Progress in Biogas III
Biogas production from agricultural biomass and organic residues

Conference Programme

International Conference
with exhibition and field trip
10 - 11 September 2014, Stuttgart, Germany
Field trip: 12 September 2014
Venue: Haus der Wirtschaft - Stuttgart
additional: International Study Tour
15 - 18 September 2014, Germany

Organisers
IBBK
UNIVERSITÄT HOHENHEIM

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Am Feuersee 6
74592 Kirchberg / Jagst, Germany
Web: www.progress-in-biogas.com
PRELIMINARY PROGRAMME

FIRST DAY - SEPTEMBER 10, 2014

Registration (Foyer König-Karl-Halle 08:00 – 09:00)

Welcome (König-Karl-Halle 09:00 – 09:30)

Prof. Dabbert, Rector University of Hohenheim and Mr Max Reger, Ministerium für Ländlichen Raum und Verbraucherschutz Baden-Württemberg

Keynote speeches (König-Karl-Halle 09:30 – 11:00)

Biogas developments in Europe, challenges and future prospects - High performing biogas plants with low cost feedstock, Jens Bo Holm-Nielsen, Denmark

Bio-methane as fuel for cars and buses in Sweden, Prof. Mohammad Taherzadeh, Sweden

Coffee break – Poster session, exhibition (List-Saal 11:00 – 11:30)

Session 1 – Domestic biogas plants

Thermal simulation of a compact urban domestic biodigester, Claudia Pabón, Ph.D., Chile

Potential of residual gas from biogas plants, Dr. Hans Oechsner, Germany

Design of cylindrical fixed dome bio digester in the condominium houses for cooking purpose at Dibiza Site, East Gojam, Ethiopia, Molla Asmare, Ethiopia

Mesophilic anaerobic co-digestion of cow manure and biogas crops in full scale German biogas plants: A model for calculating the effect of hydraulic retention time and VS crop proportion in the mixture on methane yield from digester and from digestate storage at different temperatures, Ivo Mula, Germany

Harnessing biogas from human excreta for cooking meals in a rural boarding school in Malaysia, James Dawos Mamit, Ph.D., Malaysia

Examination to optimize a method to quantify methane emission rates at biogas plants using TDLAS data, Angela Groth, Germany

Lunch – Poster session, exhibition (List-Saal 12:45 – 14:15)

Session 1 – Domestic biogas plants

Ferrocement , a constructive alternative, Lucas Gallo Mendoza, Argentina

Biocatalytic methanation of hydrogen and carbon dioxide according to the Power to Gas Strategy, Dr. Marko Burkhardt, Germany

What could China give to and take from other countries for development of biogas industry? Lessons learned from each other, Shikun Cheng, China

Two-phase pressurized anaerobic digestion: an innovative system for biogas production, purification and upgrading, Dr. Andreas Lemmer, Germany

Implementation approaches for domestic biogas in Mexico, its development implications and GHG mitigation potential, Manuela Pino, Chile

Chemical oxygen demand balances of pressurized anaerobic filters and the origin of COD in process liquids, Johannes Krümpel, Germany

Appropriate biogas technology in Africa – Practical examples, Dr. Thomas Krimmel, Zambia

Microbial fuel cell deployment for secondary treatment from anaerobic digestion effluent in Costa Rica, Stephanie Lansing, Ph.D., USA

Coffee break – Poster session, exhibition (List-Saal 15:50 – 16:20)

Session 4 - Innovative fermentation and digester construction methods

Filtration of anaerobic filter effluent, Dr. Simon Zielonka, Germany

Two phase biogas reactor for fast methanification of manure, Prof. Herrl Schön, Germany

Intelligent thermal energy management using a novel multi-chamber biogas reactor – a prototype, Michael Müller, Germany

Anaerobic digestion of food waste through the operation of a mesophilic two-phase pilot scale digester, Stefan Grinberg, Ph.D., USA

Process control of agricultural biogas plants in practice, Dr. Markus Schlättermann, Germany

Monitoring of gas parameters to control feeding cycles, Manuela Charatjan, Germany

Integration of Biomethane in sustainable mobility solution 2.0, Michael Krautsack, Austria

Influence of waste composition on the maximum possible throughput – results of the long term monitoring of a waste fermentation plant, Andreas Kolmair, Germany

Posters exhibition (König-Karl-Halle & List-Saal 18:00 – 19:00)

Evening reception (Eyth-Saal 19:00)

(Programme may be subject to change)

Stand as of July 22th 2014
<table>
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<tr>
<th>Session 5 – Pretreatment technologies</th>
<th>Session 6 – Digestate application and management</th>
<th>Session 7 – Process inhibition</th>
<th>List–Saal</th>
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<tr>
<td>Effects of enzyme addition on rheological properties of digester content, Karola Elsborg, Germany</td>
<td>Fertilising potential of separated biogas digestates applied to annual and perennial biomass production systems, Andrea Ehrmann, Germany</td>
<td>Microscopic digital image analysis of a farm-scale thermophilic biogas plant for early detection of ammonia inhibition effects, Yang Sung Kim, Germany</td>
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<tr>
<td>Full-scale investigations of the use of lignocellulosic materials for anaerobic digestion, Matthias Mönch-Tegeder, Germany</td>
<td>Creating value addition for anaerobic digestion by cultivating mushroom (Pleurotus spp.) in combination with agro-residues, Sreeasha Malyali, India</td>
<td>Monofunctionalisation of high solids chicken manure by ammonia removal, Dr. Fabian Jacobi, Germany</td>
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<tr>
<td>Examining the effects of crop maturity and size reduction on digestibility of energy crop for biomethane production, Prof. Samir Khanal, USA</td>
<td>Investigations on fertilizer production from digestate in a two stage vacuum-vaporizer, Stephan Rule, Germany</td>
<td>Biogas from protein-rich industrial waste and associated metagenomic changes, Prof. Kornel Kovacs, Hungary</td>
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<tr>
<td>Enhancement of biogas production from laying hen manure via sonolysis as pretreatment, Prof. Nuri Azbar, Turkey</td>
<td>Waste heat from biogas plants: experiences from 10 feasibility studies in Germany, Dominik Rutz, Germany</td>
<td>Anaerobic digestion of chicken manure for the production of ammonium carbonate, Christian Strutz, Germany</td>
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<tr>
<td>Pretreatment of lignocellulose biomass for improvement in the production of biogas, Prof. Ashok Pandey, India</td>
<td>Methane emissions from biogas plants under operation, Dr. Joachim Clemens, Germany</td>
<td>Sources and extent of process inhibition in biogas production, Dr. Bettina Frauz, Germany</td>
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Coffee break – Poster session, exhibition (List-Saal 10:25 – 10:50)

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<tr>
<th>Session 8 – Biogas generation from industrial, communal and municipal biowaste</th>
<th>Session 9 – Agricultural biogas plants</th>
<th>Practitioners forum</th>
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<tr>
<td>Biogas generation from biowaste – status quo and development, Nadja Rensberg, Germany</td>
<td>Biogas from farm waste ponds in temperate climates – studies and examples from New Zealand, Stephan Heubeck, New Zealand</td>
<td>Agricultural biogas plants, Thomas Dory, Germany</td>
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<tr>
<td>Anaerobic digestion of salty cheese whey and permeate in a two-stage system, Mikel olive, Spain</td>
<td>Production of renewable energy by biogas in Italy. Current situation and future developments, Alessandro Ragazzoni, Italy</td>
<td>Liquid feeding in biogas plants, Peter Nemeth, Germany</td>
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<tr>
<td>Co-digestion of waste from biodiesel process mixed with tropical starch wastewater in hybrid bioreactor, Chaiwemch Rangchanikom, Thailand</td>
<td>Biogas from cover crops – energy yield, EROEI and economic feasibility, Dr. Manfred Szerencsits, Austria</td>
<td>DinaMETAN the software for optimizing feeding and profitability of biogas power plants, Bettina Müller, Germany</td>
</tr>
<tr>
<td>Biochemical methane potential of agro-food wastes from the Castilla and León Region (Spain), Jesús Martín, Spain</td>
<td>Co-digestion of grass slage and dairy cattle slurry at laboratory and farm scale in Northern Ireland, Dr. James Browne, United Kingdom</td>
<td>The dynamic calculation of biogas yield (DYBE) – a new calculation tool for the heterogeneous substrate mixture, Dietrich Prenger Bernhohff, Germany</td>
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Lunch – Poster session, exhibition (List-Saal 12:25 – 13:50)

<table>
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<tr>
<th>Session 8 – Biogas generation from industrial, communal and municipal biowaste</th>
<th>Session 10 – Flexibility of biogas production and use</th>
<th>Session 11 – Study case China</th>
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<tr>
<td>Decentralised process for biogas production from fruit and vegetable waste, Dr. Ursula Schließmann, Germany</td>
<td>Efficiency of the hydrolysis in a two-stage biogas concept with biogas production on demand (ReBi-concept), Kirsten Loewe, Germany</td>
<td>Optimization of Biomass Utilization in China, Dr. Andrea Schüch, Germany</td>
</tr>
<tr>
<td>Extraction of soluble substances from organic solid municipal waste to increase methane production, Rosalinda Campuzano, Mexico</td>
<td>Flexible biogas plants for future energy systems – requirements and potentials with special reference to the biogas plants in Baden-Württemberg, Benjamin Fleischer, Germany</td>
<td>Biogas from fibrous residual biomass, coeval research and technological development in China and Germany, impact on the current China Clean Stove Initiative, Andreas Krieg, Germany</td>
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<tr>
<td>Biogas generation from industrial, communal and municipal, bio-waste, Dr. Chithral Ambawatte, Sri Lanka</td>
<td>Flexible biogas production for flexible energy supply, Eric Mauky, Germany</td>
<td>Thermophilic anaerobic co-digestion of spent coffee grounds and waste activated sludge using a submerged anaerobic membrane reactor, Wei Qiao, China</td>
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<tr>
<td>Research on methane fermentation efficiency from food waste as alternative substrates for biogas plant, Andrzej Lewicki, Poland</td>
<td>Small scale biogas upgrading plant for use as vehicle fuel, Uld Oester, Germany</td>
<td>Performance and kinetics evaluation of a completely stirred anaerobic reactor treating food waste: Role of trace elements, Shubiao Wu, China</td>
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Coffee break – Poster session, exhibition (List-Saal 15:25 – 15:50)

<table>
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<tr>
<th>Session 8 – Biogas generation from industrial, communal and municipal biowaste</th>
<th>Session 12 – Technical economical and social cooperative structures of decentralized small scale biogas systems</th>
<th>Practitioners forum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biogas production using livestock manure and tallow wastewater: Case studies from Australia, Bernadette McCabe, Australia</td>
<td>Financing biogas projects in the European Union: A new paradigm, Dr. Patrick Dorvil, Luxemboug</td>
<td>Development of new biogas feedstock options based on agricultural residues: Example of a biomethane plant of Badenova in Baden-Württemberg, Germany, Dr. Robert Greb, Germany</td>
</tr>
<tr>
<td>Analysis of meso/thermo AD process applied to food and biowaste during transient/stressed conditions and co-digestion with waste active sludge, Federico Miccoli, Italy</td>
<td>Entering new biogas markets in developing and emerging countries / Partnering and financing options of the German Development Cooperation, Oliver Gehrike, Germany</td>
<td></td>
</tr>
<tr>
<td>Decentralised combination of pig slurry, fruit wastes and wasted sardine oil for biogas production – results of a pilot experiment in Portugal, Luis Ferreira, Portugal</td>
<td>&quot;Biogas is not a symbol of poverty, but an alternative fuel that nature provides us&quot; - from small farm digesters to waste treatment facilities, Heinz-Peter Mang, China</td>
<td></td>
</tr>
<tr>
<td>Degradation of pharmaceuticals from wastewater by using anaerobic digestion technologies – first characterizations and treatment performances, Tobias Watzel, Germany</td>
<td>Flexible biogas kit for feacial sludge treatment in desaster relief, Katrin Kayser, Germany</td>
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Closing session (17:25 – 18:00)

End of the conference (18:00)
Tailor-made household biogas system – a smart answer to multi-faceted challenges, Elisabeth Maria Huba-Mang, Lesotho

ORAL-POSTER

Opti-VFA: Novel monitoring and process control system for efficient production of VFA and biogas in anaerobic digesters, Ian Irizar, Spain

Stable anaerobic fermentation of slaughterhouse waste with biofilm carriers under high ammonia levels, Daniel Schnopp, Germany

Effect of ensiling on biochemical methane potential (BMP) and physicochemical characteristics of sugar beet root pulp for biogas production, Ali Heidarzadeh, Denmark

New approach of hydrogen production from lignocellulosic biomass, Sonja Wiespickl, Germany

Foam formation and suppression in biogas plants, Dr. Lucie Moeller, Germany

Digestion of bio-waste – GHG emissions and mitigation potential, Jaqueline Daniel-Gromke, Germany

Factors affecting dissemination of domestic biogas in developing countries, Wilington Ortiz, Germany

Start-up and process characteristics of a farm-scale biogas plant for cow manure with a HRT of 12 days and an OLR of 14 kg/m3/d under elevated thermophilic conditions, Prof. Dr. Paul Scherer, Germany

Effects of mechanical treatment of digestate from anaerobic digestion on the degree of degradation, Jonas Lindner, Germany

Physicochemical parameters of the methane fermentation process of Beta vulgaris L. Monosubstrate, Anna Kanwowska, Poland

A methodology to optimize methane production in co-digestion plants, Myriam Estevez Gutierrez, Spain

Prospects and opportunities for biogas & autogas driven vehicles, Christian Jenne, Germany

Sanitation of cow manure by an intensified thermophilic biogas process, Dr. Sandra Off, Germany

Integration of a Microbial Fuel Cell in a Two-Phase Anaerobic Digestion System, Johanny Perez Sierra, Germany

POSTER

Application potential of novel high performance glycosidases from the filamentous fungus Penicillium janthinellum V39 in the biorefinery field, Judith Harssanyi, Germany

Material use of digestate from biogas plants for application as a soil conditioner, Heike Bischof, Germany

Investigation and determination of the essential parameters in a two-phase anaerobic digestion process, Mandy Schönberg, Germany

Assessment of the application of biogas technology as alternative energy source in Limpopo province, Vhutshilo Nekhubvi, South Africa

Methane production of forest residues using organosolv pretreatment, Maryam Kabir, Sweden

From the biogas to vehicle fuel. Study of CO2 absorption in a packed column, Joaquin Angel Reina Hernandez, Spain

Feasibility of generation electricity at station urban sewage treatment: A case study, Paulo Irineu Koltermann, Brazil

Biogas generation capacity from a stratified forrow-to-wean production unit and solid separation influence on methane yield, Airon Kunz, Brazil

Symbiosis: Anaerobic digestion and hydrothermal carbonization (HTC)?, Dominik Wüst, Germany

Impact of substrates interactions on biogas production and methanogenic community during semi-continuous co-digestion of slaughterhouse waste, Jhosané Pagés Díaz, Sweden

Integration of crop residues as alternative co-substrate to Danish biogas plants: Influence of ensilage, Jni Tinola, Denmark

Modeling and simulation of biogas plants for representation of important specific parameters and biogas production, Karen Fronk, Germany

Kinetic characterization of the growth and carbon dioxide fixation of an alkaliphilic microalgae consortia for deployment on the biogas enrichment, Armando Gonzalez Sanchez, Mexico

Gobi - General optimization of biogas processes, Dr. Klaus Meissner, Germany

Characterization of different recycled digestate products from biogas production with specific regard to its influence on plant-soil processes to design customized fertilizers, Inga-Marieke Bach, Germany

General optimization of biogas processes, Nicola Haag, Germany

Effects of nitrogen fertilization and strip cultivation with legumes on methane yield and sustainability of maize and amaranth, Moritz von Cossel, Germany

General optimization of biogas processes, Christian Grumaz, Germany

Nutrient recovery from digestate within the GoBi project, Alejandra Campos, Germany

Influence of trace substances on methanation catalysts in dynamic biogas upgrading, Lars Jürgensen, Germany

Potentials of flexible biogas storage and utilization of important specific parameters and biogas production, Lars Jürgensen, Germany

High pressure anaerobic digestion up to 180 bar: The effects on biogas production and upgrading, Wolfgang Merkle, Germany

Energetic utilization of horse manure, Saskia Oldenburg, Germany

The quality of Miscanthus biomass as biogas substrate under the influence of different cutting regimes, Andreas Kiesel, Germany

The influence of spatial resolution in mathematical modelling of biogas plants, Johannes Schneider, Germany

Optimization of leachate percolation by using a reactive multiphase flow model in dry anaerobic batch digestion processes, Sébastien Pommier, France

The Potential of large scale biogas production from organic waste in urban areas of developing countries: A case study in Moshi, Tanzania, Dr. Andreas Lemmer, Germany

Process simulation of dynamic biogas upgrading using the Sabatier process – dynamic simulation with a special view on heat integration and utilization, Lars Jürgensen, Germany

Lignocellulosics wastes to biogas: Pretreatment and rapid digestion, Prof. Mohammad Taherzadeh, Sweden

Assessment of the effects of pre-treatment on the anaerobic digestion of abattoir effluent containing high levels of fat, oil and grease, Peter Harris, Australia

Alternative biogas purification media for farm installations, Stephan Heubeck, New Zealand

Up to date aspects of hygiene and microbiology in biogas plants and digested residue, Thorben Schilling, Germany

Estimation of the biogas production rate, a chemometrical approach, Tetyana Beltramo, Germany
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Terms of participation & Registration

The registration fee includes the simultaneous translation (German-English-German in the main session of the conference), the digital proceedings and an abstract booklet, soft drinks and coffee during the breaks as well as lunch on the respective conference day. During the field trips lunch will be organised, but it is not included in the fee.

Registration & Payment
For registration please send us the complete filled and signed registration form. The registration is legally binding. Each participant has to fill in his/her own registration form. You will receive the invoice by e-mail, which is considered as confirmation. The payment has to be done via bank transfer to the specified bank account in the invoice after receiving it. Participants will be debited with incurred bank charges.

Cancellations
Cancellations must be received in writing by mail or fax. For cancellations until 17.08.2014 a processing fee of EUR 80 plus VAT will be charged. For cancellations after 17.08.2014 the full participation fee will be charged. In default of appearance (even in case of illness) the full participation fee must be paid. Substitutions are welcome up to 48 hours prior to the event. If the organiser cancels the congress the full participation fee will be refunded. Further claims are excluded.

Travel and Accommodation
The costs of travel and accommodation are not included in the conference fee. Participants and speakers are requested to organize and finance their travel and accommodation themselves.

Visa
Please check if you require a visa to enter Germany. Upon request an invitation letter may be issued to accompany your visa application to attend the conference. The invitation letter will be sent after the participant has been registered and the registration fee has been received.

Personal data processing
The requested personal data will be used to compile the participant list distributed to the conference attendees. No data will be disclosed to anyone outside the conference.

Liability
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Day ticket (September 10) □ EUR 230*
Day ticket (September 11) □ EUR 230*
2-days ticket □ EUR 390*
Agricultural Field Trip ** (September 12) □ EUR 100*
Research Field Trip ** (September 12) □ EUR 100*
Evening reception (September 10) □ EUR 60*
FrBB member (20% discount) □

** Please be aware that the number of places available is limited to 1 bus per field trip. Therefore we recommend an early registration.

Registration is valid upon receipt of payment
Invitation letter for a VISA application, please contact as soon as possible Ms. Silke Volk <s.volk@biogas-zentrum.de>
With your signature you confirm that you accept the terms of participation for the International Conference Progress in Biogas III.

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Signature:

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