impacts of Forestry and Land Use Change in the Tropics. 20-23 November 2008, Phnom Penh, Cambodia.
- KAPAJ, I., DOLUSCHITZ, R., MANE, A.** 2009: Assessing quality and safety of food & beverage products. An analysis of agribusiness enterprises in Tirana district/Albania. Annual conference of IAMA, 19th Annual World Forum and Symposium Budapest, Juni 2009, Hungary, Book of Abstracts, pp. 20-23.
- KARAJ, S., HUAITALLA MENDOZA, R., MÜLLER, J.** 2008. Physical, mechanical and chemical properties of *Jatropha curcas* L. seeds and kernels. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 568.
- KARAJ, S., MÜLLER, J.** 2009. Optimization of *Jatropha*

- curcas* oil-pressing for Biodiesel production. 2nd International Congress on Biodiesel: "The Science and The Technology", 15-17 November 2009, München, Germany, Book of Abstracts, p. 1.
- KARAJ, S., MÜLLER, J.** 2009. Clarification of *Jatropha curcas* L. oil for direct use in plant oil stoves. In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 447.
- KARWAT, H., WILL, S., MÜLLER, T.** 2008. Efficiency of boron foliar fertilisation in soybean (*Glycine max* L.). Deutscher Tropentag 2008, Book of Abstracts, p. 229.
- KEBEDE, A.Z., ARAUS, J.L., BÄNZIGER, M., MELCHINGER, A.E.** 2009. Influence of Parentage on in vivo Induction Rate in Haploid-Induced Maize (*Zea mays* L.). ASA-CSSA-SSSA Annual Meeting, 1-5 November 2009, Pittsburgh, USA.
- KECO, R., KAPAJ, I.** 2009. Vertical Integration in the Wine Industry: A Benchmark Analysis. Case Study "Rilindja" and "Alfa" Enterprises. IAMO Forum, 17-19 June 2009, Halle.
- KEIL, A., SAINT-MACARY, C. AND ZELLER, M.** 2009. Maize boom in the uplands of Northern Vietnam: economic importance and environmental implications. In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 374.
- KIEMEN, A., BEUCHELT, T., OBERTHÜR, T., HOLM-MÜLLER, K., ZELLER, M.** 2008. Upgrading Opportunities for Small-scale Farmers in Selected Coffee Value Chains in Nicaragua. In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management". 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 57.
- KHALIL, W.K.B., STADTLANDER, T., FRANCIS, G., BECKER, K., FOCKEN, U.** 2008. Effect of feed supplementation with different saponin fractions from *Trigonella foenum-graecum* on growth and expression of genes encoding GH and IGF-1 in carp, *Cyprinus carpio* (Einfluss einer Supplementierung des Futters mit verschiedenen Saponinfraktionen aus *Trigonella foenum-graecum* auf Wachstum und Expression der Gene für GH und IGF-1 in Karpfen, *Cyprinus carpio*). 62. Tagung der Gesellschaft für Ernährungsphysiologie, 1.-3. April 2008, Göttingen, Germany, Book of Abstracts, p. 32.
- KHALIL, W.K.B., STADTLANDER, T., FRANCIS, G., FOCKEN, U., BECKER, K.** 2008. Saponin fractions from *Trigonella foenum-graecum* in the diet affect growth and expression of GH and IGF-1 encoding genes in tilapia (*Oreochromis niloticus*). 25th ESCPB Congress on Comparative Biochemistry and Physiology - A: Comparative Physiology, 7-11 September 2008, Ravenna, Italy, Book of Abstracts, p. 12-13.
- KHAN, T. M., MAURER, C., ARGYROPOULOS, D., BRULE, M., MÜLLER, J.** 2009. Anaerobic digestion of banana waste, a potential source of energy in Uganda. In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 451.
- KLEINWECHTER, U.** 2009. Rural-urban migration in China - Lessons from a Framework of Positive Impacts on Rural Development. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 406.
- KOHLSCHEID, E., MÜLLER-STÖVER, D. SAUERBORN, J.** 2008. Does induced resistance enhance control efficacy of *Fusarium oxysporum* against holo-parasitic weeds? International Weed Science Conference, 23-27 June 2008, Vancouver, Canada.
- KOHLSCHEID, E., MÜLLER-STÖVER, D., SAUERBORN, J.** 2008. Evaluierung eines *Fusarium oxysporum*-Isolats als biologischen Gegenspieler des parasitischen Unkrauts *Orobancha ramosa*. 56. Deutsche Pflanzenschutztagung, 22.-25. September 2008, Kiel.
- KOHLSCHEID, E., MÜLLER-STÖVER, D., SAUERBORN, J.** 2008. *Fusarium oxysporum* - an antagonist of the holoparasitic weed *Orobancha ramosa*. International Weed Science Conference, 23-27 June 2008, Vancouver, Canada
- KOHLSCHEID, E., SAUERBORN, J., MÜLLER-STÖVER, D.** 2008. *Fusarium oxysporum* - an antagonist of the holoparasitic weed *Orobancha ramosa*. Unkrauttagung, 4-6 March 2008, Stuttgart-Hohenheim, Germany.
- KOHLSCHEID, E., SIEVERDING, E., MÜLLER-STÖVER, D., SAUERBORN, J.** 2009. Can formononetin induce germination of parasitic weeds? In: RUBIALES, D., WESTWOOD, J. ULUDAG, A. (Eds.): Proceedings of the 10th World Congress on Parasitic Plants, 08-12 June 2009, Kusadasi, Turkey.
- KRATZEISEN, M., MÜLLER, J.** 2008. *Jatropha* seed shells as energy source. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 575.
- KRISHNA BAHADUR, K.C.** 2009. Assessing livelihood development strategies combining socioeconomic and spatial methodologies. In proceeding of international conference on the Multi-level process of Integration and Disintegration. 14-15th January 2009, Berlin, Germany.
- KRISHNA BAHADUR, K.C.** 2008. Assessing Strategic Water Availability in the Upper Ing Watershed, Thailand. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 475.
- KRISHNA BAHADUR, K.C.** 2008. Assessing Strategic Water Availability in the Upper Ing Watershed, Thailand. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 475
- KRISHNA BAHADUR, K.C. DOPPLER, W.** 2008. Improving living standards of rural farming people through water recourses development: an example of an integrated spatial approach from Northern Thailand. In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies Between Upland and Lowland Agriculture and Resource Management", Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 35-36.
- KÜHL, Y., BÖBER, C., ZEDDIES, J.** 2009. The Water Dilemma in the North China Plain. An Analysis of Policy and Institutional Measures to Ensure the Future Use of Scarce and Polluted Water Resources. International Association of Agricultural Economists 2009 Conference, 16-22 August 2009, Beijing, China.
- KÜHL, Y., BÖBER, C., ZEDDIES, J.** 2009. Water scarcity and water pollution in agriculture in the North China Plain: Strategies to ensure agricultural sustainability. Paper presented at: ERSEC International Conference 2009 Sustainable Land Use and Ecosystem Conservation, 4-7 May 2009, Beijing, China
- KÜHNLE, E., BAYDE, B.B., HILGER, T., DERCON, G., CADISCH G.** 2008. Can we use Mid-Infrared Spectroscopy (MIRS) for Quantifying Artemisinin, an Antimalarial Compound of *Artemisia annua*? In: TIELKES, E. (Ed.):

- Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p.179.
- KUMAR, V., MAKKAR, H.P.S., BECKER, K.** 2009. Detoxified *Jatropha curcas* kernel meal: An excellent fish meal replacer in common carp (*Cyprinus carpio* L.) diet. *In*: TIELKES, E. (Ed.): Biophysical and socio-economic frame conditions for the sustainable management of natural resources. Tropentag 2009, Hamburg, Germany, Book of abstracts, p. 317.
- KUMAR, V., MAKKAR, H.P.S., BECKER, K.** 2009. Nutritional, biochemical and haematological response in rainbow trout (*oncorhynchus mykiss*) fed detoxified *Jatropha curcas* kernel meal. World Aquaculture 2009: "A Blue Revolution to Feed the World", 25-29 September 2009, Veracruz, Mexico, Book of Abstracts, p. 467.
- KUMAR, V., MAKKAR, H.P.S., BECKER, K.** 2009. Substitution of fish meal by detoxified *Jatropha curcas* protein isolate and soya protein isolate in common carp (*Cyprinus carpio* L.) diets: Effect on growth performance, biochemical and haematological parameters. Asian Pacific Aquaculture 2009: Sustainable Aquaculture and Quality Seafood for All", 3-6 November 2009, Kuala Lumpur, Malaysia, Book of Abstracts, p. 297.
- KUMAR, V., MAKKAR, H.P.S., BECKER, K.** 2008. Detoxification of *Jatropha curcas* seed meal and its utilization as a protein source in fish diet. 25th ESCPB Congress on Comparative Biochemistry and Physiology - A: Comparative Physiology, 7-11 September 2008, Ravenna, Italy, Book of Abstracts, p.13-14.
- LANGENBERGER, G. ET AL.** 2008. Living Landscapes China, LILAC. Asia Forest Workshop 2008: Interdisciplinary and Transnational Discussion on Multiple Impacts of Forestry and Land Use Change in the Tropics. 20-23 November 2008, Phnom Penh, Cambodia.
- LANGENBERGER, G., CHEN, J., SAUERBORN, J.** 2009. Promoting Sustainable Land Use in the Greater Mekong Subregion - the „Living Landscapes China (LILAC)“ Project in Xishuangbanna, Yunnan. *In*: Proceedings of the ERSEC International Conference on „Sustainable Land Use and Water Management“, 8-10 October 2008, Beijing. UNESCO Office Beijing, P.R. China, pp. 185-195.
- LANGENBERGER, G., CHEN, J., SAUERBORN, J.** 2008. Living Landscapes China (LILAC) - Towards sustainable land use in the Greater Mekong Subregion (GMS). International Conference "Towards sustainable land-use in tropical Asia", Association for Tropical Biology & Conservation (ATBC), Asia-Pacific Chapter and the Japanese Society for Tropical Ecology, 23-26 April 2008, Kuching, Sarawak, Malaysia.
- LANGENBERGER, G., CHEN, J., SAUERBORN, J.** 2008. Promoting sustainable land use in the Greater Mekong Subregion - the "Living Landscapes China (LILAC)" project in Xishuangbanna, Yunnan. ERSEC International Conference on Sustainable Land Use and Water Management, 08-10 October 2008, Beijing, P.R. China.
- LANGENBERGER, G., GHORBANI A., LIU J.** 2008. Rubber boom in Xishuangbanna - where will it end? *In*: STAHR K. & FRÖHLICH H. (Eds.): International Symposium: "Interdependencies between upland and lowland agriculture and resource management", 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 185-186.
- LEGESSE, G., SIEGMUND-SCHULTZE, M., ABEBE, G., VALLE ZÁRATE, A.** 2008. Characteristics of goats and goat keepers in Adilo small ruminant market shed of southern Ethiopia. *In*: AGUILAR-CABALLERO, A. J. et al. (Eds.): International Goat Association (IGA), Proceedings of the 9th International Conference on Goats, 31 August-4 September 2008, Querétaro, Mexico, p. 197.
- LEMKE, S., HEUMANN, N., SITHOLE, S., MATENGE, S.** 2008. We spend the farm wage immediately when we get it – gender specific livelihoods in the context of nutrition security among farm workers, North West Province, South Africa. South African Journal of Clinical Nutrition, Nutrition Congress 2008, 28 September-02 October 2008 Pretoria, Südafrika, Book of Abstracts, p. 196.
- LEMKE, S., JANSEN VAN RENSBURG, N.S., HEUMANN, N.** 2009. Land Reform in South Africa: Moving towards the right to adequate food for all? Annals of Nutrition and Metabolism, 19<sup>th</sup> International Congress of Nutrition (ICN 2009), "Nutrition Security for All", 4-9 October 2009, Bangkok, Thailand, Book of Abstracts, p. 446.
- LIPPE, M., LANGENBERGER, G., MARTIN, K., SAUERBORN, J.** 2009. Habitat and Regeneration Analysis of two Indigenous Tree Species to Combat Deforestation on Leyte Island, Philippines. *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 314.
- LIPPE, M., THAI MINH, T., NEEF, A., HOFFMANN, V., HILGER, T., CADISCH, G.** 2009. Integration of interdisciplinary participative research tools: New vistas for land use modelling? *In*: VAN ITTERSUM, M.K., J. WOLF & H.H. VAN LAAR. (Eds.): Proceedings of the Conference on Integrated Assessment of Agriculture and Sustainable Development: Setting the Agenda for Science and Policy (AgSAP 2009). Egmond aan Zee, 10-12 March 2009, Wageningen University and Research Centre, Wageningen, The Netherlands, Book of Abstracts, p. 26.
- LIPPE, M., VIEN, T.D., DUNG, N.V., HILGER, T., CADISCH, G.** 2008a. Plot-scale Modelling of Erosion and Runoff with WaNuLCAS 3.2 in Ban Tat, Northern Vietnam. *In*: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and low-land agriculture and resource management". Stuttgart-Hohenheim, Germany. Book of abstracts, pp. 45-46.
- LIPPE, M., ZÖLLMER, C., VIEN, T.D., DUNG, N.V., KIEN, T.T., HILGER, T., CADISCH, G.** 2008b. Modelling Land Use Change Dynamics of a Small Watershed of NW Vietnam. *In*: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and low-land agriculture and resource management". Stuttgart-Hohenheim, Germany. Book of abstracts, pp. 85-86.
- LIU, J., LANGENBERGER, G., GHORBANI, A., SAUERBORN, J.** 2009. Ecological evaluation of small holder rubber plantations based on understory plant inventories in NNNR, Xishuangbanna, China, *In*: Impacts of Global Change on Tropical Ecosystems - Cross-cutting the Abiotic, Biotic and Human Spheres. Society for Tropical Ecology (gtö) and Association for Tropical Biology and Conservation (ATBC), 27-30 July 2009, Marburg, Germany Book of Abstracts p. 385.
- LOOS, T., KAGISO, WAHL, J.N., ZELLER, M.** 2009. *Jatropha* seed production in Tanzania – A chance for smallholder farmers? *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p 482.
- LUSIANA, B., SUYAMTO, A.D., MULIA, R., VAN NOORDWIJK, M., CADISCH, G.** 2009. Prospecting the behaviour of agro-ecosystems: experiences in using FALLOW model with natural resource managers. *In*: VAN



- ITTERSUM, M.K., J. WOLF & H.H. VAN LAAR. (Eds.): Proceedings of the Conference on Integrated Assessment of Agriculture and Sustainable Development: Setting the Agenda for Science and Policy (AgSAP 2009). Egmond aan Zee. 10-12 March 2009, Wageningen University and Research Centre, Wageningen, The Netherlands Book of Abstracts, p. 510.
- LUSIANA, B., VAN NOORDWIJK, M., CADISCH, G.** 2008. Negotiation Support Tools: Linking Science and Policy? *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 94.
- MAKKAR H P S, KUMAR V, KARAJ S, KRATZEISEN M, TIPRAQSA P, MÜLLER J, BERGER T, AMSELGRUBER W, BECKER, K.** 2009. Sustainable land development and ecosystem conservation through enhancing economic viability of the *Jatropha curcas* based biodiesel production chain using a bio-refinery concept. *In*: Proceedings of the ERSEC International Conference on "Sustainable Land Use and Ecosystem Conservation". 4-7 May, 2009, Beijing, P.R. China, pp. 210-235.
- MAKKAR, H.P.S. & BECKER, K.** 2009. Challenges and opportunities for using byproducts from the production of biodiesel from *Jatropha* oil as livestock feed. Animal Nutrition World Conference 2009, 14-17 February 2009, New Delhi, India, Book of Abstracts, pp. 168-170.
- MAKKAR, H.P.S.** 2009. Enhancing economic viability and sustainability of the *Jatropha curcas* based bio-fuel production chain using a bio-refinery concept. *Jatropha World Africa Conference*, 14-15 October, 2009, Brussels, Belgium.
- MAKKAR, H.P.S.** 2009. Fuel and feed for tomorrow: Towards food and energy security. Brot und Spirit Symposium, 15 January 2009, Stuttgart-Hohenheim, Germany.
- MAKKAR, H.P.S.** 2008. Antinutritional and toxic factors in *Jatropha* seed and the potential of detoxified *Jatropha* seed meal as livestock feed. *Jatropha International Congress*, 17-18 December 2008, Singapore.
- MAKKAR, H.P.S.** 2008. Comparative evaluation of toxic and non-toxic genotypes of *Jatropha curcas* and their potential for production of biofuel, livestock feed and pharmaceuticals. *Jatropha World Conference*, 20-21 October 2008, Hamburg, Germany.
- MAKKAR, H.P.S., BECKER, K., LIU, J.-X.** 2008. The role of *Jatropha curcas* in sustainable land management and towards energy and food security – a joint BMBF-MoST effort. ERSEC International Conference 2008: Sustainable Land use and Water Management, 8-10 October 2008, Beijing, China, Book of Abstracts, pp. 53-61.
- MAKKAR, H.P.S., JAYANEGARA, A., BECKER, K.** 2008. Anti-methanogenic activity of phenols and polyphenols and their potential for reducing methane emission from ruminants. *Ferulate 08*, 25-27 August 2008, Saint Paul, Minnesota, USA.
- MAKKAR, H.P.S., KUMAR, V., KARAJI, S., KRATZEISEN, M., TIPRAQSA, P., MÜLLER, J., BERGER, T., AMSELGRUBER, M., BECKER, K.** 2009. Sustainable land development and ecosystem conservation through enhancing economic viability of the *Jatropha curcas* based biodiesel production chain using a bio-refinery concept. ERSEC conference on sustainable land use and ecosystem conservation, 4-7 May 2009, Beijing, China, Book of Abstracts, pp. 210-235.
- MANE, A., KAPAJ, I.** 2009: Assessing the comparative advantage of olive oil production in Albania. Annual conference of IAMA, 19th Annual World Forum and Symposium Budapest, June 2009, Hungary, Book of Abstracts, pp. 20-23.
- MARHAN, S., PHILIPPOT, L., BRU, D., FRANZARING, J., HÖGY, P., FANGMEIER, A., KANDELER, E.** 2008. Linking N<sub>2</sub>O concentrations in different soil depths to denitrification genes abundances under the influence of an elevated atmospheric CO<sub>2</sub> concentration. Proceedings of the 12th International Symposia on Microbial Ecology, Cairns, Australia.
- MARHAN, S., PHILIPPOT, L., BRU, D., FRANZARING, J., HÖGY, P., FANGMEIER, A., KANDELER, E.** 2008. Linking N<sub>2</sub>O concentrations in different soil depths to denitrification genes abundances under the influence of an elevated atmospheric CO<sub>2</sub> concentration. Proceedings of the Eurosoil Congress, Vienna.
- MARKEMANN, A., STEMMER, A., SIEGMUND-SCHULTZE, M., PIEPHO, H.-P., VALLE ZÁRATE, A.** 2008. Stated preferences of llama keeping functions in Bolivia. *In*: EAAP (Ed.): 59th Annual Meeting of the European Association for Animal Production, 23-27 August 2008, Vilnius, Lithuania, Book of Abstracts, p. 208.
- MAROHN, C., SCHULER, U., LIPPE, M., AYANU, Y., HUGENSCHMIDT, C., SCHREINEMACHERS, P., HILGER, T., CADISCH, G.** 2009. Modelling resource distribution in mountainous watersheds in Thailand – an integrated approach. *In*: VAN ITTERSUM, M.K., J. WOLF & H.H. VAN LAAR. (Eds.): Proceedings of the Conference on Integrated Assessment of Agriculture and Sustainable Development: Setting the Agenda for Science and Policy (AgSAP 2009). Egmond aan Zee. 10-12 March 2009. Wageningen University and Research Centre, Wageningen, The Netherlands, Book of Abstracts, p. 28.
- MCCULLAGH, J., GAYE-SIESSEGGER, J., FOCKEN, U.** 2008. Tracing amino acids from the diet to body tissues by LC-IRMS: Method development for a feeding trial with rainbow trout, *Oncorhynchus mykiss*. Joint European Stable Isotope User Meeting JESIUM, 31 August- 5 September 2008, Presqu'île de Giens, France.
- MENG, L., MARTIN, K., LANGENBERGER, G., CHEN, J.** 2009. How does the fragmented forest influence the abundance dynamics of beetle groups (Coleoptera) in a changing land-use system? 50th Anniversary Celebration Xishuangbanna Tropical Botanical Garden (XTBG). 1-2 January 2009, Xishuangbanna, Yunnan, P.R. China.
- MERKH, G., DAMBACHER, M., ISENGARD, H.-D.** 2009. Rapid moisture determination with microwave resonance technology in infant formulas. XV<sup>th</sup> Symposium Food Science and Technologies: New Trends in Food Safety and Processing, 27-29 May 2009, Timișoara, Romania.
- MERKH, G., DAMBACHER, M., ISENGARD, H.-D.** 2009. Schnelle Feuchtegehaltsbestimmung in Säuglingsmilchnahrung durch Mikrowellenresonanztechnologie. GDL-Kongress Lebensmitteltechnologie 2009, 22.-24. Oktober 2009, Lemgo.
- MICHALCZYK, A., SPREER, W., HILGER, T., HORLACHER, W., ENGELS, CADISCH, G.** 2008. Parameterisation and Modelling of Growth and Yield Development of Mango (*Mangifera indica* L.) in North Thailand with Application of the WaNuLCAS Model? *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 320.
- MILAN, F., ZELLER, M.** 2009. Poverty dynamics in the measurement of social performance in MFIs: Simple tools using panel data. First European Research Conference in Microfinance, 02-04 June 2009, Brussels, Belgium.

- MILAN, F., ZELLER, M.** 2009. Social Performance Measurement of Microfinance Institutions: Theory and Empirical Evidence. First European Research Conference in Microfinance, 02-04 June 2009, Brussels, Belgium.
- MÜLLER, J.** 2009. Die globale Verfügbarkeit von Wasser: Situation und Entwicklung. Bund Ökologische Lebensmittelwirtschaft - Herbsttagung 2009; "Herausforderung Wasser - Brauchen wir eine blaue Revolution?" 15 October 2009, Berlin, Germany, Book of Abstracts, pp. 1-2.
- MÜLLER, J., KRATZEISEN, M.** 2008. Development of a plant oil pressure stove. International Conference on Agricultural Engineering & Industry Exhibition - Agricultural & Biosystems Engineering for a Sustainable World AgEng 2008, 23-25 June 2008, Hersonissos, Crete (Greece), Book of Abstracts, pp. 1-9.
- MÜLLER-STÖVER, D., BATCHVAROVA, R., KOHLSCHMID, E., SAUERBORN, J.** 2009. Mycoherbicidal management of *Orobanche cumana*: observations from three years of field experiments. In: RUBIALES, D., WESTWOOD, J. ULUDAG, A. (Eds.): Proc. of the 10th World Congress on Parasitic Plants, 08-12 June, Kusadasi, Turkey.
- MÜLLER-STÖVER, D., BATCHVAROVA, R., SAUERBORN, J.** 2008. Field applications of *F. oxysporum* f.sp. *orthoceras* for the control of *Orobanche cumana* Wallr. International Weed Science Conference, 23-27 June 2008, Vancouver, Canada.
- NABULSI, A., DOPPLER, W., HEINZ-PETER WOLFF.** 2008. Socio-Economic Impacts of Changing Water Strategies on Farming Systems in the Jordan Valley. In proceedings of First Bridging Workshop on Sustainable Management of Waste water for Agriculture. 11-15 November 2007, Aleppo, Syria, Book of Abstracts, pp. 117-121.
- NAGLE, M., MAHAYOTHEE, B., HAEWSUNGCHAROEN, M., NEEF, A., SANGKAPITUX, C., LEIS, H., JANJAI, S., MÜLLER, J.** 2008. Litchi drying by upland producers versus established lowland processors: Can value-adding be reallocated? In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between Upland and Lowland Agriculture and Resource Management", 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 147-148.
- NAPHROM, D., SRITONTIP, C., HEGELE, M., WÜNSCHE, JN., SRUAMSIRI, P.** 2008. Physiology of flowering in lychee trees grown in mountainous areas of Thailand. In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management". 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 65-66.
- NDAMBI, B. E., CADISCH, G., ELZEIN, A., HELLER, A.** 2009. Interactions between the Mycoherbicide *Fusarium oxysporum* F. sp. *strigae* and Sorghum Roots. In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 180.
- NDAMBI, B. E., ELZEIN, A., HELLER, A., CADISCH, G.** 2009. Colonisation of *Striga hermonthica* and its host sorghum by the mycoherbicide *Fusarium oxysporum* f.sp. *strigae* and its implication for *Striga* control. 10<sup>th</sup> World Congress on Parasitic plants (IPPS), 8-12 June 2009, Kusadasi, Turkey.
- NDAMBI, B. E., ELZEIN, A., HELLER, A., CADISCH, G.** 2009. *Fusarium oxysporum* f.sp. *strigae*: Pathogenic to the parasite *Striga* and Non-pathogenic to its host sorghum? Tagung der DPG - Arbeitskreise Mykologie und Wirt-Parasit-Beziehungen' Deutsche Phytomedizin in der Technischen Universität Kaiserslautern, 26-27 March 2009, Kaiserslautern, Germany.
- NDAMBI, B.E., HELLER, A., ELZEIN, A., CADISCH, G., DE MOL, M.** 2008. Action of the Mycoherbicide *Fusarium oxysporum* F. sp. *strigae* 'foxy 2' on *Striga hermonthica*: An Anatomical Study? In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 286.
- NEIDHART, S., CARLE, R.** 2009. Mango processing with particular consideration of carotene retention and pectin recovery. Proceedings of the Tropical Fruits in Human Nutrition and Health Conference 2008, 8-11 November 2008, Brisbane, Australia, Book of Abstracts, pp. 47-59.
- NEIDHART, S., CARLE, R.** 2008. Die Mango - ein Rohstoff für Provitamin A-reiche Produkte und technofunktionelle Pektine? 3. Wissenschaftliches Kolloquium des Instituts für Lebensmittelwissenschaft und Biotechnologie 'Moderne Lebensmittelforschung für Qualität und Biofunktionalität', 25. June 2008, Stuttgart-Hohenheim, Germany.
- NGUYEN NGOC, T., FOCKEN, U.** 2009. Earthworm powder as potential protein source in diets for common carp (*Cyprinus carpio* L.). Deutscher Tropentag 2009, 5-8 October 2009, Hamburg, Germany.
- NGUYEN NGOC, T., STEINBRONN, S., FOCKEN, U., BECKER, K.** 2008. Development of supplemental diets for carp species based on locally available resources in upland areas in Vietnam. Health of the marine ecosystems of Southeast Asia towards an integrated and holistic strategy, 18 - 20 February, 2008, Hanoi, Vietnam.
- OKERE, I., SIEGMUND-SCHULTZE, M., CAHANER, A., VALLE ZÁRATE, A.** 2008. Fattening and carcass traits of broiler genotypes with and without feathers under hot conditions. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 345.
- ONGPRASERT, S., WIRIYA-ALONGKORN, W., SPREER, W., RÖMHELD, V.** 2008. Degradation and movement of chlorate in longan plantations. In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between Upland and Lowland Agriculture and Resource Management", 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, pp.171-172.
- PANSAK, W., HILGER, T., DERCON, G., KONGKAEW, T., CADISCH, G.** 2008b. Temporal Impact of Soil Conservation on Crop Production and Soil Fertility in the Highlands of Northeast Thailand. Eurosoil 2008 :Soil, Society, Environment. Vienna, Austria.
- PANSAK, W., HILGER, T.H., LIPPE, M., KONGKAEW, T., CADISCH, G.** 2008a. Assessing Alternative Conservation Strategies in Hillside Cropping of NE Thailand by Using WaNuLCAS. In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management". Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 83-84.
- PARZIES, H.K.** 2008. Heterosis and Heterotic Pools. In: RATTUNDE, F. & CLERGET, B. (Eds.): Concepts and Techniques for Breeding Hybrid Sorghum and Pearl Millet. Proceedings of the West African Training Workshop on Hybrid Sorghum and Pearl Millet Breeding, 17-19 April 2007, Samanko, Mali, Book of Abstracts, pp. 5-9.
- PARZIES, H.K., KIAMBI, D., FOLKERTSMA, R., HASH, T.,**

- RATTUNDE, F., DE VILLIERS, S., GEIGER, H.H., RABBI, I., BHANDARI, N., GETHI, J., TOURÉ, A., KOITA, O., MOHAMED, A., TESFAMICHAEL, A., KANYENJI, B., HAUSSMANN, B.I.G., HOISINGTON, D.** 2008. Introgression of quantitative trait loci (QTL) for striga resistance into adapted sorghum landraces through marker assisted backcrossing in sub-Saharan Africa. 5th International Weed Science Congress (IWSC), 23-27 June 2008, Vancouver, Canada.
- PELIKAN, J., BROCKMEIER, M.** 2008. Wohlfahrtswirkungen einer Handelsliberalisierung: Welchen Einfluss hat die Zollaggregation auf die Modellergebnisse? 48. Jahrestagung der Gewisola, 24.-26. September 2008, Bonn, Deutschland.
- PIOTROWSKI, S., BÖBER, C.** 2009. Inequality in a typical Chinese rural county: A village-level analysis. 9th European Conference on Agriculture and Rural Development in China, 3-5 April 2009, Leeds, UK.
- PIOTROWSKI, S., BÖBER, C.** 2008. Characteristics of the rural land rental market in China: A village-level study. Greening Asian Growth, 29-30 October 2008, Nanjing, China.
- POTCHANASIN, P., SRINGARM, K., SRUAMSIRI, P., HEGELE, M., BANGERTH, K.F.** 2008. Experiments to explain the essential role of mature leaves on KClO<sub>3</sub> induced flower induction of longan. *In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management".* 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 63-64.
- PRECOPE, M. F., NAGLE, M., PIEPHO, H.-P., MAHAYOTHEE, B., JANJAI, S., HAEWSUNGCHAROEN, M., MÜLLER, J.** 2008. Analysis of current practices of litchi drying in small scale industries in Northern Thailand. *In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development.* Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 1-4.
- PRIGGE, V., SCHIPPRACK, W., ARAUS, J.L., MELCHINGER, A.E.** 2009. Doubled Haploids in Tropical Maize: Influence of Donor and Inducer on in vivo Haploid Induction Rates. ASA-CSSA-SSSA Annual Meeting, 1-5 November 2009, Pittsburgh, USA.
- PURWESTRI, R., SCHERBAUM, V., INAYATI, DA., WIRAWA, NN., SURYANTAN, J., BLOEM, MA., PANGARIBUAN, RV., BIESALSKI, HK., QAIM, M., BELLOWS, AC.** 2009. Effectiveness of locally produced peanut-milk paste and cereal-based ready-to-use foods for mildly/moderately wasted children in Nias, Indonesia. *Annals of Nutrition & Metabolism*, 19th International Congress of Nutrition, October 2009, Bangkok, Thailand, Book of Abstracts, p. 427.
- PURWESTRI, R.C., SHAPIRO, O., NOVIANTY, D., INAYATI, D.A., STÜTZ, W., YUSRAN, WIRAWAN, N.N., HARTONO, S., SURYANATAN, J., KOENIGER, M., BLOEM, M.A., PANGARIBUAN, R.V., QAIM, M., BIESALSKI, H.K., GRUNE, T., MÜLLER, T., HOFFMANN, V., BELLOWS, A.C., SCHERBAUM, V.** 2008. Development of locally produced ready-to-use therapeutic food (RUTF) for malnourished children in Indonesia. International Life Science Student's Conference 2008, Warsaw, Poland, Book of Abstracts, p. 74.
- RAJAONA, A., BRUECK, H., ASCH, F.** 2009. Description of the spatial arrangement of *Jatropha curcas* L. root system. A case study from Madagascar *In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources.* Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 203.
- RAMANANTSOANIRINA, A., DUSERRE, J., SHRESTA, S., ASCH, F.** 2009. Temperature effects on the phenology of upland rice grown along an altitude gradient in Madagascar. *In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources.* Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 230.
- REICHEL, M., KIENZLE, S., NEIDHART, S., SRUAMSIRI, P., CARLE, R.** 2008. Utilisation-orientated harvest time decision - a chance to enhance the marketability of fresh longan fruits. *In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development.* Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p.160.
- REICHEL, M., KIENZLE, S., NEIDHART, S., SRUAMSIRI, P., CARLE, R.** 2008. The role of harvest maturity in postharvest concepts for fresh longan fruits from Northern Thailand. *In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies Between Upland and Lowland Agriculture and Resource Management",* Stuttgart-hohenheim, Germany, Book of Abstracts, pp.145-146.
- REWE, M., DERCON, G., RASCHE, F., COBO, J. G., CADISCH, G.** 2008. Development of a Generic Model to Quantify Soil Organic Matter Applying Infra-Red Spectroscopy and Thermal Stability of Soil. *In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development.* Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 491.
- REWE, T.O., HEROLD, P., VALLE ZÁRATE, A.** 2008. Institutional framework and farm types characterising the Kenya Boran cattle breeding programme. *In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development.* Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 337.
- RODRIGUEZ, J.H., KLUMPP, A., FANGMEIER, A., HÖGY, P., LAMARQUE, A., MAESTRI, D.M., PIGNATA M.L.** 2008. Effects of Elevated CO<sub>2</sub> on Growth Parameters and Crop Quality of Soybean (*Glycine max* [L.] Merr.) Grown in Fly-Ash Amended Soils. *Proceedings of the SETAC Argentina, Mar del Plata*, 103.
- ROEMER, MG., HUONG, PT., SRUAMSIRI, P., HEGELE, M., WÜNSCHE, JN.** 2008. Possible physiological mechanism of premature fruit drop in mango (*Mangifera indica* L.) in Northern Vietnam. *In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management".* 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 177-178.
- ROMIG, T.** 2008. Molecular phylogeny and lifecycles of *Echinococcus* spp. 6<sup>th</sup> International Workshop on Cestode Systematics and Phylogeny, 15-20 June 2008, Smolenice, Slovakia.
- RÖSSLER, R., HEROLD, P., MOMM, H., VALLE ZÁRATE, A.** 2009. Optimising smallholder pig breeding organisation in villages in Northwest Vietnam. *In: EAAP (Ed.): Book of Abstracts of the 60<sup>th</sup> Annual Meeting of the European Association for Animal Production*, 24-27 August 2009, Barcelona, Spain, Book of Abstracts, p. 127.
- RÖSSLER, R., HEROLD, P., MOMM, H., LY, L.V., VALLE ZÁRATE, A.** 2008. Breeding organisation for smallscale pig producers in upland areas in Northwest Vietnam. 13<sup>th</sup> Animal Science Congress: Animal agriculture and the role of smallholder farmers in a global economy, 22-26 September 2008, Hanoi, Vietnam.
- RÖSSLER, R., HEROLD, P., MOMM, H., VALLE ZÁRATE,**

- A. 2008. Optimising breeding organisation for smallscale pig producers in northwest Vietnam. *In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 384.*
- RÖSSLER, R., HEROLD, P., MOMM, H., WILLAM, A., VALLE ZÁRATE, A. D.T.T. 2009.** Entwicklung dörflicher Zuchtprogramme für lokale Schweinerassen in Nordwestvietnam. Optimierung der Zuchtplanung und -organisation. Vortragstagung der DGfZ und GfT, 16-17 September 2009, Gießen.
- RÖSSLER, R., HEROLD, P., VALLE ZÁRATE, A. 2008.** Optimizing breeding plans for market-oriented smallholder pig production in NW Vietnam. *In: EAAP (Ed.): Book of Abstracts of the 59<sup>th</sup> Annual Meeting of the European Association for Animal Production, 23-27 August 2008, Vilnius, Lithuania, Book of Abstracts, p. 179.*
- RÖSSLER, R., HEROLD, P., WILLAM, A., PIEPHO, H.-P., MOMM, H., VALLE ZÁRATE, A. 2008.** Optimisation of pig breeding at smallholder farms in North-West Vietnam. *In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium: "Interdependencies between upland and lowland agriculture and resource management", 1-4 April 2008, Stuttgart-Hohenheim, Germany.*
- ROTH, A., DOLUSCHITZ, R. 2009:** A multi agent simulation approach in order to model agronomic income sources in the North China Plain-Case Study for Quzhou county. *JAC2009, 6-8 July 2009, Wageningen, The Netherlands, Book of abstracts, p. 67.*
- ROTH, A., DOLUSCHITZ, R. 2009:** A multi agent simulation approach to assess agronomic income sources in the North China Plain-Case Study for Quzhou county. *In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 480.*
- ROTH, A., YING, P., YU, Z., DOLUSCHITZ, R. 2009:** Using multi-agent modeling technique to regionalize key processes and patterns of sustainable agricultural cropping systems in the North China Plain. *IAAE - 27th Conference of the International Association of Agricultural Economists, 16-21 August 2009, Beijing, Book of abstracts, pp. 404-405.*
- RÜCKERT-JOHN, J. 2009.** Gender made by nutrition. Forms of social reproduction of a difference. *ESA- Conference, 2-5 September 2009, Lissabon.*
- RÜCKERT-JOHN, J. 2009.** Semantic of naturalness. Re-assuring consumers of a risky food production. *ESA- Conference, 2-5 September 2009, Lissabon.*
- RÜCKERT-JOHN, J. 2008.** „Semantik der Natürlichkeit als sichernder Sinnhorizont des Nahrungsmittelkonsums“, Vortrag im Rahmen der Sitzung der Arbeitsgruppe Konsumsoziologie in der DGS „Konsumieren ver(un)sichert! Stabilisierung durch Konsum und ihre Grenzen“, 6.-10. Oktober 2008, Jena.
- RUNGPICHAYAPICHET, P., MAHAYOTHEE, B., NAGLE, M., HAESUNGCHAROEN, M., JANJAI, S., MÜLLER, J. 2008.** The effect of irrigation on harvest maturity of mango as determined by near infrared spectroscopy (NIR). *Proceedings of The First Asian NIR Symposium, 10-14 November 2008, Tsukuba (Japan), Book of Abstracts, pp. 196-197.*
- RUNGPICHAYAPICHET, P., NAGLE, M., MAHAYOTHEE, B., MÜLLER, J. 2008.** Determination of sweetness for fresh-cut mango processing using near infrared spectroscopy (NIR). *Proceedings of The First Asian NIR Symposium, 10-14 November 2008, Tsukuba (Japan), Book of Abstracts, pp. 198-199.*
- RYSAVY, A., DUMET, D., SONDER, K., SAUERBORN, J. 2009.** GIS Based Gap Analysis as a Tool for Biodiversity Conservation Optimisation: The IITA Cowpea Collection. *In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 27.*
- SAIGENJI, Y. 2008.** Productivity, efficiency and comparative advantage of tea production in northern Vietnam: A micro-economic and institutional-level analysis. *ESNIE 2008: the seventh session of the European School on New Institutional Economics, 19-23 May 2008, Cargèse, France.*
- SAIGENJI, Y., ZELLER, M. 2009.** Contract farming in Vietnam: Impact on income and productivity of smallholder tea production. *Agricultural Economics Society of Japan. 28-30 March 2009, Tsukuba, Japan.*
- SAIGENJI, Y., ZELLER, M. 2009.** Effect of contract farming on productivity and income of small holders: The case of tea production in north-western Vietnam. *27th International Association of Agricultural Economists (IAAE), 16-22 August 2009, Beijing, China.*
- SAIGENJI, Y., ZELLER, M. 2008.** Effect of contract farming on smallholders in northwestern Viet Nam: The case of tea production. *In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management". 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 63.*
- SAIGENJI, Y., ZELLER, M. 2008.** Structure of production system and constraints of tea sector in north western Vietnam. *In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management". 1-4 April 2008, Stuttgart-Hohenheim, Germany.*
- SAINT-MACARY, C., KEIL, A., ZELLER, M. 2009.** Land allocation policy and conservation practices in the mountains of Northern Vietnam. *27th International Association of Agricultural Economists (IAAE) 'The New Landscape of Global Agriculture', 16-22 August 2009, Beijing, China.*
- SAINT-MACARY, C., MY DUNG, P.T., KEIL, A., LE THI, A. V., DINH THI, T.V., ZELLER, M. 2008.** Determinants of adoption of soil conservation technologies in upland areas of northern Vietnam. *In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management". 1-4 April 2008, Stuttgart-Hohenheim, Germany*
- SÄNGER, C., BUDIDARSONO, S., WULAN, Y., BUDI, C., JOSHI, L., CADISCH, G., QAIM, M. 2008.** Bouncing Back: Rubber and its Capacity in the Restoration of Rural Livelihood in Post-Tsunami Aceh, Indonesia. *In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 535.*
- SAUERBORN, J. 2009.** Biodiversity matters! Sino-German Senior Experts Workshop on Sustainable Forestry. *Chinese Academy of Forestry, 24-26 November 2009, Beijing, P.R. China.*
- SAUERBORN, J. ET AL. 2009.** Enhancing the relationships between society, economy and ecology – The Sino-German co-operative projects on sustainable land use in a nutshell. *ERSEC International Conference on "Sustainable Land Use and Ecosystem Conservation". 4-7 May 2009, Beijing, P.R. China.*
- SAUERBORN, J. 2008.** Biodiversität: Wie viele Arten sind

- „genug“? Deutsch-Französisches Symposium, 31. Januar 2008, Stuttgart-Hohenheim.
- SAUERBORN, J.** 2008. Phytoparasiten in der Internationalen Landwirtschaft. 17. January, Technische Universität Darmstadt.
- SAUERBORN, J., BECKER, K., BORRISS, R., CAI, Z.C., CHEN, J., CLEMENS, J., COTTER, M., CUI, T.N., FELBERMEIER, B., FISCHER, C., GOLDBACH, H., HECK, P., HUANG, J.K., LANGENBERGER, G., MAKESCHIN, F., MAKKAR, H.P.S., MOSANDL, R., MUELLER-HANSEN, K., NIEMEYER, B., NIEDER, R., ROELCKE, M., SCHMIDHALTER, U., SCHÜTT, C., SPIECKER, H., WU, J., ZHANG, F.S., ZHANG, W.L.** 2009. Enhancing the relationships between society, economy and ecology – The Sino-German co-operative projects on sustainable land use in a nutshell. *In: Proceedings of the ERSEC International Conference on “Sustainable Land Use and Ecosystem Conservation”*. 4-7 May, 2009, Beijing, P.R. China, pp. 9-24.
- SCHAD, I., RÖSSLER, R., NEEF, A., VALLE ZÁRATE, A., HOFFMANN, V.** 2009. Towards Improving Extension Interventions in Vietnam: The case of group-based extension delivery in smallholder pig production. *In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources*. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 468.
- SCHAD, I., SCHMITTER, P., SAINT-MACARY, C., KEIL, A.** 2008. Awareness raising for improved surface water governance in mountainous northern Vietnam after two severe rainfall events: Integrating scientific information and local perceptions. XII. World Congress of the International Rural Sociology Association, 6-11 July 2008, Goyang, South-Korea.
- SCHERBAUM, V., SHAPIRO, O., PURWESTRI, R.C., INAYATI, DA., NOVIANTY, D., STÜTZ, W., YUSRAN, Y., MÜLLER, T., WIRAWAN, NN., SURYANTAN, J., BLOEM, MA., KOENIGER, M., PANGARIBUAN, RV., QAIM, M., GRUNE, T., BIESALSKI, HK., HOFFMANN, V., BELLOWES AC.** 2009. Development of locally produced cereal-based Ready-to-Use Food (RUF) for wasted children in Nias Island, Indonesia. *Annals of Nutrition & Metabolism*, 19th International Congress of Nutrition, October 2009, Bangkok, Thailand, Book of Abstracts, p.147.
- SCHIEBER, A., CARLE, R.** 2009. By-products from mango (*Mangifera indica* L.) processing as a source of functional compounds. *Proceedings of the Tropical Fruits in Human Nutrition and Health Conference 2008*, 8-11 November 2008, Brisbane, Australia, Book of Abstracts, pp. 67-74.
- SCHMITTER, P., DERCON, G., HILGER, T., HERTEL, M., LE HA, T., HUU THANH, N., VIEN, T.D., CADISCH, G.** 2008c. Linkage between sediment induced spatial variability in soil quality and rice performance in paddy fields in mountainous regions of Vietnam. *International Conference of the Society for Tropical Ecology „Consequences of Climate Change on Tropical Ecosystems“*, 18-22 February 2007, Stuttgart-Hohenheim, Germany.
- SCHMITTER, P., HERTEL, M., DERCON, G., HILGER, T., LE HA, T., THANH, N.H., VIEN, T.D., VAN DUNG, N., CADISCH, G.** 2008a. Sedimentation in paddy fields: A neglected issue associated with land use intensification. *EUROSOIL: Soil, Society & Environment*, University of Technology, 25-29 August 2008, Vienna, Austria.
- SCHMITTER, P., HERTEL, M., DERCON, G., HILGER, T., THI LE HA, T., HUU THANH, N., DUC VIEN, T., VAN DUNG, N., CADISCH, G.** 2008b. Linkage between Sediment Induced Spatial Variability in Soil Quality and Rice Performance in Paddy Fields in Mountainous Regions of Vietnam. *In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium “Interdependencies between upland and lowland agriculture and resource management”*. Stuttgart-Hohenheim, Germany. Book of Abstracts, p. 79-80.
- SCHMITTER, P., TREFFNER, J., HERTEL, M., DERCON, G., HILGER, T., CADISCH, G.** 2009. Assessment of Water and Nitrogen Limitations to Paddy Rice Performance Using N-15 and C-13 Stable Isotopes. *In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources*. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 149.
- SCHNEIDER, S., HOLANDA JÚNIOR, E.V., SIEGMUND-SCHULTZE, M., ALVES, F.S., VALLE ZÁRATE, A.** 2008. Geographical certification as production and commercialisation strategy for smallholder sheep farming in Ceará, Brazil. *In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development*. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 411.
- SCHNEIDER, S., REICHLING, J., STINTZING, F.C., CARLE, R., SCHNITZLER, P.** 2008. Efficacy of an aqueous *Pelargonium sidoides* extract against herpesvirus. *Proceedings of GA Congress*. 03-08 August 2008, Athen, p. 322.
- SCHREINEMACHERS, P., BERGER, T., LIPPE, M., HUGENSCHMIDT, C., SIRIJINDA, A., POTCHANASIN, C., HILGER, T., CADISCH, G.** 2008. Integrated modeling to guide watershed development: A case study from Northern Thailand. *In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium “Interdependencies between upland and lowland agriculture and resource management”*. Stuttgart-Hohenheim, Germany. Book of Abstracts, pp. 53-54.
- SCHULTE, M., MARTIN, K., SAUERBORN, J.** 2008. Alternative Bekämpfungsmaßnahmen der Hauptschädlingsarten im Litchi-Anbau in Nordthailand. 56. Deutsche Pflanzenschutztagung, 22.-25. September 2008, Kiel.
- SCHÜSSLER, J., VAN ELSSEN, T., SIEGMUND-SCHULTZE, M., VALLE ZÁRATE, A.** 2008. Impact of support centres for social farming on social farmers with livestock in Northern Europe. 3<sup>rd</sup> European COST Workshop: Green Care in Agriculture - Advancing research methods and approaches, 6-8 October 2008, Thessaloniki, Greece.
- SCHWEIGGERT, R.M., VILLALOBOS-GUTIERREZ, M.G., ESQUIVEL, P., CARLE, R.** 2009. Desarrollo y optimización de la maceración enzimática a bajas temperaturas de pulpa de pitaya roja (*Hylocereus polyrhizus* [Weber] Britton & Rose). IV Congreso Nacional de Ciencia y Tecnología de Alimentos: Alimentos, Innovación y Salud, 27-29 October 2009, San José, Costa Rica.
- SEEBERG-ELVERFELDT, C., SCHWARZE, S., ZELLER, M.** 2008. Could carbon payments provide a solution for deforestation? Empirical evidence from Central Sulawesi, Indonesia. XIIIth Congress of the European Association of Agricultural Economists (EAAE), 26-29 August 2008, Gent, Belgium.
- SETZER, K., BEUCHELT, T., ZELLER, M.** 2009. Smallholder cooperatives in the coffee value chain: what are the requirements for participation? *In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources*. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p 501.
- SHRESTA, S., ASCH, F., BRUECK, H., DUSERRE, J., RAMANANTSOANIRINA, A.** 2009 Upland rice adaptation to variable water availability along an altitude gradient in

- Madagascar *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 229.
- SIMTOWE F., DIAGNE, A., ZELLER, M.** 2008. Does microfinance lead to good health? A local average treatment effect analysis for rural Malawi. PEGNET Workshop, 11-12 September 2008, ACCRA, Ghana.
- SIEGMUND-SCHULTZE, M.** 2009. Reflection upon the inter-disciplinary project BIOTA Southern Africa at the end of its first phase. Workshop on Inter- and Transdisciplinary Research on Sustainable Resource Use - Experiences, Methods & Instruments, Helmholtz Centre for Environmental Research-UFZ, Leipzig, 30Jan-1<sup>st</sup> Feb 2009, Germany.
- SIEGMUND-SCHULTZE, M., DELGADO, J., STEMMER, A., MARKEMANN, A., VALLE ZÁRATE, A.** 2008. Llama de Ayopaya: Towards marketing of high quality fine fibre in the Bolivian Andes. Proceedings of IGC-IRC Congress: Multifunctional grasslands in a changing world, 29 June - 05 July 2008, Hohhot, Beijing, China, Volume II, Book of Abstracts, p. 1074.
- SIEGMUND-SCHULTZE, M., LEGESSE, G., ABEBE, G., VALLE ZÁRATE, A.** 2008. Bottleneck analysis of sheep production systems in southern Ethiopia: Comparison of reproductive and growth parameters. 6<sup>th</sup> International Seminar of the FAO-CIHEAM Network on Sheep and Goats, Changes in sheep and goat farming systems at the beginning of the 21st century: Research, tools, methods and initiatives in favour of a sustainable development, Sub-Network on Production Systems, 15-17 November 2007, Ponte de Lima, Portugal, Book of Abstracts, pp. 33-34.
- SIEGMUND-SCHULTZE, M., SCHNEIDER, S., DELGADO, F., STEMMER, A., MARKEMANN, A., HOLANDA JÚNIOR, E.V., ALVES, S., VALLE ZÁRATE, A.** 2008. Criação de marcas para melhorar a competitividade da agricultura familiar: A „manta de carneiro de Tauá“ e o „lhama de Ayopaya“.Poster: IX Simposio Iberoamericano sobre Conservación y Utilización de Recursos Zoogenéticos, 10-12 December 2008, Mar del Plata, Argentina.
- SPREER, W., SATIENPERAKUL, K., ONGPRASERT, S., MÜLLER, J.** 2008. Applicability of deficit irrigation strategies in lychee and longan production in Thailand. *In*: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between Upland and Lowland Agriculture and Resource Management", 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 175-176.
- SRICHARON, T., BUCHENRIEDER, G.** 2008. Health insurance in rural Northern Thailand: What is available? What would be desirable? Annual Conference of Verein für Sozialpolitik "Development Economics and Policy", 31 May 2008, Zurich, Switzerland.
- SRITONTIP, C., TIYAYON, P., SRINGARM, K., HEGELE, M., NAPHRON, D., SRUAMSIRI, P., MANOCHAI, P., WÜNSCHE, JN.** 2008. Effects of temperature and potassium chlorate on leaf gas exchange and flowering in longan. 3<sup>rd</sup> International Symposium on Longan, Lychee and Other Fruit Trees in Sapindaceae Family, 25-29 August 2008, Fuzhou, China Book of Abstracts, C-26, Book of Abstracts, pp. 70-71.
- SRITONTIP, C., TIYAYON, P., SRINGARM, K., NAPHRON, D., SRUAMSIRI, P., MANOCHAI, P., HEGELE, M., WÜNSCHE, JN.** 2008. Effects of KClO<sub>3</sub> and temperature on flowering and leaf gas exchange characteristics in longan. *In*: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management". 1-4 April 2008, Stuttgart, Germany, Book of Abstracts, pp. 61-62.
- SRITONTIP, C., TIYAYON, P., SRINGARM, K., SRUAMSIRI, P., NAPHRON, D., MANOCHAI, P., HEGELE, M., WÜNSCHE, JN.** 2008. Effects of KClO<sub>3</sub> and water deficit on flowering and growth characteristics of longan. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 184.
- STADTLANDER, T., LEVAVI-SIVAN, B., DWEIK, H., QUTOB, M., ABU-LAFI, S., KEREM, Z., BECKER, K.** 2008. Treatment with saponins from trigonella foenum-graecum and Quillaja saponaria influences sex ratio in Nile tilapia (*Oreochromis niloticus*) larvae. The Eighth International Symposium on Tilapia in Aquaculture, 12-14 October 2008, Cairo, Book of Abstracts, Book of Abstracts, pp. 355-364.
- STEMMER, A., GALL, C.F., VALLE ZÁRATE, A.** 2008. Impacts of Anglo Nubian goats in smallholder farms in Bolivia, a case study. *In*: AGUILAR-CABALLERO, A. J. et al. (Eds.): International Goat Association (IGA), Proceedings of the 9<sup>th</sup> International Conference on Goats, 31 August-4 September 2008, Querétaro, Mexico, Book of Abstracts, p. 180.
- STEMMER, A., SIEGMUND-SCHULTZE, M., GALL, C.F., VALLE ZÁRATE, A.** 2008. Development and worldwide distribution of the Anglo Nubian goat. *In*: A. J. AGUILAR-CABALLERO et al. (Eds.): International Goat Association (IGA), Proceedings of the 9<sup>th</sup> International Conference on Goats, 31 August - 4 September 2008, Querétaro, Mexico, Book of Abstracts, p. 269
- STEMMER, A., VALLE ZÁRATE, A., SIEGMUND-SCHULTZE, M., GALL, C.F.** 2008. La cabra Anglo Nubia: Historia de la raza, distribución en América Latina e impacto en la cría de caprinos en Bolivia. Oral: XVII Reunión de la Asociación Boliviana de Producción Animal (ABOPA), 29-31 May 2008, Santa Cruz, Bolivia.
- STUETZ, W., CARRARA, V., BIESALSKI, HK., NOSTEN, F.** 2009. Iron, thiamine, and micronutrient status in pregnant and breastfeeding women: Assessment of food rations, and supplementation in Maela Refugee Camp, Northern Thailand. *Annals of Nutrition & Metabolism*, 19<sup>th</sup> International Congress of Nutrition, October 2009, Bangkok, Thailand, p. 380.
- STÜRZ, S., SCHLEGEL, I., SOW, A., ASCH, F.** 2008. Physiological responses of lowland rice cultivars to the saturated soil culture system. *In*: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 488.
- STÜRZ, S., SOW, A., SCHLEGEL, I., MANNEH, B., ASCH, F.** 2009. Annual variation of water use and yield of irrigated rice in the Sahel. *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 158.
- TERRE, S., ASCH, F., BECKER, M.** 2009. Influence of *Bacillus* spp. on iron plaque formation at the root surface of lowland rice. *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Book of Abstracts, p.195.
- THANH, N. T., LIPPE, M., MAROHN, C., STAHR, K., HILGER, T., LAM, N.T., CADISCH, G.** 2009. Assessment of Land Cover Change in Chieng Khoi Commune, Northern Viet Nam by Combining Remote Sensing Tools and Historical Local Knowledge. *In*: TIELKES, E. (Ed.): Biophysical and Socio-

- economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 21.
- TIYAYON, P., PONGSRIWAT, K., SRUAMSIRI, P., SAMACH, A., HEGELE, M., WÜNSCHE, JN.** 2008. The molecular basis of flowering in longan (*Dimocarpus longan* Lour.). In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p.175.
- TIYAYON, P., PONGSRIWAT, K., SRUAMSIRI, P., SAMACH, A., HEGELE, M., WÜNSCHE, JN.** 2008. The molecular basis of flowering in longan. In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies between upland and lowland agriculture and resource management". 1-4 April 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 67-68.
- TIYAYON, P., SRINGARM, K., SRITONTIP, C., SRUAMSIRI, P., HEGELE, M., MANOCHAI, P., NAPHRM, D., SRUAMSIRI, P., WÜNSCHE, JN.** 2008. Effects of girdling and defoliation on hormonal changes during flower induction in longan (*Dimocarpus longan* Lour.). 3<sup>rd</sup> International Symposium on Longan, Lychee and Other Fruit Trees in Sapindaceae Family. 25-29 August 2008, Fuzhou, China, Book of Abstracts, pp. 74-75.
- TREYDTE, A.C., JELTSCH, F.** 2008. Tree-grass-grazer interactions: Future projects on disappearing trees in African savannas. Proceedings of the 6th Kruger Park Networking Meeting, Skukuza, South Africa.
- TRIMBORN, M., HECK, C., ASCH, F., BRUECK, H.** 2009. Options for the management of water use in energy crop production in areas prone to summer drought. X. Congress of the European Society for Agronomy: Multi-functional Agriculture - Agriculture as a resource for energy and environmental preservation, Journal of Italian Society of Agronomy 15-19 Sept 2008, Bologna, Italy, pp. 623-625.
- ULLRICH, B., HÖGY, P., GRENZ, J., FRANZARING, J., SAUERBORN, J., FANGMEIER, A.** 2008. Effects of CO<sub>2</sub> enrichment and increased temperature on tomato and faba bean and their interactions with broomrape. 38<sup>th</sup> Annual Conference of the Ecological Society of Germany, September 2008.
- ULLRICH, B., HÖGY, P., GRENZ, J., SAUERBORN, J., FANGMEIER, A.** 2008. Effects of CO<sub>2</sub> enrichment and increased temperature on tomato and faba bean and their interactions with broomrape. Proceedings of the Conference of the European Ecological Federation and the Ecological Society of Germany, Austria and Switzerland, Leipzig, 149.
- UMEJESI, E.** 2009. Certification as a means for sustainable biofuel production?-potentials and constraints. ELLS Scientific Student Conference Climate Change - Global Change: Impacts, Adaptation and Mitigation, 5-6 November 2009. Stuttgart- Hohenheim, Germany.
- UMEJESI, E., LIPPERT, C.** 2009. Certification as a Means for Sustainable Biofuel Production?-Potentials and Constraints. In: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 422.
- VALLE ZÁRATE, A.** 2008. Current and projected future flows of AnGR between countries and regions. Workshop on Rights to Animal Genetic Resources, 27-28 November 2008, World Trade Institute, University of Bern.
- VALLE ZÁRATE, A., AL BAQAIN, A., GOOTWINE, E., HEROLD, P., AL BAQAIN, R.** 2009. Socio-economic benefits from Bedouin sheep farming in the Negev. In: EAAP (Ed.): 60<sup>th</sup> Annual Meeting of the European Association for Animal Production, 24 - 27 August 2009, Barcelona, Spain, Book of Abstracts, p. 73.
- WALLE, E.M., KRUSE, M., CALLES, T.** 2008. Cultivation of *Schoenocaulon officinale* for Improving the Procurement of Raw Material: An Ongoing Project. . In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 199.
- WANG R, SCHERBAUM V, GRUNE T, HE JG, BELLOWS AC.** (2008): Malnutrition Risk Factors of Rural-to-Urban Migrant Children (< 5years) in Comparison to Urban Children in Two Kindergartens in Beijing, China. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 182.
- WARUI, H., KAUFMANN, B., HÜLSEBUSCH, C., PIEPHO, H.-P., VALLE ZÁRATE, A.** 2009. Pastoralists' perspectives on multi-functional role of small ruminants in their production systems in arid areas of northern Kenya. In: TIELKES, E. (Ed.): Biophysical and socio-economic frame conditions for the sustainable management of natural resources. Tropentag 2009, Hamburg, Germany, Book of abstracts, p. 252.
- WARUI, H., KAUFMANN, B., HÜLSEBUSCH, C., PIEPHO, H.-P., VALLE ZÁRATE, A.** 2008. Milk yield and lactation management of goats kept by Gabra and Rendille pastoralists in northern Kenya. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 400.
- WARUI, H., KAUFMANN, B., HÜLSEBUSCH, C., VALLE ZÁRATE, A.** 2008. Local knowledge on relevant traits in sheep and goats under pastoral management in Kenya: a contribution to characterisation of animal genetic resources in their production system context. 10<sup>th</sup> World Conference on Animal Production, 23-28 November 2008, Cape Town, South Africa.
- WEISS, A., SCHMITTER, P., CADISCH, G., HILGER, T., FIEDLER, S.** 2008. Charcoal in Sediment Layers: A Way to Estimate Impact of Land Use Intensification on Reservoirs Siltation. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 507.
- WILL, S., MÜLLER, T., RÖMHELD V.** 2008. Efficiency of foliar fertilisation in Lychee (*Litchi chinensis* Sonn.). In: STAHR K. & FRÖHLICH H. (Eds.): International Symposium "Interdependencies Between Upland and Lowland Agriculture and Resource Management", Stuttgart-hohenheim, Germany, Book of Abstracts, pp. 179-180.
- WILL, S., SPREER, W., MÜLLER, T., RÖMHELD, V.** 2008. Efficiency of boron foliar fertilization in Lychee (*Litchi chinensis* Sonn.). In: CORREIA P.J. & PESTANA M. (Eds.): VI. International ISHS Symposium on Mineral Nutrition of Fruit Crops. Book of Abstracts, p. 120.
- WILL, S., SPREER, W., MÜLLER, T., RÖMHELD, V.** 2008. Efficiency of boron foliar fertilization in lychee (*Litchi chinensis* Sonn.). Proceedings of the VIth Intenational ISHS Symposium on Mineral Nutrition of Fruit crops, 19 May 2008, Universidade do Algarve, Faro (Portugal), Book of Abstracts, p. 120.
- WILL, S., TISCH, C., SCHÜTT, M., SPREER, W., WIRIYA-ALONGKORN, W., MÜLLER, T., RÖMHELD, V.** 2008. Boron and Zinc fertilisation to compensate negative effects of photooxidative stress in Lychee (*Litchi chinensis* Sonn.).

- Deutscher Tropentag 2008, Book of Abstracts, p. 228.
- WILL, S., TISCH, C., SCHÜTT, M., SPREER, W., WIRIYA-ALONGKORN, W., MÜLLER, T., RÖMHELD, V.** 2008. Boron and zinc fertilisation to compensate negative effects of photooxidative stress in lychee (*Litchi chinensis* Sonn.). In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 228.
- WOLFF, H.P., MORDECHAI S., THAMEEN. H., AMER, Z.S., ALIZA, F., AL-KARABLIEH, E., IDDO, K.** 2008. Change in natural resources vs. Socioeconomic development-identification of bottlenecks for exploiting future agricultural potentials in Jordan Valley. In: TIELKES, E. (Ed.): Competition for Resources in a Changing World: New Drive for Rural Development. Tropentag 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, p. 628.
- WÜNSCHE, JN., ROEMER, MG., HUONG, PT., SRUAMSIRI, P., HEGELE, M.** 2008. Possible physiological mechanism of premature fruit drop in mango (*Mangifera indica* L.) in Northern Vietnam. 9<sup>th</sup> International Symposium on Integrating Canopy, Rootstocks and Environmental Physiology in Orchard Systems, 4-8 August 2008, Geneva, New York, USA.
- WÜNSCHE, JN., TIYAYON, P., PONGSRIWAT, K., SRUAMSIRI, P., SAMACH, A., HEGELE, M.** 2008. The molecular basis of flowering in longan. 9<sup>th</sup> International Symposium on Integrating Canopy, Rootstocks and Environmental Physiology in Orchard Systems. 4-8 August 2008, Geneva, New York, USA.
- YUSRAN, RÖMHELD, V., MÜLLER, T.** 2009. Effects of *Pseudomonas* sp. "Proradix" and *Bacillus amyloliquefaciens* FZB42 on the establishment of AMF infection, nutrient acquisition and growth of tomato affected by *Fusarium oxysporum* Schlecht f.sp. *radicis-lycopersici* Jarvis and Shoemaker. Proceedings of the XVI International Plant Nutrition Colloquium. Paper 1106.
- YUSRAN, RÖMHELD, V., MÜLLER, T.** 2009. Effects of plant growth-promoting rhizobacteria and *Rhizobium* on mycorrhizal development and growth of *Paraserianthes falcataria* (L.) Nielsen seedlings in two types of soils with contrasting levels of pH. Proceedings of the XVI International Plant Nutrition Colloquium. Paper 1098.
- YUSRAN, WEINMANN, M., NEUMANN, G., RÖMHELD, V., MÜLLER, T.** 2008. Suppression of soilborn pathpogens by selected bioeffectors in onion (*Allium ascolanicum* L.). Jahrestagung der Deutschen Gesellschaft für Pflanzenernährung 2008. Limburgerhof/Speyer, Germany, Kurzfassung der Poster, p. 23.
- YUSRAN, WEINMANN, M., NEUMANN, G., RÖMHELD, V., MÜLLER, T.** 2008. Contribution of *Pseudomonas proradix*® and *Bacillus amyloliquefaciens* FZB42 on healthy plant growth of tomato affected by soil sickness. Deutscher Tropentag 2008, Book of Abstracts, p. 98.
- YUSRAN, WEINMANN, M., NEUMANN, G., RÖMHELD, V., MÜLLER, T.** 2008. Use of plant growth-promoting rhizobacteria to improve mycorrhisation, nutrient acquisition and plant health of tomato affected by soilborne pathogens. Deutscher Tropentag 2008, Book of Abstracts, p. 193.
- YUSRAN, WEINMANN, M., NEUMANN, G., RÖMHELD, V., MÜLLER, T.** 2008. Isolation and screening of *Pseudomonas fluorescens* isolates from Indonesian soils against *Fusarium oxysporum* Schlecht f. sp. *radicis-lycopersici* Jarvis and Shoemaker. Deutscher Tropentag 2008, Book of Abstracts, p. 214.
- YUSRAN, WEINMANN, M., RÖMHELD, V., MÜLLER, T.** 2008. Application of rhizobacteria to improve mycorrhization, nutrient status and plant growth of tomato affected by *Fusarium oxysporum* Schlecht f.sp. *radicis-lycopersici* Jarvis and Shoemaker. International Life Science Student's Conference 2008, Warsaw, Poland, Book of Abstracts, p. 70.
- YUSRAN, WEINMANN, M., RÖMHELD, V., MÜLLER, T.** 2008. Suppression of soilborn pathpogens in onion (*Allium ascolanicum* L.) by rhizobacteria related mechanisms. In: PERNER H., GEORGE A., ZAITUN, SYAHABUDDIN. (Eds.): Proceedings of Land use after the Tsunami, Book of Abstracts, pp. 122-130.
- ZAHRAN, E., KOHLSCHMID, E., SAUERBORN, J., MÜLLER-STÖVER, D.** 2008. Can seed coating enhance efficacy of biocontrol agents against *Striga hermonthica*? Unkrauttagung, 4-6 March 2008. Stuttgart-Hohenheim, Germany.
- ZAINAL, ISENGARD, H.-D.** 2009. Determination of total polar material in frying oil by using accelerated solvent extractor (ASE). 7<sup>th</sup> Euro Fed Lipid Congress – Lipids, Fats and Oils – from Knowledge to Application, 18-21 October 2009, Graz, Austria, Book of Abstracts, p. 20.
- ZAINAL, ISENGARD, H.-D.** 2009. The correlation between dielectricity method and micro column chromatography in determining the total polar material in some frying media. World Congress on Oils and Fats & 28<sup>th</sup> ISF Congress, 27-30 September 2009, Sydney, Australia, Book of Abstracts, p. 49.
- ZAINAL, ISENGARD, H.-D.** 2008. Stability of frying fats and oils in dependence of the fried goods. 6<sup>th</sup> Euro Fed Lipid Congress – Oils, Fats and Lipids in the 3<sup>rd</sup> Millennium: Challenges, Achievements and Perspectives, 07-10 September 2008, Athens, Greece, Book of Abstracts, p. 113.
- ZELLER, M.** 2009. Analyse der Finanzmarkt- und Landallokationspolitik in Vietnam. Leibniz Institute of Agricultural Development in Central and Eastern Europe (IAMO), 18 May 2009, Halle, Germany.
- ZELLER, M.** 2009. Kann Afrika seine wachsende Bevölkerung ernähren? Hindernisse und Chancen der landwirtschaftlichen Entwicklung im 21. Jahrhundert. scope of the Colloquium Politicum of the Albert-Ludwigs-University, 18. May 2009, Freiburg, Germany.
- ZELLER, M.** 2009. The Food Security Center of the University of Hohenheim. World Food Day, , 16 October 2009, Stuttgart-Hohenheim, Germany.
- ZELLER, M.** 2008. Agrartreibstoffe: Herausforderungen und Chancen für Entwicklungsländer. Wissenschaftlicher Beirat beim Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung (BMZ), 12. June 2008, Berlin, Germany.
- ZELLER, M.** 2008. Methodological aspects of assessing impact of technological or development interventions on livelihood. Presentation at Department of Agricultural Economics, University of Nairobi, 5<sup>th</sup> August 2008, Nairobi, Kenya.
- ZELLER, M., BEUCHELT, T.** 2009. Ernährungssicherung in Zeiten des Klimawandels. Stuttgarter Buchwochen, 3. Dezember 2009, Stuttgart, Germany.
- ZELLER, M., BEUCHELT, T., FISCHER, I., HEIDHUES, F.** 2008. Linkages between poverty and sustainable agricultural and rural development in the uplands of Southeast Asia. Keynote. International Conference 'Tropical Rainforests and Agroforests under Global Change', 5-9 October 2008, Bali, Indonesia.
- ZEMEK, O., HILGER, T., MAROHN, C., HOANG, M.H., TUAN,**



- V.D., LAM, N.T., CADISCH, G.** 2009. Biomass and Carbon Stocks Inventory of Perennial Vegetation in the Chieng Khoi Watershed, Northwest Viet Nam. *In*: TIELKES, E. (Ed.): Biophysical and Socio-economic Frame Conditions for the Sustainable Management of natural Resources. Tropentag 2009, Hamburg, Germany, Book of Abstracts, p. 30.
- ZIA, S.** 2008. Precision irrigation and fertigation technology for improving water and fertilizer efficiency of North China Plain production systems. International Research Training Group: Sustainable Resource Use in North China, 3-10 November 2008, Stuttgart-Hohenheim, Germany, Book of Abstracts, pp. 18-19.

## Dissertations

- ABU-ROMMAN, S.** 2008. Functional Characterization of 12-Oxophytodienoate Reductases in *Arabidopsis*. Department of Plant Physiology and Biotechnology, Prof. Andreas Schaller.
- AGRAJA, L.** 2007. Analysis of Comparative Advantage of Wheat Production under Transformation and Trade Liberalisation in Albania. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- ALMOHAMED, S.** 2008. Sozioökonomische Analysen und Evaluierung des Bewässerungsprojektes West Maskana in Nord Syrien. *In*: DOPPLER, W. & BAUER, S. (Eds.): Farming and Rural Systems Economics, Margraf Verlag, Weikersheim; Vol. 96, Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Werner Doppler.
- AMANI AL-ASSAF.** 2009. The impact of resources quality and pricing on rural families living standard in Jordan. *In*: DOPPLER, W. & BAUER, S. (Eds.): Farming and Rural Systems Economics, Margraf Verlag, Weikersheim; Vol. 106, Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Werner Doppler.
- ARNOLD THORSTON.** 2009. Linking farm economics and hydrology: Model integration for watershed-level irrigation management, applied to RegionVII, Chile. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Thomas Berger.
- AROUNA, A.** 2009. Domestic and Agricultural Water Use by Rural Household in the Oueme River Basin (Benin): An Economic Analysis Using Recent Econometric Approaches (Dissertation Part 1). Department of Farm Management, Prof. Stephan Dabbert.
- BEHRINGER, C.** 2009. Charakterisierung eines Saferner-induzierbaren Promotors und Analyse der Saferner-abhängigen Genexpression in *Arabidopsis thaliana*. Department of Plant Physiology and Biotechnology, Prof. Andreas Schaller.
- BLANCKART, P.** 2009. Biomonitoring von Fluorwasserstoff: Neue Ansätze zum Einsatz höherer Pflanzen als Akkumulationsindikatoren. Department of Landscape and Plant Ecology, Prof. Andreas Fangmeier.
- BREUNIG PETER.** 2009. Rentabilität und Risiko typischer Ackerbaubetriebe in der Russischen Föderation. Department of Farm Management, Prof. Jürgen Zeddies.
- DONGMEZA, E.** 2009. Studies on the nutritional quality of plant materials used as fish feed in Northern Vietnam. Department of Animal Production in the Tropics and Subtropics, Department of Aquaculture Systems and Animal Nutrition, Prof. Klaus Becker.
- DORODNIKOV, M.** 2008. Pathways of C and N turnover in soil under elevated atmospheric CO<sub>2</sub>. Department of Landscape and Plant Ecology, Prof. Andreas Fangmeier.
- ECKER, O.** 2009. Economics of Micronutrient Malnutrition: The Demand for Nutrients in Sub-Saharan Africa. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Martin Qaim
- ESPAÑA, M.** 2009. Function, Structure and Composition of Soil Microbial Communities by Plant Residue Quality in a Tropical Vertisol. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.
- GHRAIR, A.** 2009. Immobilization of heavy metals in soil by amendment of nanoparticulate zeolitic tuff. Department of Soil Science and Land Evaluation, Prof. Karl Stahr.
- GONZALEZ, A.** 2009. Trade Liberalization, Poverty and Household Analysis: The Case of Mexico. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Martina Brockmeier.
- HAU, N.V.** 2008. On Farm Performance of Vietnamese Pig Breeds and its Relation to Candidate Genes. Cuvillier Verlag, Göttingen. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate
- HUTTENLOCHER, F.** (2008): Biochemische und funktionelle Charakterisierung der Subtilase SISBT3 aus *Solanum lycopersicum* L. Department of Plant Physiology and Biotechnology, Prof. Andreas Schaller.
- HÜTTNER, M.** 2009. Molekulare Charakterisierung und Epidemiologie von *Echinococcus* spp. in ostafrikanischen Wild- und Nutztieren. Department of Zoology. Prof. Ute Mackenstedt.
- KNÖDLER, M.** 2009. Alk(en)ylresorcinols in Mango (*Mangifera indica* L.) and Cereals – Studies into Structure, Anti-inflammatory Activity, and Use as Marker Compounds in Authenticity Control. Department of Food Science and Biotechnology, Prof. Reinhold Carle.
- KOHLSCHMIDT, E.** 2009. Assessment of the biocontrol agent *Fusarium oxysporum* for controlling *Phelipanche ramosa* in tobacco fields. Department of Agroecology in the Tropics and Subtropics, Prof. Dr. Joachim Sauerborn.
- KRIESEMER, S.** 2009. Adoption and Diffusion of Small-Scale Pond Aquaculture - The Case of Cameroon in Comparison to Malawi. Kommunikation und Beratung, Band 94, Margraf Verlag, Weikersheim, pp.154. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- KURZWEIL, M.** 2008. Interdependencies between Agricultural and Labor Markets. DFG-Projekt im Rahmen der Forschergruppe "Strukturwandel und Transformation im Agrarbereich" an der Humboldt-Universität zu Berlin, Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Martina Brockmeier.
- LEGESSE, G.** 2008. Productive and economic performance of small ruminants in two production systems of the highlands of Ethiopia. Cuvillier Verlag, Göttingen, Germany. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- MURAYA, M.M.** 2009. Genetic Diversity and Mating System of Wild Sorghum in Kenya and Adaptive Value of Wild x Cultivated Sorghum Hybrids. Department of Plant Breeding, Prof. H. H. Geiger.
- NEUBERGER, A.** 2008. Livelihoods und Umweltschutz -

- Wege für eine nachhaltige Entwicklung der kleinbäuerlichen Subsistenzwirtschaft. Entwicklungsprojekte zum Schutz tropischer Küsten- und Regenwaldgebiete auf dem Prüfstand. Fallstudien der Insel Leyte, Philippinen. (Betreuer: Prof. Dr. Thomas Krings, Universität Freiburg; Prof. Dr. Friedhelm Göltenboth, Universität Hohenheim).
- PANSAK, W.** 2009. Soil Conservation, Erosion and Nitrogen Dynamics in Hillside Maize Cropping in Northeast Thailand. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.
- PARASECOLI, F.** 2009. Food and Men in Cinema: An exploration of Gender in Blockbuster Movies. Competence centre for gender and nutrition, Prof. Anne C Bellows.
- PELIKAN, J.** 2009. Quantitative Analysen zu den WTO-Agrarverhandlungen der Doha-Runde, Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Martina Brockmeier.
- PHUPAICHITKUN, S.** 2008. Mathematical modelling of drying kinetics of Thai longan (*Dimocarpus longan* Lour.). Department of Agricultural Engineering, Prof. Joachim Müller.
- POTCHANASIN CHAKRIT.** 2008. Investigation through Simulation of Sustainability of Farming Systems in the Mountainous Area of Northern Thailand. Department of Farm Management, Prof. Jürgen Zeddies.
- POTCHANASIN, P.** 2008. Investigation into the role of phytohormones on 'off-season' floral induction in longan trees (*Dimocarpus longan* Lour). Department of Crop Sciences, Prof. Fritz Bangerth.
- RABBI, I.Y.** 2009. Population Dynamics of Crop Sorghum: Genetic Structure, Pollen Dispersal and Outcrossing rates. Department of Plant Breeding, Prof. H.H. Geiger.
- REWE, T.** 2009. Breeding objectives and selection schemes for beef cattle populations in Kenya. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- ROESSLER, R.** 2009. Optimising breeding programmes with local pig breeds in North Vietnam considering functions of pigs for smallholders and logistic determinants. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- SADILOVÁ, E.** 2009. Chemical Characterization of Coloring Foodstuffs and Studies into the Thermal Degradation of Anthocyanins. Department of Food Science and Biotechnology, Prof. Reinhold Carle.
- SANCHEZ, E.A.** 2008. From Subsistence to Market Oriented Livestock Smallholder Development in Nicaragua and Honduras. In: DOPPLER, W. & BAUER, S. (Eds.): Farming and Rural Systems Economics, Margraf Verlag, Weikersheim; Vol. 94, Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Werner Doppler.
- SCHULER JOHANNES.** 2008. An Economic Analysis of the Implementation Options of Soil Conservation Policies. Department of Farm Management, Prof. Stephan Dabbert.
- SCHULER, U.** 2008. Towards regionalisation of soils in Northern Thailand and consequences for mapping approaches and upscaling procedures. Department of Soil Science and Land Evaluation, Prof. Karl Stahr.
- SIART, S.** 2008. Strengthening Local Seed Systems – Options for Enhancing Diffusion of Varietal Diversity of Sorghum in Southern Mali. Reihe: Kommunikation und Beratung 85, Margraf Verlag, Weikersheim, pp. 200. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- SINON, F. G.** 2008. Optimization of stripping technologies for the production of high quality abaca fiber. Department of Agricultural Engineering, Prof. Joachim Müller.
- SPREER, W.** 2008. Influence of different irrigation regimes on fruit growth, yield and quality parameters of mango (*Mangifera indica*, L. cv. 'Chok Anan'). Department of Agricultural Engineering, Prof. Joachim Müller.
- SRINGARM, K.** 2008. Investigation into the correlative hormonal regulation of floral induction in longan trees (*Dimocarpus longan* Lour) induced by potassium chlorate. Department of Crop Sciences, Prof. Fritz Bangerth.
- STEINBRONN, S.** 2009. A case study: Fish production in the integrated farming system of the Black Thai in Yen Chau District (Son La Province) in mountainous North-Western-Vietnam - current state and potential. Department of Animal Production in the Tropics and Subtropics, Prof. Klaus Becker.
- STÜTZ, W.** 2009. Determinants of micronutrient status, DDT residues and pregnancy outcomes: cross-sectional studies in pregnant and post partum women from Maela refugee camp, North-Western Thailand. Department of Biological Chemistry and Nutrition, Prof. Hans K. Biesalski.
- THAI THI MIN.** 2009. Agricultural Innovation Systems in Vietnam's Northern Mountainous Region - Six decades shift from a supply-driven to a diversification-oriented system. Kommunikation und Beratung, Band 96, Margraf Verlag, Weikersheim, pp. 260. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- VAN DER HOEK, R.** 2009. Farmers Researching Multipurpose Forages – A Case of Participatory Action Research in Honduras, Kommunikation und Beratung, Band 91, Margraf Verlag, Weikersheim, pp.207. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- VASSILEV, Z.** 2009: Structural Change Requirements in the Bulgarian Dairy Sector aiming at higher Competitiveness within the EU. Department of Farm Management, Prof. Reiner Doluschitz.
- WELDESILASSIE, A.** 2009. Economic Analysis and Policy Implications of Wastewater Use in Agriculture in the Central Region of Ethiopia. Department of Farm Management, Prof. Stephan Dabbert.
- YUSRAN.** 2009. Use of Plant Growth-Promoting Rhizobacteria (PGPR) to Improve Mycorrhization, Nutrient Acquisition and Growth of Vegetable Plants Affected by Soilborn Pathogens. Department of Plant Nutrition, Prof. Torsten Müller.
- ZAHKAN, E.** 2008. Biological control of *Striga hermonthica* (Del.) Benth. using formulated mycoherbicides under Sudan field conditions. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.

## Diploma & Master theses

- ABID MAHMOOD KAHLOON.** 2009. Innovation History of Beef Meat Sector in Pakistan. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- AKO YOSEPH MELKA.** 2008. Potential of Bioethanol and Biodiesel Production in Tanzania. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- AKWASI, QK.** 2009. Assessing the actual and potential impact

- of the Ghana School Feeding Programme (GSFP): A case study of the Amansie East District of the Ashanti Region. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anna C. Bellows.
- ALBRECHT, T.** 2009. Phenotypic evaluation of a Finger Millet [*Eleusine coracana* (L.) Gaertn.]. Core collection under different field conditions in India. Diploma Thesis. Department of Plant Breeding, Prof. Albrecht E. Melchinger.
- AMMAR, O.** 2008. Effect of Non-Essential Amino Acid Pattern in Iso-Nitrogenous Diets on Growth and Body Composition in Trout (*Oncorhynchus mykiss*). Department of Animal Production in the Tropics and Subtropics, M.Sc. Thesis. PD Ulfert Focken.
- ARAPOVIC, A.** 2008. Entwicklung einer Verarbeitungstechnologie für Granatäpfel unter besonderer Berücksichtigung der polyphenolischen Inhaltsstoffe. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Reinhold Carle.
- AYANU, Y.Z.** 2009. Simulating consequences of land use change and spatial distribution of land uses on sustainability of crop production in Northern Vietnam. M.Sc. Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.
- BAMUTURAKI, J.** 2009. World market integration and price transmission in selected markets in Tanzania. M.Sc. Thesis. Department for Agricultural Policy and Markets, Prof. Harald Grethe.
- BATISTEL, C.C.** 2008. Changes in carbon stocks of peat soils as caused by land use change in West Aceh, Sumatra. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.
- BIHLMAYER, S.** 2009. Der Einsatz von Ökoprodukten in der Gastronomie: Hemmende Faktoren des Einsatzes der Analyse von kompensierenden Lösungsstrategien. Diploma Thesis. Department of Social Sciences in Agriculture, Prof. Anna C. Bellows.
- BOH, M. Y.** 2008. Optimising faecal sludge co-composting in the semiarid tropics. M.Sc. Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.
- BOLL, L.** 2009. Spatial Variability in Maize and Cassava Productivity in the Chieng Khoi Watershed, Northwest Vietnam. M.Sc. Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.
- BOSCH, M.** 2008. Analyse der Wundantwort in einer Jasmonat defizienten Mutante von *Solanum lycopersicum*. Diploma Thesis. Department of Plant Physiology and Biotechnology, Prof. Andreas Schaller.
- BRONCHIEVA, NAZIRA.** 2009. Landwirtschaftliche Beratung in Kirgisien – Probleme der Landwirte. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- BUKARI MORO.** 2009. History, Present State of the Art and Adoption of Aquaculture Technology in the Eastern Region of Ghana. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- BÜNNER, N.** 2008. Analysis of the socio-economic situation of households in the vicinity of a *Jathropa* plantation in Madagascar. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- BURKART, STEFAN.** 2009. Success Factors in the operation of Banana Tissue Culture Nurseries in Kenya. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- CALBERTO SÁNCHEZ, G.A.** 2008. Parameterization and calibration of the Tropical Soil Productivity Calculator (TSPC) for cabbage, sweet pepper and litchi in Mae Sa watershed, Northern Thailand. M.Sc. Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.
- CASTRO-MONTOYA, J.M.** 2009. Effect of tannins and saponins on methane emission and rumen microbial composition in an in vitro rumen fermentation system. M.Sc. Thesis. Department of Animal Production in the Tropics and Subtropics, Prof. Klaus Becker
- CEBALLOS A. R.** 2009. Constraints and options to conserve biodiversity in Morrocoy National Park-Venezuela. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.
- CHEN, J.** 2009: Does Agricultural Policy Influence Farmers' Fertilization Practice? A Microeconomic Comparison of Trends for Hebei Province, China. M.Sc. Thesis. Department of Farm Management, Prof. Reiner Doluschitz.
- CHESI, L.A.** 2008. Technical and Financial Analysis of selected Tropical Crop for Biodiesel production. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- CHOTRUANGPRASERT, KOBRAT.** 2009 Do Coffee Farmers in Northern Thailand Benefit from Fairtrade? M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- CHUKWUMAH, I.** 2008. Financial profitability and sustainability of improved fallow strategies using the Water, Nutrient and Light Capture in Agroforestry Systems (WaNuLCAS) model. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.
- COLOMBO, S.** 2008. Wollqualität und Organisation der Produzenten als Determinanten der Vermarktungsmöglichkeiten von Schafwolle von der Schwäbischen Alb. M.Sc. Thesis. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- DAMBACHER, M.** 2009. Wasserbestimmung in Milchprodukten unter Einsatz der Mikrowellenresonanzspektroskopie. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Heinz-Dieter Isengard.
- DANGELMAIER, S.** 2008. Einfluss verschiedener Parameter auf die Ergebnisse bei der Bestimmung polarer Anteile in Frittierfetten nach der DGF-Einheitsmethode C-III 3b und Vergleich ihrer Trennleistung mit HPLC. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Heinz-Dieter Isengard.
- DANNENMANN, B..E.** 2009. An evaluation of the environmental impacts of rice production using life cycle assessments. M.Sc. Thesis. Department of Agricultural Engineering, Prof. Joachim Müller.
- DAVILA-LEAL, A.** 2008. Mexican Law for Organic Products: DOF 07-02-2006, Perceptions of its development and implications. M.Sc. Thesis. Department of Farm Management, Prof. Christian Lippert.
- DISTEL, A.** 2008. Assessment of the tsunami impact on tree crop response through temporal and permanent groundwater changes at landscape level in Sumatra. Diploma Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.
- DJAMALOV, BEKHZOD.** 2008. Worldwide Development of Organic Agriculture: Impacts, Factors and Trends. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof.

- Volker Hoffmann.
- DONKOR, I. F.** 2008. Determinants of Competitiveness and Performance of Ghana's Non-Traditional Exports, M.Sc. Thesis. Department for Agricultural Policy and Markets, Prof. Harald Grethe.
- DOSSOU-YOVO, V. I.** 2009. Evaluation of amount and types of strigolactones biosynthesis in cowpea and sorghum lines. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.
- DREHER, F.** 2009. *Acrocomia totai* Mart., a promising oil-producing palm of South America: a literature review. Diploma Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch. (in coop with FH Nürtingen.)
- DUCKSTEIN, S.** 2008. Charakterisierung der Zellwandzusammensetzung von *Opuntia ficus-indica* (L.) Mill. und Optimierung der Extrakterstellung aus dem Pericarp und den Cladodien. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Reinhold Carle.
- EGERMANN, L.** 2009. Ökophysiologische Untersuchungen zum Blattgasaustausch und Wasserbedarf der C4-Gräser *Melinis minutiflora* P. Beauv. und *Setaria sphacelata* Schumacher auf einem gestörten Bergwaldstandort in den tropischen Anden. Diploma Thesis. Department of Botany, Prof. Manfred Küppers.
- ENGELS, C.** 2008. Antioxidative and antimicrobial activities of polyphenols from mango (*Mangifera indica* L.) by-products. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Reinhold Carle.
- FALKENHAGEN, F.** 2008. Costs of Organic and Fair Trade Group Certification. A profit margin analysis in a cashew nut smallholder association in Brazil. M.Sc. Thesis. Department of Farm Management, Prof. Christian Lippert.
- FITA, DM.** 2009. The Impact of Self Help Groups on the Livelihood of Rural Women in Central Ethiopia: A comparative case study on women involving and not-involving in self help groups. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anna C. Bellows.
- FLAIG, D.** 2008. Budgethilfe oder Projekthilfe in der Entwicklungszusammenarbeit. Diploma Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- FRIEDEN, CLAUDIA.** 2008. Refocusing the current world agricultural system: looking to organic food chains as a viable option. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- GAO, H.** 2009. Assessment of infant feeding policies and practice in Deyang City (Sichuan Province) of China. M.Sc. Thesis., Prof. Anne C Bellows.
- GEBETSADIK B.H.** 2008. Determinants of the adoption of agricultural technologies in rural Ethiopia. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- GEBREMICHAEL, E. D.** 2008. Investigation of the genetic variability Master among landraces of Sesame (*Sesamum indicum* L.) from Ethiopia using simple sequence repeat markers. Department of Plant Breeding, Prof. Albrecht E. Melchinger.
- GONG, MIN.** 2008. The knowledge and innovation system related to paddy rice in Hunan Province, China - Recent Technology and Actual Effectiveness. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- GORIBAR, AF.** 2008. Changes in food security perception among beneficiaries of the program Oportunidades in the state of Colima, Mexico. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anna C. Bellows.
- GRAF, P.** 2008. Pseudotuberkulose bei Ziegen: Die Verbreitung und Bekämpfung in Baden-Württemberg unter besonderer Berücksichtigung des Sanierungsprogramms am Oberen Lindenhof. Diplomarbeit. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- GRIESER, M.** 2008. Pathogenresistenz in *Arabidopsis thaliana* und die Rolle von AtSBT3.3, 3.4 und 3.5. Diploma Thesis. Department of Plant Physiology and Biotechnology, Prof. Andreas Schaller.
- HAMMEL, C.** 2008. Local food chain management and the conservation of biodiversity: A case study of the non-governmental organizations working to save the orchard meadow food system of Baden-Wuerttemberg. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anna C. Bellows.
- HAMMEL, K.** 2008. Local Food Chain Management and the Conservation of Biodiversity: A case study of the Initiatives working to save the fruit orchard food system of Baden-Wuerttemberg. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.
- HASCHKA, E.** 2009. Optimierung einer Methode zur Wasserbestimmung in Lactose. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Heinz-Dieter Isengard.
- HASSANI, A.** 2008. Effects of carbon dioxide enrichment and temperature rising on quality traits of tomato and soybean crops: a meta-analysis". M.Sc. Thesis. Department of Landscape and Plant Ecology, Prof. Andreas Fangmeier.
- HEEB, A.** 2009. Participatory risk assessment on game products marketed through formal and informal chains. M.Sc. Thesis. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- HIEPP, G.** 2008. Machbarkeitsstudie für eine Biogasanlage auf Basis häuslicher, industrieller und landwirtschaftlicher Reststoffe. M.Sc. Thesis. Department of Agricultural Engineering, Prof. Joachim Müller.
- HÜPPE, S.** 2008. Insektenresistenz in *Solanum lycopersicum* und die Rolle von SISBT3. Diploma Thesis. Department of Plant Physiology and Biotechnology, Prof. Andreas Schaller.
- IKENOUE, S.** 2009. Effect of the land reform on land use pattern change in Limpopo Province, South Africa. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.
- ILOGU, C.F.** 2009. Effects of atmospheric carbon dioxide enrichment, increased temperature and infestation with a parasitic weed *Orobanche crenata* on carbohydrate contents in faba bean. M.Sc. Thesis. Department of Landscape and Plant Ecology, Prof. Andreas Fangmeier.
- JÄGER, J.** 2008. A systematic approach to analyze the geographical origin of germplasm exemplified for pearl millet [*Pennisetum glaucum* (L.) R. Br.] in the genebank of ICRISAT-Niger. Diploma Thesis. Department of Plant Breeding, Prof. Michael Kruse.
- JAYANEGARA, A.** 2009. Methane reduction effect of polyphenol containing plants, simple phenols and purified tannins in *in vitro* rumen fermentation system. M.Sc Thesis. Department of Animal Production in the Tropics and Subtropics, Prof. Klaus Becker.
- JEREMIAS T.** 2009. Addressing the double-burden of malnutrition (over- and undernutrition) in the life-course of people living in Samoa. Part II: School children and the elderly. Diploma Thesis. Department of Biological Chemistry

- and Nutrition, Prof. Hans K. Biesalski.
- JIE, C.** 2009. Determinants of Fertilizer Use in the North China Plain. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- JIMÉNEZ, Y. P.** 2008. Screening for two resistance mechanisms to *Stiga hermonthica* infestation in a collection of Sorghum landraces from Sudan. Department of Plant Breeding, Prof. Albrecht E. Melchinger.
- KALIPALIRE, Z.** 2009. Rainfall variability, food security, and coping and Adaptation strategies in Tanzania. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- KASSAYE, G.** 2008. The Impact of NGOs on Urban Poverty Reduction in Southern Ethiopia: A comparative study on families receiving and not receiving project assistance. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anna C. Bellows.
- KIRCH, C.** 2008. Vergleich verschiedener Methoden zur Bestimmung des Wassergehaltes in Butter und einigen Käsesorten. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Heinz-Dieter Isengard.
- KORESE KUDADAM, J.** 2008. Influence of drying parameters on the drying behaviour and quality of lemon balm (*Melissa officinalis* L.). M.Sc. Thesis. Department of Agricultural Engineering, Prof. Joachim Müller.
- KUGLER, F.** 2009. Auswirkungen veränderter atmosphärischer CO<sub>2</sub>-Konzentrationen und pflanzlicher Artendiversität auf den Kohlenstoffkreislauf in mediterranen Modellökosystemen mit annueller Vegetation. Diploma Thesis. Department of Landscape and Plant Ecology, Prof. Andreas Fangmeier.
- KÜHN, K.** 2008. Effect of Feeding Diets with Different Protein Content to *Macrobrachium rosenbergii* in Tank and Cage Culture in the Philippines: Interaction between Diet and Production System. Diploma Thesis. Department of Animal Production in the Tropics and Subtropics, PD Ulfert Focken.
- LANGLOIS, M.** 2008. Untersuchungen zu Einsatzmöglichkeiten ionischer Flüssigkeiten bei der Karl-Fischer-Titration. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Heinz-Dieter Isengard.
- LATYNSKIY E.** 2009. Impacts of Climate Change on Agriculture and Poverty in Linares Province of Chile. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences. Prof. Thomas Berger.
- LAUVAI J.** 2009/10 Addressing the double-burden of malnutrition (over- and undernutrition) in the life-course of women and children living in Samoa: Part I: Pregnant and lactating women. Diploma Thesis. Department of Biological Chemistry and Nutrition, Prof. Hans K. Biesalski.
- LI, Z.** 2009: Qualitätsmanagement bei Fleisch und Fleischwarenexport in China. M.Sc. Thesis. Department of Farm Management, Prof. Reiner Doluschitz.
- LIN H.** 2009. Potential Contribution of Bioenergie Crops for Rural Livelihoods in Southwest China. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences. Prof. Thomas Berger.
- LIU, R.** 2009: Lebensmittelsicherheit von Gemüseprodukten in China – Aktuelle Situation und Lösungsansätze. M.Sc. Thesis. Department of Farm Management, Prof. Reiner Doluschitz.
- LOOS, T.** 2008. Socio-economic impact of a *Jatropha*-Project on smallholder farmers in Mpanda, Tanzania. Case study of a Public-Private Partnership Project. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- LORENZ, D.** 2009. Effect of interval feeding on metabolic parameters, gene expression and body composition in the common carp (*Cyprinus carpio* L.). Diploma Thesis. Department of Animal Production in the Tropics and Subtropics, Prof. Klaus Becker.
- LUCKMANN, J.** 2009. Price transmission and market integration of selected maize and rice markets in Vietnam. M.Sc. Thesis. Department for Agricultural Policy and Markets, Prof. Harald Grethe.
- LUQUE-GOMEZ, M.A.** 2009. Effects of atmospheric carbon dioxide enrichment, temperature increase and broomrape infestation on ascorbic acid concentration in tomato fruit. M.Sc. Thesis. Department of Landscape and Plant Ecology, Prof. Andreas Fangmeier.
- M´SEFOLA, M.J.** 2008. Learning for Food and Nutrition Security School: Gardens as a Pedagogic Tool in Secondary and Primary Schools of the North West Province of Cameroon. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anne C Bellows.
- MACK, S.** 2009. Analysis, stability and functional properties of sorghum polyphenols. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Reinhold Carle.
- MBATIFUH, JUDITH MSEFOLA.** 2008. Learning for Food and Nutrition Security: School Gardens as a Pedagogic Tool in Primary and Secondary Schools in the Northwest Province of Cameroon. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- MEHMOOD, ALAMGIR.** 2009. Comparison of Quality Management Systems of Organic and Conventional Farming: A Review of the Literature. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- MELKONYAN, CHRIST.** 2008. Development Constraints of Armenian Dairy Cooperatives – Transition Country Case. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- MENDOZA HUAITALLA, R.** 2008. Mechanical and physical properties of *Jatropha curcas* L. for oil production. M.Sc. Thesis. Department of Agricultural Engineering, Prof. Joachim Müller.
- MERAL, MA.** 2008. Development of Turkish organic black tea market in Germany. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anne C Bellows.
- MEYER, W.** 2008. Income Diversification of Farm Households in Albania. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- MICHALCZYK, A.** 2008. Parametrisation and Modelling of Growth and Yield development of Mango (*Mangifera indica*) in North Thailand with Application of the WaNuL-CAS Model. M.Sc. Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch (in cooperation with Alexander-von-Humbolt University, Berlin)
- MODJESCH, N.** 2008. Funktionelle Charakterisierung der Oxophytodiensäurereduktasen in *Arabidopsis thaliana*. Diploma Thesis. Department of Plant Physiology and Biotechnology, Prof. Andreas Schaller.
- MÖSLEIN, L.** 2008. Charakterisierung des Polyphenolspektrums und der Polysaccharide aus *Aloe ferox* Miller. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Reinhold Carle.
- MUHAMMAD BILAL.** 2008. Innovation History of Milk Production in Pakistan, M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- MURENDO, C.** 2009. Rainfall variability, food security, climate

- coping and adaptation strategies of rural communities in Awash Basin, Ethiopia. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- MUTH, P.** 2008. Characterization of pathogenic variation in *Colletotrichum lindemuthianum*, the causal agent of anthracnose of common bean *Phaseolus vulgaris* L. in South Africa, resistance screening of local germ plasm, and evaluation of existing molecular markers. Diploma Thesis. Department of Plant Physiology and Biotechnology, Prof. Andreas Schaller.
- NAGEL, A.** 2008. Charakterisierung spezieller Pektine, insbesondere aus Mango, unter Einbeziehung von Größenausschlusschromatographie. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Reinhold Carle.
- NAGEL, M.** 2009. Ökophysiologische Untersuchungen zum Blattgas-austausch und Xylemsaftfluss von *Pteridium aquilinum* (L.) Kuhn auf einem gestörten Bergwaldstandort in den tropischen Anden. Diploma Thesis. Department of Botany, Prof. Manfred Küppers.
- NAMPIKI FLORENCE KIBUUKA.** 2008. Reform of Agricultural Extension of Uganda – Case Study: National Agricultural Advisory Service (NAADS). M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- NARJES, M. E.** 2009. Is Beekeeping a Viable Additional Income for the Rural Poor? An economic analysis of beekeeping and honey hunting as additional income alternatives for the rural poor in the Philippine Cordillera, Luzon, the Philippines. M.Sc. Thesis. Department of Farm Management, Prof. Christian Lippert.
- NDONGO, F.** 2009. Husbandry practices and breed influencing safety of milk and milk products from small farms around Nairobi. M.Sc. Thesis. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- NEUGEBAUER, M.** 2008. Zur Rolle der Subtilase 3 aus Tomate (*Solanum lycopersicum*) in der Pathogenabwehr. Diploma Thesis. Department of Plant Physiology and Biotechnology, Prof. Andreas Schaller.
- NICKEL, T.** 2009. Einfluss von Temperatur und Erntejahr auf die Keim- und Lebensfähigkeit von *Striga hermonthica*. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.
- NIKANG HYSENT TOSAM.** 2008. Management of African Corporations: Literature Review and a Case Study about the Cameroon Development Corporation. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- NISAR, A.G.** 2008. Biofuels in India: An assessment of biofuel policies. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- NOVIANTY D.** 2008. Comparison of Vitamin and Mineral Content in Locally Produced Ready-to-Use Food (RUF) – Biscuits with International Recommendation for Treatment of Malnourished Children in Nias, Indonesia. Master Thesis. Department of Biological Chemistry and Nutrition, Prof. Hans K. Biesalski.
- NUGROHO, E.** 2009. Socio-economic condition of mildly and moderately wasted children in Nias, Indonesia. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anne C Bellows.
- OBIDIEGWU, N. O.** 2009. Development of microsatellite markers for genetic characterization of a core subset of Foxtail millet (*Setaria italica*) and Finger millet (*Eleusine coracana*) germplasm. Department of Plant Breeding, Prof. Albrecht E. Melchinger.
- OLUKAYODE OKUNOLA.** 2009. Current State and Future Perspectives of Fish Pond Diffusion in Ogun State, Nigeria. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- ORFORD, R.** 2009. A growth experiment evaluating *Moringa stenopetala* leaves as an alternative protein source for farm based aqua-feed in a rural semi-intensive culture system for *Oreochromis niloticus baringoensis* L. in the Rift Valley, Kenya. M.Sc. Thesis. Department of Animal Production in the Tropics and Subtropics, PD Ulfert Focken.
- PASAM, R. K.** 2008. Evaluation of Photoperiodic Response and Characterization of Population Structure of Pearl Millet Geermplasm from West and Central Africa. Department of Plant Breeding, Prof. Albrecht E. Melchinger.
- PAVLOVIC, J.** 2009. Gaseous emissions of a plant oil stove when fuelled with *Jatropha curcas* oil. M.Sc. Thesis. Department of Agricultural Engineering, Prof. Joachim Müller.
- PERCY PINGPOH N.** 2009 Potentials of Bio-Energy-Production in Cameroon, M.Sc. Thesis. Department of Farm Management. Prof. Jürgen Zeddies.
- PHAM THANH, L.** 2008. Smallholder Production of Green Tea in Northern Vietnam: An economic analysis of Profitability, Factor Productivity, and Choice of Marketing Contract. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- PONTIAN, TIFU YONG.** 2008. Rural Innovations in Kom, North West Province, Cameroon, M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- POUDEL, HARI KRISHNA.** 2008. The Agricultural Knowledge System in Nepal - A Review Study, M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- PRECHSL, U.** 2008. Agrestal flora associated with paddy rice in Nabanhe Nature Reserve (Yunnan, PR China), as affected by altitude and management. M.Sc. Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.
- PRECOPPE, M.** 2008. Performance analysis of a litchi drying system in the upland region of Northern Thailand. M.Sc. Thesis. Department of Agricultural Engineering, Prof. Joachim Müller.
- PREUKSCHAS, J.** 2009. „Reaktionen auf CO<sub>2</sub>-Gaswechsel, Chlorophyllgehalt und Bestandesentwicklung bei unterschiedlichen CO<sub>2</sub>-Behandlungen und Biodiversitäten am Beispiel *Hordeum spontaneum*“. Diploma Thesis. Department of Landscape and Plant Ecology, Prof. Andreas Fangmeier.
- QU, S.** 2009. Nutrition and health aspects of infants and women during the reproductive period in rural and urban areas of Deyang, China. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anne C Bellows.
- RETZ, S.** 2008. Effects of tropospheric ozone on grassland model community canopies. Diploma Thesis. Department of Landscape and Plant Ecology, Prof. Andreas Fangmeier.
- REWE, M.** 2008. Development of a mid-infrared spectroscopy based technique utilising thermal stability of soils and soil organic matter (SOM) removal to assess the quality and quantity of SOM. M.Sc. Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.
- ROSE, P.** 2009. On-line NIR measurements of spice plants during drying. M.Sc. Thesis. Department of Agricultural

- Engineering, Prof. Joachim Müller.
- RYSAVY, A.** 2009. GIS Based Gap Analysis as a Tool for Biodiversity Conservation Optimization: The IITA Cowpea Collection. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.
- SÄENGER, C.** 2008. Economics of tree crop production and marketing in post-tsunami Aceh, Indonesia. M.Sc. Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.
- SALAZAR ORTEGÓN, P.** 2009. Clarification of *Jatropha curcas* L. oil for direct use in plant oil stoves. M.Sc. Thesis. Department of Agricultural Engineering, Prof. Joachim Müller.
- SALISSOU, M.L.** 2009. Agro-morphological characterization and diversity assessment of early to medium maturing West and Central African pearl millet landraces accessions. Department of Plant Breeding, Prof. Albrecht E. Melchinger.
- SCHLEGEL, I.** 2009. Physiological and agronomic responses of selected rice genotypes to irrigation management in the Sahel. M.Sc. Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics. Prof. Folkard Asch.
- SCHMIDTNER, E.** 2009. Organic Farming and its Potential Contributions to Food Security in Sub-Saharan Africa. Department of Farm Management, Prof. Stephan Dabbert.
- SCHNEIDER, A.** 2009. Participatory Supply Chain Analysis of High Value Spices in Northern Lao PDR. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- SCHNEIDER, S.** 2008. Geographical certification as production and commercialisation strategy for smallholder sheep farming in Ceará, Brazil. M.Sc. Thesis. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- SCHREIB, K.** 2008. Wasserbestimmung in Säuglingsmilchnahrung. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Heinz-Dieter Isengard.
- SCHÜSSLER, J.** 2008. Impact of support centers for social farming on benefits from livestock in northern Europe. M.Sc. Thesis. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- SCHWEIGGERT, R.** 2009. Untersuchungen zur Herstellung von Fruchtsaftkonzentraten aus *Hylocereus* sp.. Diploma Thesis. Department of Food Science and Biotechnology, Prof. Reinhold Carle.
- SCHWEIZER TOBIAS** 2009, Agricultural potential of bioenergy production in Peru. M.Sc. Thesis. Department of Farm Management. Prof. Jürgen Zeddies.
- SETZER, K.** 2009. Smallholder Cooperatives in the Coffee Value Chain – A Roasters' and Importers' Perspective. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- SINAR, E.** 2008. Pharmaceuticals in human sanitary products for use in tropical agriculture - Case study at the Valley View University in Accra, Ghana. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.
- SOL, G.** 2009. Assessment of Ecosan Urine Diversion Dehydration Toilets (UDDT) in Cagayan de Oro City, Philippines. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.
- STAMENOVA, K.** 2009. Molekulare Charakterisierung von Taeniiden-Eiern aus Umweltproben in Ostafrika. Diploma Thesis. Fachgebiet Parasitologie, Prof. Ute Mackenstedt.
- STAMM, N.** 2009. Sorption of phenyl urea herbicides to black carbon. M.Sc. Thesis. Department of Landscape and Plant Ecology, Prof. Andreas Fangmeier.
- STROEDER, J.** 2009. Die Rolle von Subtilisin-ähnlichen Proteasen in der Interaktion von Tomate (*Solanum lycopersicum*) und herbivoren Insekten. Diploma Thesis. Department of Plant Physiology and Biotechnology, Prof. Andreas Schaller.
- TAKYI, A.** 2008. Perceived versus realised benefits of crossbred goats in the Kedida Gamela district of Southern Ethiopia. M.Sc. Thesis. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- TELLUM, ELIN AKRE.** 2008. Assessment of pictures in health and nutrition education – Use of pictures in health and nutrition communication in Lao PDR. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Volker Hoffmann.
- THANH, N. T.** 2009. Assessment of vegetation cover change in Chieng Khoi Commune, Yen Chau district, Northern Vietnam by using satellite images. M.Sc. Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch
- THEOFANO-ELISSAVET, V.** 2008. Animal welfare approaches and the concept of naturalness in organic dairy calf farming management. M.Sc. Thesis. Department of Animal Production in the Tropics and Subtropics, PD Brigitte Kaufmann.
- THÜRBECK, N.** 2009. Assessing vulnerability and microfinance instruments in rural households in Mexico/ Vulnerability Survey in rural marginalized households of Mexico. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anne C. Bellows.
- TONG S.** 2008. Application of a human rights approach to end mother and child malnutrition in the Highland and Lowland of Bale, Ethiopia. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anne C Bellows.
- TRAORÉ, S.A.** 2009 Contribution of endemic ruminants to the livelihoods of small farmers in The Gambia. M.Sc. Thesis. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- TRIANI, R.** 2008. Influence of selected pre- and postharvest factors on the quality and peel properties of fresh litchi fruits (*Litchi chinensis* Sonn.). M.Sc. Thesis. Department of Food Science and Biotechnology, Prof. Reinhold Carle.
- TROOST C.** 2009 Public Subsidies for Advanced Irrigation Technologies in the Province of Linares, Chile. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences. Prof. Thomas Berger.
- TROX J.** 2009. Einfluss verschiedener Verarbeitungsverfahren auf den Gehalt bioaktiver Inhaltsstoffe in Cashewnüssen. Vergleich konventionell verarbeiteter und „kalt geknackter“ Cashewnüsse aus Flores, Indonesien. Diploma Thesis. Department of Biological Chemistry and Nutrition, Prof. Hans K. Biesalski.
- TRKULJA, D.** 2008. Reversible Phosphorylierung von OPR3 und die daran beteiligten Enzyme. Diploma Thesis. Department of Plant Physiology and Biotechnology, Prof. Andreas Schaller.
- TSCHANADI, A.** 2009. Utilization of by-catch and processing wastes from marine fishery in feeds for the organic aquaculture of marine shrimp *Litopenaeus vannamei* in Costa Rica. Diploma Thesis. Department of Animal Production in the Tropics and Subtropics, PD Ulfert Focken.
- UFER, S.** 2009. Coping and Adaptation Strategies of Rural Households in Response to Rice and Maize Price

Variability in Northern Vietnam. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.

**ULLRICH, B.** 2008. Wirkung von erhöhtem CO<sub>2</sub> und erhöhter Temperatur auf Bestandesentwicklung und Photosynthese von Tomaten (*Solanum lycopersicum*) und Fababohnen (*Vicia faba*) in Interaktion mit *Orobancha spec.* Diploma Thesis. Department of Landscape and Plant Ecology, Prof. Andreas Fangmeier.

**UMEJESI, E.** 2009. Certification as a Means to Sustainable Biofuels? – Prospects and Constraints. Department of Farm Management, Prof. Christian Lippert.

**VAIRAMUTHU, C.** 2009. Rapid diagnostic test for tomato quality as affected by climate change, atmospheric CO<sub>2</sub> enrichment and broomrape. M.Sc. Thesis. Department of Landscape and Plant Ecology, Prof. Andreas Fangmeier.

**VU DUONG QUYNH.** 2008. The impact of conventional, intergated and organic vegetable production on soil fertility and vegetable quality in Vietnam - A comparative investigation. M.Sc Thesis. Department of plant nutrition, Prof. Torston Müller.

**WALLE, E.M.** 2008. Research on Cultivation of *Sabadilla (Schoenocaulon officinale)* for Improving the Procurement of Raw Material. Msc. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.

**WANG R.** 2008. Malnutrition Risk Factors of Rural-to-Urban Migrant Children (< 5 years) in comparison to Urban children in Two Kindergartens in Beijing, China. M.Sc. Thesis. Department of Social Sciences in Agriculture, Prof. Anne C Bellows.

**WEISS, A.** 2008. Charcoal in sediment layers: a way to estimate the impact of land use intensification on erosion and reservoir siltation? M.Sc. Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.

**WELLHÖFER, J.** 2009. Untersuchungen zur enzymatischen Schalenbräunung von Litchifrüchten (*Litchi chinensis*). Diploma Thesis. Department of Food Science and Biotechnology, Prof. Reinhold Carle.

**WU, Y.Y.** 2008. Customer satisfaction with bank cards among rural migrant workers in Guang Dong Province, China. M.Sc. Thesis. Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.

**WURST, S.** 2009. Evaluation of feed ingredients for the organic production of freshwater prawns *Macrobrachium rosenbergii* by smallholders in the Atlantic Zone of Costa Rica. Diploma Thesis. Department of Animal Production in the Tropics and Subtropics, PD Ulfert Focken.

**XU, L.** 2009: Struktur und Wirtschaftlichkeit der Milchproduktion und –verarbeitung in urbanen Gebieten in China (Fallbeispiel: Großraum Peking). M.Sc. Thesis. Department of Farm Management, Prof. Reiner Doluschitz.

**ZEMEK, O.** 2009. Biomass and carbon stocks inventory of perennial vegetation in the Chieng Khoi watershed, NW Viet Nam. M.Sc.Thesis. Department of Plant Production and Agroecology in the Tropics and Subtropics. Prof. Georg Cadisch.

**ZHENG, H.** 2009. Modelling the Dry Bulk Freight Market. M.Sc. Thesis. Department for Agricultural Policy and Markets, Prof. Harald Grethe.

## Bachelor theses

**BAUER T.** 2009. Apple Fruit Production in the Highlands of Ethiopia: Current Situation and Challenges. M.Sc. Thesis. Department of Agricultural Economics and Social Sciences. Prof. Thomas Berger.

**BIRKENBERG, A., HILSCHER, M., MANOHARAN, D.** 2009. Local knowledge and the ecology of medicinal plants in Northern Thailand. Department of Plant Production and Agroecology in the Tropics and Subtropics. Prof. Folkard Asch.

**BORCHERT, P.** 2009. Growth of Rainbow Trout (*Oncorhynchus mykiss*) Fed Soybean- or *Jatropha curcas* Kernel Meal as a Substitute for Fish Meal. Department of Animal Production in the Tropics and Subtropics. PD. Ulfert Focken.

**BRENNER, H.** 2008. Der Ernährungsgipfel der FAO und sein Beitrag zur nachhaltigen Verbesserung der Welternährung – kritische Diskussion. Department of Agricultural Policy and Markets, Prof. Harald Grethe.

**BUHRKE, F.** 2009. Substitution of *Jatropha curcas* kernel meal for fishmeal: Effect on body composition of pacific white leg shrimp (*Penaeus vannamei*). Department of Animal Production in the Tropics and Subtropics, PD. Ulfert Focken.

**DANNENMANN, B.M.E.** 2007. The Potential of Bamboo as a Source of Renewable Energy in Northern Laos. Department of Agricultural Engineering, Prof. Joachim Müller.

**FARR, F.** 2008. Description of wet processing of *Coffea Arabica* in Kilimanjaro (Tanzania), definition of bottle necks and potential approaches. Department of Agricultural Engineering. Prof. Joachim Müller.

**FEHRENTZ, J.** 2009. Strukturen des Weltreismarktes und des Weltreishandels und die Auswirkungen auf nationale Reispolitiken. Department of Agricultural Policy and Markets, Prof. Harald Grethe.

**HAGEL, H.** 2008. Direktsaat als Alternative zu wendender Bodenbearbeitung unter den Bedingungen in Paraguay. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Joachim Sauerborn.

**HAHNE, L.** 2009. Virtuelles Wasser in der Baumwolle Australiens. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Folkard Asch.

**HARTER, T.** 2009. Substitution of *Jatropha curcas* kernel meal for fish meal: Effect on the growth performance of pacific white leg shrimp, *Penaeus vannamei*. Department of Animal Production in the Tropics and Subtropics, PD Ulfert Focken.

**HAUSBERG, M.** 2009. Experimentelle Untersuchungen zu alternativen Induktionsquellen und Testsystemen für die in vivo Haploideninduktion bei tropischem Mais. Department of Plant Breeding, Prof. Albrecht E. Melchinger.

**HEINZE, C.** 2009. Qualität von Kamelmilch. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.

**HÖPPNER, M.** 2009. Die Reform der Bananenmarktordnung der EU und ihre Auswirkungen auf die Handelsbeziehungen unter besonderer Berücksichtigung der AKP-Staaten und den USA Department of Agricultural Policy and Markets, Prof. Harald Grethe.

**HOLMGREN, T.** 2009. Klimakiller Bio? Department of Agricultural Policy and Markets, Prof. Harald Grethe.

**JAHN, A.** 2008. Der Weltmarkt für Reis: Struktur u.



- Trendanalysen zu Nachfrage u. Angebot. B.Sc. Thesis. Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Prof. Manfred Zeller.
- KANZ, C.-I.** 2009. Struktur, Zuchtziele und Zuchtpraxis in der Erwerbsziegenhaltung in Baden-Württemberg im Vergleich zur Erwerbsziegenhaltung in Österreich. Department of Animal Production in the Tropics and Subtropics, Prof. Anne Valle Zárate.
- KARWAT, H.** 2008. Einfluss des Bor-Nährstoffstatus bei Sojabohnen (*Glycine max* (L.) Merr.) auf die Aufnahme von Bor bei Blattangebot. Department of plant nutrition, Prof. Torston Müller.
- KÜHNLE, E.** 2009. Quantification of Artemisinin in *Artemisia annua* cv. Anamed using Fourier Transform Infrared Spectroscopy. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch
- MANOHARAN, D.** 2009. Indigenes Wissen und die Ökologie von Heilpflanzen in Nordthailand. Department of Social Sciences in Agriculture, Prof. Anne C. Bellows.
- MANOHARAN, DHUSENTI, HILSCHER, MANUEL, BIRKENBER, ATHENA.** 2009. Local Knowledge and the Ecology of Medicinal Plants in Northern Thailand. Department of Soil Science and Land Evaluation. Prof. Karl Stahr.
- MBENG, K.** 2009. Trocknungsverhalten von Biogas-Gärresten in einer solargestützten Trocknungsanlage. Institut für Agrartechnik, Prof. Joachim Müller.
- REINHARDT, NADJA.** 2009. Evaluation of a Study Site for sustainable Yield increase in Northern Vietnam. Department of Soil Science and Land Evaluation. Prof. Karl Stahr.
- ROLKER, D. J.** 2009. Optimisation of mechanical extraction of *Jatropha curcas* L. seeds. Department of Agricultural Engineering, Prof. Joachim Müller.
- SCHAFFERT, A.** 2009. EU-Programm: „Verteilung von Nahrungsmitteln an Bedürftige“: Darstellung und Bewertung. Department of Agricultural Policy and Markets, Prof. Harald Grethe.
- CHOCK, S.** 2008. Einfluss von Calcium und Magnesium auf die Rückstandsbildung im Pflanzenölkocher. Institut für Agrartechnik, Prof. Joachim Müller.
- TREFFENER, J.** 2009. Assessment of water and nitrogen limitations to paddy performance using stable isotopes. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Georg Cadisch.
- WINTER, M.** 2009. Influence of soil ameliorants on the availability of micro nutrients to industrial crop plants grown on marginal soils in Brandenburg. Department of Plant Production and Agroecology in the Tropics and Subtropics, Prof. Folkard Asch.

## Statistics on development-oriented publications

Name of Department	peer re- viewed	non-re- viewed	books/ book chap- ters	conference contribu- tions	PhD	Di- ploma M.Sc.
Department of plant production and agroecology in the tropics and subtropics						
Plant production	16	1	6	42	2	14
Agroecology	18	2	7	35	3	10
Crop water stress management in the tropics and subtropics	16	-	1	16	-	1
Department of soil science and land evaluation						
Soil science and petrology	4	-	-	-	2	-
Biogeophysics	3	-	-	-	-	-
Department of landscape and plant ecology						
Plant ecology and ecotoxicology	7	1	1	6	2	9
Department of plant breeding, seed science and population genetics						
Department of plant nutrition. Fertilisation with soil chemistry	3	2	-	14	1	1
Department of biological chemistry and nutrition						
Biological chemistry and nutrition		2	-	6	1	6
Biofunctionality and food safety	2	-	-	-	-	-
Department of plant physiology and biotechnology: Plant physiology and biotechnology						
Department of Crop Sciences: Crop physiology of speciality crops	10	1	2	15	3	1
Department of animal production in the tropics and subtropics						
Animal breeding and husbandry	12	7	1	35	4	9
Aquaculture systems and animal nutrition	29	-	-	38	2	8
Department of Zoology: Parasitology						
Department of agricultural economics and social sciences in the tropics and subtropics	4	-	-	2	1	1
Department of agricultural economics and social sciences in the tropics and subtropics						
Rural development theory and policy	16	8	5	46	-	18
International agricultural trade and food security	7	3	-	5	3	-
Farming and rural systems	-	13	7	11	3	-
Land use economics Josef G. Knoll professorship	6	-	-	1	1	3
Department of economics: economics, esp. environmental economics and public policy						
Department of farm management	3	-	-	4	4	5
Production Theory and Resource Economics	3	-	-	4	4	5
Computer applications and business management in agriculture	-	-	-	11	1	4
Department of agricultural policies and markets: Agricultural and food policy group						
Department of agricultural policies and markets: Agricultural and food policy group	6	-	7	-	-	4
Department of social sciences in agriculture						
Rural communication and extension	-	6	12	3	4	18
Gender and Nutrition	3	3	1	17	2	14
Department of agricultural engineering						
Agricultural engineering in the tropics and subtropics	16	4	1	22	3	8
Department of food technology						
Plant foodstuff technology	9	9	6	16	2	9
Food analysis	5	6	4	13	-	6

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*Group 1 Plant production and landscape ecology / Group 2 Animal production*

*Group 3 Agricultural economics and social sciences / Group 4 Agricultural engineering and food technology*

## Dr. Hermann Eiselen Research Grant 2008

Name	Supervisor	Topic	Country	Exam
Albrecht	Melchinger	Phenotypic evaluation of a finger millet [ <i>Eleusine coracana</i> L.] core collection under different field conditions in India	India	Dipl.
Baah	Lippert	Environmental and socioeconomic impact assessment of peri-urban land degradation: A case study on the effects of sand winning on arable farmlands in the Ga District of the Greater Accra Region (Ghana)	Ghana	M.Sc.
Boll	Cadisch	Spatial variability in maize and cassava productivity in the Chieng Khoi Watershed, Northwest Vietnam	Vietnam	M.Sc.
Class-Mahler	Stahr	Evaluation of soil characteristic changes and their tendency to landslides due to deforestation and agricultural use in the mountainous region of Northern Vietnam	Vietnam	Diploma
Falkenhagen	Zeller	Costs of organic and fair trade group certification - a gross margin analysis in a cashews nut smallholder association in Brazil	Brazil	M.Sc. Diploma
Gao	Bellows	Assessment of infant feeding policies and practices in Chengdu Area (Sichuan province) China	China	M.Sc.
Han	Berger	The potential of oil bearing crops to improve the well-being and food security of farm households: a case study in Panzhihua, Southwest China	China	M.Sc.
Hüller	Stahr	Improvement of cropping system in the Limestone Area Bor Krai, Northern Thailand, under consideration of the soil water household and plant nutrition	Thailand	M.Sc.
Jeremias	Biesalski	Addressing the double burden of malnutrition (over- and undernutrition) in the life-course of women and children in Samoa. Part II: Children, women and the elderly	Samoa	Diploma
Latynskiy	Berger	Poverty impacts of climate change in Linares Province, Chile	Chile	M.Sc.
Lauvai	Biesalski	Addressing the double burden of malnutrition (over- and undernutrition) in the life-course of women and children in Samoa. Part I: Pregnancy and breastfeeding period	Samoa	Diploma
Melkonyan	Hoffmann	Development constraints of Armenian dairy cooperatives	Armenia	M.Sc.
Narjes	Lippert	Is beekeeping a viable additional income for the rural poor? - An economic analysis of beekeeping as an additional income alternative for the rural poor in the Cordillera Administrative Region (CAR), Luzon in the Philippines	Philippines	M.Sc.
Owusu-Kyem	Bellows	Assessing the actual and potential impact of the Ghana School feeding programme (GSFP): A case study of the Offinso Municipal of the Ashanti Region	Ghana	M.Sc.
Schneider	Valle Zárate	Geographical certification as production and commercialisation strategy for smallholder sheep farming in Ceará, Brazil	Brazil	M.Sc.
Schweiggert	Carle	Evaluation of different processes for the production of juice concentrates and fruit powders from dragon fruit ( <i>Hylocereus</i> sp.)	Costa Rica	Diploma
Takyi	Valle Zárate	Perceived versus realised benefits of grossbred goats in the Kedida Gamela district of Southern Ethiopia	Ethiopia	M.Sc.
Triani	Carle	Influence of selected pre- and post harvest factors on the quality and peel properties of fresh litchi fruits ( <i>Litchi chinensis</i> Sonn.)	Indonesia	M.Sc.
Tschanadi	Focken	Utilization of by-catch and processing wastes from marine fishery in feeds for organic aquaculture of marine shrimp <i>Litopenaeus vannamei</i> in Costa Rica	Costa Rica	Diploma

Name	Supervisor	Topic	Country	Exam
Vu	Müller, T	The impact of conventional, integrated and organic vegetable production on soil fertility and vegetable quality in Vietnam - A comparative investigation	Vietnam	M.Sc.
Wider	Stahr	Indigenous soil mapping and land evaluation at a site vulnerable to climate change in the Upper West Region of Ghana - The case of Pisii Village	Ghana	M.Sc.
Wurst	Focken	Evaluation of protein-rich feed ingredients for the organic production of freshwater prawns <i>Macrobrachium rosenbergii</i> by smallholders in the inlands of Costa Rica	Costa Rica	Diploma
Xu	Zeddies	Struktur und Wirtschaftlichkeit der Milchproduktion und -verarbeitung in urbanen Gebieten in China (Fallbeispiel: Großraum Peking)	China	M.Sc.

## Dr. Hermann Eiselen Research Grant 2009

Name	Supervisor	Topic	Country	Exam
Bukari	Hoffmann	History, state of art and adoption of fish farming in Ghana with particular reference to the eastern region	Ghana	M.Sc.
Burkard	Melchinger	Investigation of spontaneous chromosome doubling rates after in vivo haploid induction in tropical maize germ plasm	Mexico	M.Sc.
Chotruangprasert	Zeller	Do coffee farmers in northern Thailand benefit from fair trade?	Thailand	M.Sc.
Haffke	Melchinger	Assessment of different methods farmer-participatory selection in diversified pearl millet populations at three pilot sites in Niger	Niger	Diploma
Heeb	Valle Zárate	Participatory risk assessment on game products marketed through formal and informal chains: Hazard identification and risk assessment	Soth Africa	M.Sc.
Huber	Carle	Evaluation of volatiles and sensory characteristics of different Costa Rican papaya ( <i>Carica papaya</i> L.) genotypes	Costa Rica	Diploma
Ikenoue	Sauerborn	The effect of land redistribution on land use change patterns in South Africa	South Africa	M.Sc.
Luckmann	Grethe	Prize transmission and market integration of selected maize and rice markets in Vietnam	Vietnam	M.Sc.
Murendo	Zeller	Rainfall variability, food security and climate adaptation strategies of rural communities in the Awash River Basin, Ethiopia	Ethiopia	M.Sc.
Ndongo Kasse	Valle Zárate	Choice of breeds and husbandry practices influencing the safety of milk and milk products from smallholder dairy farms around Nairobi focussing on Brucellosis	Kenya	M.Sc.
Nguyen	Cadisch	Assessment of land cover change in Chieng Khoi Commune, Northern Vietnam, by combining remote sensing tools and historical local knowledge	Vietnam	M.Sc.
Orford	Focken	A growth experiment evaluating <i>Moringa stenopetala</i> leaves as an alternative protein source for farm based aqua-feed in a rural semi-intensive culture for <i>Oreochromis niloticus baringoensis</i> L. in the Rift Valley, Kenya	Kenya	M.Sc.
Reinhardt	Stahr	Evaluation of a study site for sustainable yield increase in Northern Vietnam	Vietnam	B.Sc.
Schneider	Hoffmann	Participatory supply chain analysis of high value spices in Northern Laos PDR	Laos	M.Sc.
Schulze	Müller, J.	Agronomic aspects of water saving irrigation methods in mango and longan production in Northern Thailand	Thailand	M.Sc.

<b>Name</b>	<b>Supervisor</b>	<b>Topic</b>	<b>Country</b>	<b>Exam</b>
Schüttel	Grethe	The impact of globally fluctuating process on the Bolivian price level	Bolivia	M.Sc.
Steingass	Carle	Characterisation of morphological and chemical traits of Costa Rican papaya ( <i>Carica papaya</i> L.) fruit genotypes with special reference to their carotenoid composition	Costa Rica	Diploma
Thürbeck	Zeller	Assessment of vulnerability to poverty in rural Mexico	Mexico	M.Sc.
Traore	Valle Zárate	Contribution of endemic ruminants to the livelihoods of small farmers in the Gambia	Mali	M.Sc.



## Tropenzentrum Revenues and Expenditures 2008

Revenues from University		Expenditures	
Core funding	130.000 €	Scientific staff	48.576 €
Reward for third party funds	4.029 €	Assistants	1.380 €
		Running costs of management unit	4.901 €
		Public relations / events	13.589 €
		Education	961 €
		Tropentag 2008	10.656 €
		Travel costs	697 €
		Allocated funds for core institutes (10x3.000 €)	30.000 €
		Requested funding	26.506 €
			Becker (480): 1982 €; F.R.E.S.H: 1.211 €; Müller (440): 2443 €; Neef (796): 2.870 €; Stahr (310): 3.000 €; Wünsche (370): 3.000 €; Zeller (490): 12.000 €
<b>Sum of revenue</b>	<b>134.029 €</b>	<b>Sum of expenditures</b>	<b>137.266 €</b>

## Tropenzentrum Revenues and Expenditures 2009

Revenues from University		Expenditures	
Core funding	130.000 €	Scientific staff	54.323 €
Reward for third party funds	4.125 €	Assistants	6.673 €
		Running costs of management unit	2.790 €
		Public relations / events	7.488 €
		Education	380 €
		Tropentag 2009	5.022 €
		Travel costs	1.441 €
		Allocated funds for core institutes (10x3.000 €)	30.000 €
		Requested funding	24.688 €
			Cadisch (380): 2.500 €; F.R.E.S.H: 455 €; Olanrevaju B. Smith: 1.633 €; Sauerborn (380): 11.600 €; Stahr (310): 4.000 €; Wünsche (370): 4.500 €
<b>Sum of revenue</b>	<b>134.125 €</b>	<b>Sum of expenditures</b>	<b>132.805 €</b>

## Third party funding generated by core departments

Source of funds	Project	Period	2008 in Euro	2009 in Euro
<b>Department of Plant Production and Agroecology in the Tropics and Subtropics (380)</b>				
<b>Plant Production in the Tropics and Subtropics (380a) - Prof. Dr. Georg Cadisch</b>				
German Research Foundation (DFG)- Federal Ministry of Education and Research (BMBF)	Sustainable Land Use and Rural Development in Mountainous Regions of South-east Asia (Uplands Program)-Special Research Program (SFB) 564	2006-2009 2009-2012	104.872,00	138.229,00
EU – ASIA PRO ECO II B Post-Tsunami PROGRAMME	Trees, Resilience and Livelihood Recovery in the Tsunami-affected Coastal Zone	2006-2009	55.051,00	43.372,00
BEAF (BMZ/GTZ)	Trees in multi-Use Landscapes in South-East Asia (TUL-SEA): A negotiation support toolbox for Integrated Natural Resource Management	2007-2010	26.644,00	
DFG	Regionaler Klimawandel-Charakterisierung und Modellierung von Kohlenstoffpools in Böden	2008-2011	19.200,00	32.760,00
DAAD	Projektbezogener Personenaustausch mit Thailand	2008-2009	6.275,00	4.435,00
GTZ / BMZ	Lessons from the tsunami 2004 in Aceh: Mitigation or aggravation through trees? Modeling the effect of coastal vegetation on tsunami impact in West Aceh, Indonesia	2008-2009		32.653,00
International Atomic Energy Agency (IAEA), Wien	Technical Contract-Implementation of Compound-Specific Stable-Isotope Analysis to Trace Carbon Sink-and-Source Relationships between Areas of Critical Land Degradation and Deposition Ageas in Regional Catchments	2008-2009		12.000,00
DFG	Domestizierung der Palme <i>Acrocomia aculeata</i>	2009-2010		7.200,00
<b>Agroecology in the Tropics and Subtropics (380b) - Prof. Dr. Joachim Sauerborn</b>				
Source of funds	Project	Period	2008	2009
BMBF	Verbundvorhaben "Ländliche Entwicklung im Südwesten Chinas" (LILAC)	2007-2010	270.769,00	371.666,00
DFG	Internationale Zusammenarbeit, Auslandsreisen	2008	9.700,00	
BMBF	Ökologische Kreislaufwirtschaft an der Valley View University, Accra, Ghana	2008-2009	60.000,00	46.497,00
Universitätsbund Hohenheim e.V.	5th International Weed Science Congress	2008	750,00	
EU	Anschubfinanzierung EU FLUXPLAN 7 (FP7) / Kooperation: Integrated mass flow toolbox for designing water supply and sanitation systems in peri-urban areas of Sub-Saharan Africa			10.790,00

Source of funds	Project	Period	2008 in Euro	2009 in Euro
<b>Crop Waterstress Management in the Tropics and Subtropics (380c) - Prof. Dr. Folkard Asch</b>				
Bundesministerium für Bildung und Forschung (BMBF), Bonn	Verbundprojekt: Bodenmelioration und Anbauverfahren für trockenheitsgefährdete Standorte	2006-2009	75.000,00	131.786,00
Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH, Eschborn	Developing rice and sorghum crop adaption strategies for climate change in vulnerable environments in Africa	2007-2011	500.000,00	280.000,00
The Africa Rice Center (WARDA), Cotonou	Collaborative research on iron toxicity in rice	2009-2010		10.990,00
EnBW Regenwaldstiftung	Wassernutzungseffizienz von Jatropha in Madagascar	2008-2011	58.747,00	28.647,00
Atmosphäre Protect GmbH, Stuttgart	Machbarkeitsstudie zum Potential der CO <sup>2</sup> -Sequestrierung in heißen Wüsten-Nutzung von desaliniertem Meerwasser für die Bewässerung von Energiepflanzen	2009		5.355,00
DAAD für AA	Cross-continental network for sustainable adaptation of grassland systems vulnerable to climate change	2009-2013		182.870,00
Förderprogramm der EU	Integrated water management and agroforestry strategies as sustainable option to render carbon sequestration an effective, scale spanning driving force for climate change adaption and mitigation in live stock production	2009-2010		16.350,00
<b>Department of Animal Production in the Tropics and Subtropics (480)</b>				
<b>Animal Breeding and Husbandry in the Tropics and Subtropics (480a) - Prof. Dr. Anne Valle Zárate</b>				
DFG	Effizienz kleinbäuerlicher Tierhaltung in Abhängigkeit von Haltungsintensität und genetischem Potenziell der Nutztierpopulationen in Bergregionen Nordvietnams	2006-2009	84.951,00	46.628,00
DFG	Effizienz kleinbäuerlicher Tierhaltung in Abhängigkeit von Haltungsintensität und genetischem Potenziell der Nutztierpopulationen in Bergregionen Nordvietnams	2009-2012		60.454,00
DFG	Improving lamb meat and milk production for fat-tail sheep of the Middle East through breeding	2008-2010	103.340,00	206.680,00
BMZ-ILRI	Safe food, fair food: Building capacity to improve the safety of animal source foods and ensure continued access for poor farmers in sub-Saharan Africa	2008-2010		13.300,00
RBW, MLR	Optimierung der Zuchtplanung beim Braunvieh und Hinterwälder Rind in Baden-Württemberg	2009-2012	12.750,00	17.000,00
Eiselen-Stiftung, Ulm	Sustainability of beef production with Bali cattle in smallholder farms on Ceram Island, Indonesia	2009		10.035,90
MLR	Organisation und Planung der Milchziegenzucht in Baden-Württemberg	2007-2011	4.549,00	10.197,00

Source of funds	Project	Period	2008 in Euro	2009 in Euro
DFG, MWK, Rektorat	Vorbereitung eines SFB in Israel; "From Drought to Increasing Use of Treated Water in Agriculture: Impact on the Safety and Quality of Food from Crops and Livestock"	2009		147.672,00
DAAD	Promotionsförderungen	2009-2012	36.215,00	54.322,50
DAAD	Fachbezogene Partnerschaften mit Hochschulen	2009		8.560,00
DFG	Fachbezogene Partnerschaften mit Hochschulen im Mittleren Osten	2009		6.900,00
<b>Aquaculture-Systems and Animal Nutrition in the Tropics and Subtropics (480b) - Prof. Dr. Klaus Becker</b>				
DFG/BMZ	Optimierung von Nährstoffflüssen und Umwelteffekten in Integrierter Reis-Aquakultur mit <i>Oreochromis niloticus</i> , <i>Cyprinus carpio</i> und <i>Macrobrachium rosenbergii</i>	2007-2009	66.331,00	16.583,00
DFG	Increasing productivity and efficiency of Nile tilapia production using plant saponins and introduction of its culture in areas under the jurisdiction of the Palestinian Authority (PA)	2009-2011	-	323.044,00
BMBF	Optimierte Extraktion und Nutzung des Jatropaöls und effiziente Verwertung von Jatropa-Mehl und Proteinkonzentrat für die Tierernährung	2007-2010	534.680,00	672.241,00
Energiestiftung Baden-Württemberg/ Regenwaldstiftung	Wirtschaftliche Einsatzmöglichkeiten des <i>Jatropha curcas</i> Anbaus zur Rekultivierung degradierter ehemaliger Naturwaldböden und zur Bekämpfung der Bodenerosion in Madagaskar - eine multiple wissenschaftliche Analyse	2008-2011	79.000,00	105.147,00
DFG SFB 564	Research of improved fish nutrition and fish health in upland aquaculture systems in Yen Chau, Son La Province, Vietnam			65.128,00
<b>Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics (490)</b>				
<b>Rural Development Theory and Policy (490a) - Prof. Dr. Manfred Zeller</b>				
MWK	Vorbereitung eines SFB in Afrika	2008-2011	30.000,00	
IFPRI	Contracting out of poverty/Tansania	2008-2011	35.356,00	
DFG	Sustainable Resource Use in North China	2004-2013	28.807,00	24.580,00
ENBW	Wirtschaftliche Einsatzmöglichkeiten des <i>Jatropha curcas</i> Anbaus zur Rekultivierung in Madagaskar	2008-2011	14.272,00	35.747,00
ENBW	EnBW Regenwaldstiftung	2007-2012	11.894,00	14.157,00
DAAD	Fachbezogene Partnerschaften mit Hochschulen in Entwicklungsländern	2009-2012		23.380,00
DFG	SFB 564 Nachhaltige Landnutzung Südostasien		62.872,00	64.864,00

Source of funds	Project	Period	2008 in Euro	2009 in Euro
<b>Social and Institutional Change in Agricultural Development (490c) - Prof. Dr. Werner Doppler</b>				
DAAD	Aufbaustudiengang mit entwicklungsbezogener Thematik "Agricultural Economics and Related Sciences"	2008	31.560,00	32.280,00
DAAD	Durchführung eines deutschen Sprachkurses im Promotionsprogramm "Agrarökonomie"	2008	21.277,00	
Eiselen-Stiftung	Impact of water resources development and irrigation on rural livelihood - Case from Thailand-	2008	18.665,00	
<b>Land Use Economics in the Tropics and Subtropics (Josef G. Knoll Professorship) (490d) - Prof. Dr. Thomas Berger</b>				
IFPRI	Integrating Governance and Modeling/ Challenge Program on Water and Food	2005-2008	13.064,52	
IFPRI	Working together for market access: Strengthening rural producer organizations in Sub-Saharan Africa	2009-2012		9.992,00
DFG	Bewertung von Innovationen und Nachhaltigkeitsstrategien	2006-2012	84.755,00	111.254,00
DFG	Farm and land use modelling, TP P6	2008-2011	10.080,00	57.840,00
DFG	Model coupling and software engineering, TP P8	2008-2011	10.080,00	42.120,00
DAAD	Projektbezogener Personenaustausch mit Chile	2007-2008	4.405,00	
IDRC	Innovations and Sustainability Strategies in Upland Agriculture of Northern Vietnam	2008-2009	5.113,97	
Deutscher Bundestag	Bioenergie in Entwicklungsländern	2005-2008	2.735,75	2.572,63
BMBF	Deutsch-chinesisches Verbundprojekt über Jatropa	2007-2009	78.000,00	78.000,00
<b>Department of Agricultural Engineering (440)</b>				
<b>Agricultural Engineering in the Tropics and Subtropics (440e) - Prof. Dr. Joachim Müller</b>				
Nachhaltige Produktion von ABACA-Faser, Philippinen	DaimlerChrysler AG	2006-2008	23.800,00	
Optimierung von Trocknungsverfahren für Arznei- und Gewürzpflanzen	FNR OTRO AGP	2007-2010	69.715,50	50.407,00
Technische Weiterentwicklung des Pflanzenölkochers	BSH	2008-2010	35.900,00	35.900,00
Kosten-Nutzen-Analyse der Verwendung von Pflanzenöl aus	BSH-PÖ-Ki	2008	41.769,00	
Biogene Gase - Systemanalyse	MLR	2008-2011	10.000,00	34.657,00
Biogene Gase - Unterer Lindenhof	MLR	2008-2011	32.639,26	54.360,74
Ammoniakemissionen	MLR	2009-2012		57.000,00
Sustainable Partners Applicability of solar pumps for irrigation .....	Robert Bosch Stiftung	2009-2010		8.485,00

Source of funds	Project	Period	2008 in Euro	2009 in Euro
Precision Phenotyping for Improving Drought Stress Tolerant Maize	CIMMYT, Mexico	2009-2011		51.850,00
KV-Armutsbekämpfung Tillabéri und Tahoua Nord-Niger	GTZ	2009		8.070,00
Bewässerungsmanagement im Gemüsebau	Behr AG	2009-2011		10.560,00
AgroHort Gewächshausprojekt	Rheinische Friedrich-Wilhelms-Uni.Bonn	2009-2011	-	25.000,00
Jatropha	BMBF	2007-2009	138.767,00	80.968,00
IRTG TP 2.4	DFG	2008 - 2013	1.103,00	50.450,00
SFB 564/2 E1.2	DFG	2006-2009	81.153,00	65.319,00
SFB 564/2 B3.2	DFG	2006-2009	44.000,00	22.000,00
SFB 564 Transferprojekt T1	DFG	2009-2012	-	42.982,00
SFB 564 Transferprojekt T2	DFG	2009-2012	-	45.949,00



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