CIOSTA

CIGR V CONFERENCE 2011
EFFICIENT AND SAFE PRODUCTION PROCESSES IN SUSTAINABLE AGRICULTURE AND FORESTRY

FINAL PROGRAMME

29 June - 01 July 2011
Vienna - Austria

CIOSTA
Vienna - Austria
XXXIV CIOSTA  CIGR V Conference 2011

Efficient and safe production processes in sustainable agriculture and forestry

29 June – 01 July 2011
Vienna – Austria

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Scientific Committee
Agostini Stella (Italy)
Bartosik Ricardo (Argentina)
Bochtis Dyonisis (Denmark)
Bernhardt Heinz (Germany)
Berruto Remigio (Italy)
Giametta Gennaro (Italy)
Frisch Jürgen (Germany)
Juliszewski Tadeusz (Poland)
Handler Franz (Austria)
Hartung Eberhard (Germany)
Luoma Tarmo (Finland)
Maier Dirk (USA)
Nozdrovicky Ladislav (Slovak Rep.)
Piccarolo Pietro (Italy)
Schick Matthias (Switzerland)
Sørensen Claus Grøn (Denmark)
Savoie Philippe (Canada)
Smelik Victor (Russia)
Søren Pedersen (Denmark, CIGR President)
Takaaki Maekawa (Japan)
Tuure Veli-Matti (Finland)
Zazueta Fedro (USA)
Zimbalatti Giuseppe (Italy)

President
Boxberger Josef (Austria)

Coordinator
Quendler Elisabeth (Austria)

Organizing Committee
Kössler Katharina (Austria), Löffler Melanie (Austria)
Acknowledgements

The organizers of the XXXIV CIOSTA-CIGR V Conference express their appreciation for support given by:
General Information

Congress Locality
Division of Agricultural Engineering – University of Natural Resources and Life Sciences, Peter Jordan Straße 82, 1190 Wien, Austria

Public transport tickets for Vienna
You get in the Vienna Transport Authority’s ticket offices and at the ticket machines (underground).

Single Trip Ticket: € 1,80, € 2,20 in the means of transport: valid for one way
24hour Ticket: € 5,70: valid for all ways within 2 days
72hour Ticket: € 13,60: valid for all ways within 3 days

Travelling from Schwechat airport to conference location
Take the Airport bus from the airport to the Westbahnhof. Transfer onto the U6 subway (in the direction of Floridsdorf) to the stop “Waehringerstrasse/Volksoper.” Take the 40A bus (in the direction of Doeblinger Friedhof) to the bus stop „Borkowskigasse.“ You can reach the main entrance of the Schwackhoeferhaus by crossing the parking lot towards the glass building. The conference location is on the ground floor behind the stairway. The approximate time needed is 45 minutes.

Money
Currency in Austria is EURO (€).

Registration
The registration desk is located in the Cafeteria (ground floor) of the Schwackhöferhaus. All participants must check in at their arrival there.

Method of Payment
Paying of the registration fee can be carried out only in cash at the registration desk.

Official Language
Official language of the conference is English.
Proceedings
Papers are published in the proceedings of the conference.

Oral sessions
Only power-point presentations are allowed. Please, bring your presentation on a memory stick with you. The use of personal laptops is not allowed. Each oral presentation should not exceed 20 minutes including discussion time. Each presentation must be provided to the session chair during the break.

Posters
Posters should have the size of 84 cm x 119 cm (A0-format), please use the sample at the homepage (author instructions). Posters in the digital version can be send to ciosta.2011@boku.ac.at and the printing will be done at the Division of Agricultural Engineering.
Evenings - Locations

Evening 1 – public transport to s’Pfiff (of family Huber)
Participants are invited for a dinner in s’Pfiff of family Huber (Rathstrasse 4, 1190 Wien).

From Dänenstraße you take bus 10A (in the direction of Heiligenstadt) to the stop Gatterburggasse. There you change to the bus 35 A (in direction of Salmannsdorf at the same bus stop) to the stop Agnesgasse (required time: 16 minutes)

1: Bus 10 A: Dänenstrasse to Gatterburggasse
2. Bus 35 A: Gatterburggasse to Agnesgasse

Private Bus: 2 buses direct from Peter Jordan Strasse 82 (entrance of Exner house) to s’Pfiff at 18:30.
Evening 2 – public transport to Vienna city hall (Rathaus)
Participants are invited for a cocktail reception in the Vienna city hall (address: Rathausplatz: Entrance: Liechtenfelsgasse 2, Feststiege 1 (=stair 1)), Stadtsenatssitzungssaal from the mayor and governor of Vienna Dr. M. Häupl.

Public: From Dänenstraße you take bus 40A (in the direction of Schottentor) to the Schottentor. There you change to the underground U2 (in direction of Karlsplatz) to the stop Rathaus (required time: 21 minutes)

1: Bus 40A: Dänenstrasse to Schottentor U Hohenstaufengasse
2. U2: Schottentor to Rathaus
# Technical Tour (1/07/2011)

**Departure/Arrival:** Entrance of Exner House, Peter Jordan Straße 82, 1190 Wien

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>7:45am - 6:30pm</td>
<td>T: Technical Tour</td>
</tr>
<tr>
<td>8:00am</td>
<td>T1: 8:00: Departure at entrance of Exner House</td>
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<tr>
<td>10:00am - 11:00am</td>
<td>T2: Visit of Schweinezentrum Gießhübl</td>
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<tr>
<td>11:30am - 12:30pm</td>
<td>T3: Visit of BLT Wieselburg</td>
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<tr>
<td>12:30pm - 2:00pm</td>
<td>T4: Lunch at BLT Wieselburg</td>
</tr>
<tr>
<td>3:15pm - 4:15pm</td>
<td>T5: Visit of Stift Melk (abbey) and Wachau</td>
</tr>
<tr>
<td>5:30pm</td>
<td>T6: Arrival at airport Vienna (Schwechat)</td>
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<tr>
<td>6:30pm</td>
<td>T7: Arrival at BOKU</td>
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</tbody>
</table>
Map of Conference Place
Map of Conference Place

SCHWACKHÖFER HOUSE, GROUND FLOOR

EXNER HOUSE, GROUND FLOOR
Topics of Conference

1. Labour, ergonomics, safety and health
2. System engineering, management, traceability
3. Field operations
4. Livestock management
5. Processing, post-harvest technology, logistics
6. Renewable energy and efficiency
7. Information systems and precision farming
8. Open topics
### Overview Programme

**Wednesday, 29/06/2011 – Sessions**

<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Session</th>
<th>Session Chair</th>
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</thead>
<tbody>
<tr>
<td>8:30am - 6:00pm</td>
<td>SR 06</td>
<td>C1_SR06: Cafeteria</td>
<td></td>
</tr>
<tr>
<td>10:00am - 11:00am</td>
<td>EH 01</td>
<td>OP1: Opening Session</td>
<td>Josef Boxberger</td>
</tr>
<tr>
<td>11:00am - 12:00pm</td>
<td>EH 01</td>
<td>PL1: Key Speakers</td>
<td>Elisabeth Quendler</td>
</tr>
<tr>
<td>12:00pm - 1:20pm</td>
<td>SR 06</td>
<td>L1: Lunch 1</td>
<td></td>
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<tr>
<td>1:20pm - 3:20pm</td>
<td>EH 01</td>
<td>S1_01: Livestock management</td>
<td>Vladislav Borisovich Minin</td>
</tr>
<tr>
<td>1:20pm - 3:20pm</td>
<td>SR 04</td>
<td>S1_04: Renewable energy and efficiency</td>
<td>Franz Handler</td>
</tr>
<tr>
<td>1:20pm - 3:20pm</td>
<td>SR 07</td>
<td>S1_07: Renewable energy and efficiency / Labour,</td>
<td>Elisabeth Quendler</td>
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<tr>
<td></td>
<td></td>
<td>ergonomics, safety and health</td>
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<tr>
<td>1:20pm - 3:20pm</td>
<td>SR 08</td>
<td>S1_08: System engineering, management, traceability</td>
<td>Andreas Gronauer</td>
</tr>
<tr>
<td>1:20pm - 3:20pm</td>
<td>SR 09</td>
<td>S1_09: Labour, ergonomics, safety and health</td>
<td>Bernhard Haidn</td>
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<tr>
<td>Time</td>
<td>Session Description</td>
<td>Room</td>
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<tr>
<td>1:20pm - 3:20pm</td>
<td>S1_10: Labour, ergonomics, safety and health/Processing, post harvest technology, logistics</td>
<td>SR 10</td>
<td>Joachim Sauter</td>
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<tr>
<td>3:20pm - 4:00pm</td>
<td>B1: Coffee Break 1</td>
<td>SR 06</td>
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<tr>
<td>4:00pm - 6:00pm</td>
<td>S2_01: Livestock management</td>
<td>EH 01</td>
<td>Barbara Amon</td>
</tr>
<tr>
<td>4:00pm - 6:00pm</td>
<td>S2_04: Renewable energy and efficiency</td>
<td>SR 04</td>
<td>Picardo Bartosik</td>
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<tr>
<td>4:00pm - 6:00pm</td>
<td>S2_08: System engineering, management, traceability</td>
<td>SR 08</td>
<td>Andreas Gronauer</td>
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<tr>
<td>4:00pm - 6:00pm</td>
<td>S2_09: Labour, ergonomics, safety and health</td>
<td>SR 09</td>
<td>Remigio Berruto</td>
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<tr>
<td>4:00pm - 6:00pm</td>
<td>S2_10: Processing, post harvest technology, logistics</td>
<td>SR 10</td>
<td>Matthias Schick</td>
</tr>
<tr>
<td>6:00pm - 7:00pm</td>
<td>S7_09: CIGR Section Board V</td>
<td>SR 09</td>
<td>Claus Aage Gron Soerensen</td>
</tr>
<tr>
<td>7:15pm - 10:30pm</td>
<td>E1: Buffet at Heuriger (s’Pfiff in Neustift) - Rathstrasse 4, 1190 Wien</td>
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# Overview Programme

**Thursday, 30/06/2011 – Sessions**

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<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Session</th>
<th>Session Chair</th>
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<tbody>
<tr>
<td>7:45am - 6:00pm</td>
<td>SR 06</td>
<td>C2_SR06: Cafeteria</td>
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<tr>
<td>8:00am - 10:20am</td>
<td>EH 01</td>
<td>S3_01: Open topics</td>
<td>Katja Heitkämper</td>
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<tr>
<td>8:00am - 10:20am</td>
<td>SR 04</td>
<td>S3_04: Field operations</td>
<td>Georg Kormann</td>
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<tr>
<td>8:00am - 10:20am</td>
<td>SR 08</td>
<td>S3_08: Information systems and precision farming</td>
<td>Thiago Libório Romanelli</td>
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<tr>
<td>8:00am - 10:20am</td>
<td>SR 09</td>
<td>S3_09: Labour, ergonomics, safety and health</td>
<td>Matthias Schick</td>
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<tr>
<td>8:00am - 10:20am</td>
<td>SR 10</td>
<td>S3_10: Processing, post harvest technology, logistics</td>
<td>Herbert Weingartmann</td>
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<tr>
<td>10:20am - 11:00am</td>
<td>SR 06</td>
<td>B2: Coffee Break 2</td>
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<tr>
<td>11:00am - 1:00pm</td>
<td>EH 01</td>
<td>S4_01: Open topics</td>
<td>Thomas Amon</td>
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<tr>
<td>11:00am - 1:00pm</td>
<td>SR 04</td>
<td>S4_04: Field operations</td>
<td>Dionysis Bochtis</td>
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<tr>
<td>11:00am - 1:00pm</td>
<td>SR 08</td>
<td>S4_08: Information systems and precision farming</td>
<td>Claus Aage Gron Soerensen</td>
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<tr>
<td>11:00am - 1:00pm</td>
<td>SR 09</td>
<td>S4_09: Labour, ergonomics, safety and health</td>
<td>Tadeusz Juliszewski</td>
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<tr>
<td>11:00am - 1:00pm</td>
<td>SR 10</td>
<td>S4_10: Processing, post harvest technology, logistics</td>
<td>Veli-Matti Tuure</td>
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<td>Time</td>
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<tr>
<td>1:00pm - 2:20pm</td>
<td>Room SR 06</td>
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<td><strong>L2: Lunch 2</strong></td>
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<td>2:00pm - 4:00pm</td>
<td>Room EH01</td>
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<td></td>
<td><strong>S5_01: Open topics</strong></td>
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<td>Session Chair: <strong>Heinz Bernhardt</strong></td>
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<tr>
<td>2:00pm - 4:00pm</td>
<td>Room SR 04</td>
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<td><strong>S5_04: Field operations</strong></td>
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<td>Session Chair: <strong>Remigio Berruto</strong></td>
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<td>2:00pm - 4:00pm</td>
<td>Room SR 08</td>
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<td></td>
<td><strong>S5_08: Information systems and precision farming</strong></td>
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<td>Session Chair: <strong>Pietro Piccarolo</strong></td>
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<td>2:00pm - 4:00pm</td>
<td>Room SR 09</td>
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<td></td>
<td><strong>S5_09: Labour, ergonomics, safety and health</strong></td>
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<td>Session Chair: <strong>Ladislav Nozdrovicky</strong></td>
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<tr>
<td>2:00pm - 4:00pm</td>
<td>Room SR 10</td>
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<td></td>
<td><strong>S5_10: Processing, post harvest technology, logistics</strong></td>
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<td>Session Chair: <strong>Tarmo Luoma</strong></td>
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<tr>
<td>4:00pm - 4:40pm</td>
<td>Room SR 06</td>
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<td></td>
<td><strong>B3: Coffee Break 3</strong></td>
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<td>4:40pm - 5:40pm</td>
<td>Room <strong>Basement</strong></td>
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<td><strong>PO: Poster Session</strong></td>
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<td>Session Chair: <strong>Giuseppe Zimbalatti</strong></td>
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<td></td>
<td>Session Chair: <strong>Giampaolo Schillaci</strong></td>
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<td>5:40pm - 6:00pm</td>
<td>Room EH 01</td>
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<td><strong>FS1: Final Session</strong></td>
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<td>Session Chair: <strong>Andreas Gronauer</strong></td>
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<td>7:45pm - 10:30pm</td>
<td><strong>E2: Buffet at Vienner City Hall</strong> (entrance at Rathausplatz: 1010 Wien, Lichtenfelsgasse 2, Feststiege 1)</td>
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**Friday, 01/07/2011 Technical Tour: Departure/Arrival: Entrance of Exner House, Peter Jordan Strasse 82, 1190 Wien**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>7:45am - 6:30pm</td>
<td><strong>T: Technical Tour</strong></td>
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</tbody>
</table>
Oral Programme – Wednesday

ROOM_EH01: Opening Session
Wednesday, 29/06/2011: 10:00am - 11:00am

Session Chair: Josef Boxberger

OP1_EH01: 1: Vice Rector, University of Natural Resources and Life Sciences
Barbara Hinterstoisser, Austria

OP1_EH01: 2: Introduction
Elisabeth Quendler, CIOSTA Coordinator, CIGR V member, Austria

OP1_EH01: 3 CIOSTA and CIGR V past, present, future: challenges and opportunities
Pietro Piccarolo, Remigio Berruto, Claus A. G. Soerensen, CIGR V members, Italy, Denmark

ROOM_EH01: Key Speakers
Wednesday, 29/06/2011: 11:00am - 12:00pm

Session Chair: Elisabeth Quendler

PL1_EH01: 1 The role of human factor in ensuring the efficient production processes in sustainable agriculture
Ladislav Nozdrovicky, Miroslav Macak

PL1_EH01: 2 Role of human labour in relation to efficiency and effectiveness, with particular regard to small-scale farms
Matthias Schick

S1_Room EH01: Livestock management
Wednesday, 29/06/2011: 1:20pm - 3:20pm – 20 minutes/presentation

Session Chair: Vladislav Borisovich Minin

S1_EH01: 1 Emissions from animal husbandry in Austria: assessment and reporting
Barbara Amon, Michael Anderl, Nora Mitterböck, Alfred Pöllinger
S1_EH01: 2 Effects of different pig houses on indoor environmental parameters and growth performance of growing and finishing pigs
Anguo Chen, Xuping Wang, Guoqi Liang, Qihua Hong, Caimei Yang

S1_EH01: 3 Emissions of NH3 from swine slurry during and after acidification treatment: Effect of pH, mixing and aeration
Xiaorong Dai, Victoria Blanes-Vidal

S1_EH01: 4 Emission behaviour of open stables
Karl-Heinz Krause, Stefan Linke

S1_EH01: 5 Particulate matter in a fattening pig house in Beijing, China: First indoor and outdoor measurements
Roxana Mendoza Huaitalla, Eva Gallmann, Thomas Jungbluth, Xuejun Liu

S1_EH01: 6 Engineering Decisions of Environmental Problems in Intensive Animal Breeding
Vladislav Borisovich Minin, Vladimir Dmitry Popov, Dmitry Anatoly Maksimov, Alexander Iurivich Brukhanov

S1_Room SR04: Renewable energy and efficiency
Wednesday, 29/06/2011: 1:20pm - 3:20pm – 20 minutes/presentation

Session Chair: Franz Handler

S1_SR04: 1 Comparison of Ethanol Fuel Productivity of Some Selected Varieties of Tropical Crops
Babajide A. Adelekan

S1_SR04: 2 Innovative agronomic solutions to rescue marginal soil and to produce sustainable biodiesel
Davide Barnabè, Renzo Bucchi, Ada Rispoli, Gianni Carvoli, Claudia Bianchi, Daria Boffito, Carlo Pirola, Vittorio Ragaini, Andrea Rossi

S1_SR04: 3 Impact of new agriculture technologies for sugarcane production on the emissions of greenhouse gases
Paulo S. Graziano Magalhaes, Oscar A. Braunbeck, Henrique C.J. Franco

S1_SR04: 4 Compacting of herbaceous biomass particles for solid biofuel
Mareks Smits, Edgars Repsa, Eriks Kronbergs

S1_SR04: 5 Emission Behaviour of New Tractors with Different Vegetable Oils
Klaus Thuneke, Peter Emberger, Thomas Gassner, Edgar Remmele
S1_SR04: 6: Potential for biomass energy production in Friuli Venezia Giulia (Italy)
Rino Gubiani, Sirio Rossano Secondo Cividino, Daniele Dell'Antonia, Emiliano Maroncelli, Simona Rainis, Gianfranco Pergher

S1_Room SR07: Renewable energy and efficiency / Labour, ergonomics, safety and health
Wednesday, 29/06/2011: 1:20pm - 3:20pm – 20 minutes/presentation

Session Chair: Elisabeth Quendler

S1_SR07: 1: Air Heated Solar Collector for Room Heating
Guntis Ruskis, Aivars Aboltins, Janis Palabinskis

S1_SR07: 2: Rice Straw Fibres of Central and South America
Alfred Wong

S1_SR07: 3: Hand Forces Measured During Vine Shoot Cutting
D. Camillieri, E. Romano, R. Bonsignore, V. Rapisarda, G. Schillaci

S1_SR07: 4: WRMSDs Assessment in Greenhouse Nursery
G. Schillaci, L. Caruso, D. Balloni, D. Camillieri, E. Romano, V. Rapisarda

S1_SR07: 5: Perceived stress and measured forces in vineyard pruning
Elio Romano, Davide Camillieri, Roberta Bonsignore, Giampaolo Schillaci

S1_SR07: 6: Using ASTER and MODIS images to investigate the crop coefficient Kc in chestnut plants in southern Italy
A. Capra, F. Catona, P. Porto

S1_Room SR08: System engineering, management, traceability
Wednesday, 29/06/2011: 1:20pm - 3:20pm – 20 minutes/presentation

Session Chair: Andreas Gronauer

S1_SR08: 1: A ‘Living Lab’ research project for farm relief workers
Tarmo Luoma, Janne Karttunen, Markku Lätti, Tea Elstob

S1_SR08: 2: A farm configuration system for planning and monitoring farm activities
Fabrizio Mazzetto, Pasqualina Sacco

S1_SR08: 3: Item level radio frequency identification of cheese wheels
Cristina Tortia, Paolo Barge, Paolo Gay, Valentina Merlino, Pietro Piccarolo
S1_SR08: 4: Green-lean supply chains for improving sustainability, human development and competitiveness in Latin-American global food chains  
Fuentes-Pila, Joaquín, Zokaei Kelvan, Berruto Remigio, Busato Patrizia

S1_SR08: 5: The design of a pickup system for leafy green harvesters  
Akbar Arabhosseini, Hamed Mehravar, Mohammad Hossein Kianmehr, Hadi Samimi Akhijahani

S1_SR08: 6: Field evaluation on a towed multi-function row straddling machine for the cultivation of goblet vineyards  
G. Schillaci, L. Caruso, G. Manetto, R. Bonsignore, S. Balloni, E. Romano

S1_Room EH09: Labour, ergonomics, safety and health  
Wednesday, 29/06/2011: 1:20pm - 3:20pm – 20 minutes/presentation

Session Chair: Bernhard Haidn

S1_SR09: 1: Work Time Measurement by a Real-time Location System – Accuracy of the Positioning in a Farrowing Barn  
Stefanie Beyer, Bernhard Haidn

S1_SR09: 2: Welfare friendly housing in pigports for finishers  
Rudolf Wiedmann

S1_SR09: 3: Working time requirement in small ruminant husbandry  
Katja Heitkämper, Kerstin Mager, Matthias Schick

S1_SR09: 4: Determination of labour input on Bavarian dairy farms with four different organisation forms  
Juliana Mačuhová, Andrea Heinrich, Bernhard Haidn

S1_SR09: 5: Software for calculation of labour, energy consumed and costs of biomass production for energy purposes  
Tadeusz Juliszewski

S1_SR09: 6: Vibrations transmitted to the whole body during citrus cultivation  
Cerruto Emanuele, Emma Giuseppe, Manetto Giuseppe
S1_Room SR10: Labour, ergonomics, safety and health / Processing, post harvest technology, logistics
Wednesday, 29/06/2011: 1:20pm - 2:40pm – 20 minutes/presentation

Session Chair: Joachim Sauter

S1_SR10: 1: Analyzing the manual handling risk in the vine growing and wine production sectors: Michela Vello, Sirio R.S. Cividino, Rino Gubiani, Gianfranco Pergher, Emiliano Maroncelli

S1_SR10: 2: The manual handling risk in the forestry workers
Michela Vello, Sirio R.S. Cividino, Rino Gubiani, Gianfranco Pergher, Nicola Zucchiatti, Emiliano Maroncelli

S1_SR10: 3: An Historical Perspective of Operator Lifts Used on Self Propelled Agricultural Equipment
A.M. Yoder, G.R. Deboy, W.E. Field

S1_Room SR10: Labour, ergonomics, safety and health / Processing, post harvest technology, logistics
Wednesday, 29/06/2011: 2:40pm - 3:20pm – 20 minutes/presentation

Session Chair: Joachim Sauter

S1_SR10: 4: Nondestructive estimation of relative contents of chicken egg by machine vision and neural network techniques
Mohammad Hossein Raoufat, Vahid Asadi

S1_SR10: 5: Reconditioning of overly dried soybeans with aeration
Bartosik, Ricardo, de la Torre D., Cardoso, L., Urcola H.

S1_SR10: 6: Studies regarding the oak log quality for veneer provided for veneer enterprises in Romania
C. Morosanu, R. Derczeni, E. Iordache
**S2_Room EH01: Livestock management**  
**Wednesday, 29/06/2011: 4:00pm - 6:00pm – 20 minutes/presentation**

*Session Chair: Barbara Amon*

**S2_EH01: 1:** Simulation of temperature and humidity index for indoor microclimate of warehouse poultry located in the Brazil Northeast  
Ricardo Brauer Vigoderis, José Aldo Teixeira da Silva, Ilda de Fátima Ferreira Tinôco, Maria Clara de Carvalho Guimarães, Heliton Pandorfi, Jalmir Pinheiro de Souza Júnior, Mônica Calixto Ribeiro de Holanda

**S2_EH01: 2:** Analysis of enthalpy simulated values for indoor conditions in warehouse poultry placed in Brazil Northeast  
Ricardo Brauer Vigoderis, José Aldo Teixeira da Silva, Ilda de Fátima Ferreira Tinôco, Cristiane Guiseline Pandorfi, Heliton Pandorfi, Maria Clara de Carvalho Guimarães

**S2_EH01: 3:** Stress free technology for low and medium capacity pig farms of peasant and farm husbandries of Russia  
Kaljuga Vasily, Kara Ivan, Nikolaev Sergey, Bazykin Valentine, Stepakin Evgeniy, Trifanov Aleksey

**S2_EH01: 4:** Comparison of the procedure from a stationary and a mobile slide bar system for farm slurry removal on concrete solid floors  
Stefan Sagkob, Josef Niedermeier, Heinz Bernhardt

**S2_EH01: 5:** Heifer hotel - a new model for livestock management  
Tapani Kivinen

**S2_EH01: 6:** Performance of lactating buffaloes as affected by varying concentrations of essential amino acids  
Shahzad Muhammad Aasif

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**S2_Room SR04: Renewable energy and efficiency**  
**Wednesday, 29/06/2011: 4:00pm - 6:00pm – 20 minutes/presentation**

*Session Chair: Ricardo Bartosik*

**S2_SR04: 1:** Leveraging Renewable Small-Plot Pumping Energy with Drip Irrigation  
Jack Keller

**S2_SR04: 2:** Comparison of useful surface of different type of solar collectors  
Ivett Kocsány, Istvan Seres
S2_SR04: 3: The analysis of logging residues chain for a sustainable bioenergy production: a case study in Northern Italy
Sandro Sacchelli, Isabella De Meo, Alessandro Paletto

S2_SR04: 4: Implementation of Material Flow Management in Akdeniz University (Turkey)
Yaldiz Osman

S2_SR04: 5: Strategies to improve methane yields on agrarian fields under dry climatic conditions
Lyson Debora, Leonhartsberger Christian, Bauer Alexander, Amon Thomas

S2_SR04: 6: Thermodynamic analysis of a 10 kWp grid connected photovoltaic array system
Dani Rusirawan, István Farkas

S2_Room SR08: System engineering, management, traceability
Wednesday, 29/06/2011: 4:00pm - 6:00pm – 20 minutes/presentation

Session Chair: Andreas Gronauer

S2_SR08: 1: Climate Change Adaptation and Mitigation Options through Strengthening Forest Management in Bangladesh
Shahriar Rahman

S2_SR08: 2: A new prototype machine to investigate on the malaxing phase
Alessandro Leone, Paolo Amirante, Antonia Tamborrino

S2_SR08: 3: Prototype of storage system for preservation of extra-virgin olive oil characteristics
Alessandro Leone, Roberto Romaniello, Antonia Tamborrino, Giorgio Peri

S2_SR08: 4: Algorithms to interpret the continuous measurement of slurry level in storage tanks
Fabrizio Mazzetto, Pasqualina Sacco, Aldo Calcante

S2_SR08: 5: Development and Laboratory Evaluation of a Roller Mechanism for Sugar Cane Residue Harvesting
Jalil Razavi, Mohsen Hajheidary

S2_SR08: 6: Assessment of the yield and quality of olive oil obtained with two different crushing systems
Leone Alessandro, Tamborrino Rosanna, Zagaria Riccardo, Tamborrino Antonia
Session Chair: Remigio Berruto

S2_SR09: 1: Work Analysis Methods Comparing Working Methods and the Total Agricultural System
Matthias Schick

S2_SR09: 2: Working time requirement for the management of semi-natural habitats
Thomas Stehle

S2_SR09: 3: Reduction of the labour input by a livestock tracking system on alpine farms with young cattle
Stefan Thurner, Georg Neumaier, Patrick Ole Noack, Georg Wendl

S2_SR09: 4: Physical work load during driving agricultural vehicles
Veli-Matti Tuure, Markku Lätti

S2_SR09: 5: Evaluation of the safety volume to protect the driver during the rollover of small agricultural vehicles
Valda Rondelli, Enrico Capacci

S2_SR09: 6: Rules for safety in the equestrian sector
A. Checchi, S. Casazza

Session Chair: Matthias Schick

S2_SR10: 1: New concepts for grain logistic-organizational chains from the field to the agricultural trade
Heinz Bernhardt, Dirk Engelhardt

S2_SR10: 2: Quality on bean seeds under different storage conditions
Naimara Vieira do Prado, Vanderléia Schoeninger, Pétterson Vinícius Pramiu, Silvia Renata Machado Coelho

S2_SR10: 3: Summary of Over 800 Grain Storage and Handling-related Entrapments and Suffocations Documented in the U.S. and Canada between 1970 and 2010
S.M. Riedel, W.E. Field
S2_SR10: 4: Comparison of five measurement methods to determine the density of grass silage  
Latsch Roy, Sauter Joachim

S2_SR10:5: Separation whole raisin berries by physical and aerodynamic properties  
Arabhosseini Akbar, Karimi Navab, Kianmehr Mohammad Hossein, Khazaei Javad

S2_SR10:6: Modeling Key Logistics Processes in Agri-food Supply Chain  
Dimitris Folinas

S7_Room SR09: CIGR Section Board V  
Wednesday, 29/06/2011: 6:00pm - 7:00pm

S7_SR09: 1: CIGR Section Board V Meeting  
Claus Aage Gron Soerensen
Oral Programme – Thursday

S3_Room EH01: Open Topics
Thursday, 30/06/2011: 8:00am - 10:20am – 20 minutes/presentation

Session Chair: Katja Heitkämper

S3_EH01: 1: Environmental design for sustainable development and management with the use of modern digital methods in forest areas
Vasileios Drosos, Apostolos Kantartzis

S3_EH01: 2: Contemporary irrigation requirements of maize (grain), grown on chernozems in Bulgaria
Veska Georgieva, Milena Moteva, Valentin Kazandjiev

S3_EH01: 3: Effect of different herbicides applied in Eleusine indica under water stress
Maria Renata Rocha Pereira, Guileherme Sasso F. Souza, Dagoberto Martins, Antônio Evaldo Klar, André Luiz Melhorança Filho

S3_EH01: 4: SALVERE – Semi natural grassland as a source of biodiversity improvement – a Central Europe Project
Petra Haslgrübler, Bernhard Krautzer, Wilhelm Graiss

S3_EH01: 5: Environmental comparison by means of LCA of construction and management of Mediterranean Urban Parks
Giovanni Russo, Alessandra Grassi

S3_EH01: 6: Struvite precipitation from anaerobic co-digestion residues of poultry manure and maize silage
Yilmazel Y. D., Goksel N. Demirer

S3_EH01: 7: Energy use pattern of some tuber plants cultivation over Turkey
C. Ertekin, M. Canakci, R. Kulcu, O. Yaldız

S3_Room SR04: Field operations
Thursday, 30/06/2011: 8:00am - 10:20am – 20 minutes/presentation

Session Chair: Georg Kormann

S3_SR04: 1: Machinery efficiency effects in the energy performance of an orange production system
Nelson Cerino Franco Junior, Thiago Libório Romanelli, Marcos Milan
S3_SR04: 2: Implementation of industrial scheduling approaches in the collection of crop-residues for bioenergy production
Panagiotis Ntogkoulis, Dionysis Bochtis, Theofanis Gemtos

S3_SR04: 3: Fuel consumption, CO2-emission and energy efficiency in soil tillage systems in Austria
Markus Schüller, Gerhard Moitzi, Herbert Weingartmann, Peter Liebhard

S3_SR04: 4: The analysis of water-table variation using GDZ RoDrain application for some areas affected by humidity excess from western Romania
Rares Halbac-Cotoara-Zamfir, Ioana-Alina Costescu

S3_SR04: 5: Path planning for unloading task of autonomous head-feeding combine
Ryohei Masuda, Naoya Tokunaga, Michihisa Iida, Masahiko Suguri

S3_SR04: 6: Work economical analysis of the harvest of miscanthus
Franz Handler, Emil Blumauer

S3_SR04: 7: Field traffic planning for reduced soil compaction
D.D. Bochtis, C.G. Sørensen, O. Green

S3_Room SR08: Information systems and precision farming
Thursday, 30/06/2011: 8:00am - 10:20am – 20 minutes/presentation

Session Chair: Thiago Libório Romanelli

S3_SR08: 1: Green lean approach for improving sustainability and economic performance of vegetable supply-chain: the ZEROEMISSION case.
Remigio Berruto, Patrizia Busato, Keivan Zokaei, Joaquim Fuentes-Pila

S3_SR08: 2: Achieving a landscape for the rearrangement of a parcel situated on a river bank from the west side of Romania
Luminita Livia Barliba, Cosmin Popescu, Gabriel Eles, Costel Barliba

S3_SR08: 3: Integrated management – for farmers, advisors, vertical and horizontal chain partners
Walter H. Mayer

S3_SR08: 4: Tractor-based RTK-GPS system for geospatial mapping of tomato transplants
Manuel Pérez Ruiz, David Slaughter, Chris Gliever, Shrini Upadhyaya
Improving water emission uniformity using different spacings between drippers in the lateral line
João Carlos Cury Saad, Luiz Antonio de Andrade

Micro Irrigation Design Software to Evaluate Technical and Economical Aspects of MIS
A. A. Ghaemi, A. Tabarzad

Fitness for use of ISOBUS network in safety critical functions
Ronkainen Ari Kalervo

S3_Room SR09: Labour, ergonomics, safety and health
Thursday, 30/06/2011: 8:00am - 10:20am – 20 minutes/presentation

Session Chair: Matthias Schick

A mathematical model of a rear suspension system for an agricultural tractor and sensitivity analysis for driver comfort optimization
Maurizio Cutini, Carlo Bisaglia, Simone A M Bertinotti

The potential of quarter individual milking to reduce the work load
Sandra Rose-Meierhöfer, Martina Jakob, Falk Liebers, Sylvia Behrendt

Noise Level of Two Types of Tractor and Health Effect on Drivers
Mehrzad Payandeh, Mansoor Behroozilar, Zahra Khodarahmpour, Jahangir Bagheri

Power installations audit for the purpose of providing with minimization of the harmful substances emission
Tamara Yurievna Salova, Elisaveta Anatoliievna Gromova

Data for Analysis of Accidents with Machinery and Devices in Agriculture
Elisabeth Quendler, Veronika Helfensdoerfer, Josef Boxberger

Anthropometric Compatibility of Driver's Post on Agricultural Tractor Cabs: a Survey on Medium-High Power Tractors
Cecchini Massimo, Monarca Danilo, Bedini Roberto, Merlo David

Safety in the use of portable olive harvesters
Aiello G., Catania P., La Scalia G., Vallone M.
**S3_Room SR10: Processing, post harvest technology, logistics**

**Thursday, 30/06/2011: 8:00am - 10:20am – 20 minutes/presentation**

*Session Chair: Herbert Weingartmann*

S3_SR10: 1: *Mathematical modelling of oxygen and carbon dioxide concentration profiles in the interstitial atmosphere of silo-bags*

**Analía Gastón, Rita Abalone**

S3_SR10: 2: *Rapid-method for rotten parts detection in citrus fruits using machine vision and ultraviolet fluorescence*

**Gennaro Giametta, Paolo Demetrio Falzea**

S3_SR10: 3: *Determining Shear Strength and Energy of Saffron Stalk as Affected by Bevel Angles and Cutting Rates*

**Seyed Reza Hassan-Beygi, Mohammad Hossein Kianmehr, Hadi Vale Ghozhdi**

S3_SR10: 4: *Residual Effect of Some Herbicides on Germination and Growth of Wheat*

**Fathi Abdulkareem Omer, Ahmed Salih Khalaf, Nahla Mohammed Salim**

S3_SR10: 5: *Drying popcorn with a natural air/low temperature in-bin drying system*

**D. de la Torre, R. Bartosik, J. Rodriguez**

S3_SR10: 6: *Mathematical Modelling of Thin Layer Drying of Saffron (Crocus Sativus L.)*

**Seyed Reza Hassan-Beygi, Mohammad Hossein Kianmehr**

S3_SR10: 7: *Analysis of citrus peel for non-destructive determination of fruit composition by reflectance Vis/NIR spectroscopy*

**Jamshidi Bahareh, Minaei Saeed, Mohajerani Ezedin, Ghassemian Hassan**

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**S4_Room EH01: Open Topics**

**Thursday, 30/06/2011: 11:00am - 1:00pm – 20 minutes/presentation**

*Session Chair: Thomas Amon*

S4_EH01: 1: *Optimization of Environmental Factors in Plant Factory*

**Hiroshi Shimizu, Yuta Saito, Hiroshi Nakashima, Juro Miyasaka, Katsuaki Ohdoi**

S4_EH01: 2: *Effectiveness of halophytes as alternative strategies for tackling the soil salinity problem*

**Medhat Mekhail Tawfik**
S4_EH01: 3: **Sustainable farm building design: focus on landscape integration based on historic consistency**
Daniele Torreggiani, Enrica Dall'Ara, Stefano Benni, Patrizia Tassinari

S4_EH01: 4: **Proposing Growing Guideline Using Methane Fermentation Digested Sludge as a Liquid Fertilizer for Rice Production**
Jun Nakada

S4_EH01: 5: **American cranberry cultivation for the after-use of extracted raised bogs in Latvia: agrochemical prerequisites and ecological aspects**
Anita Osvalde, Andis Karlsons, Vilnis Nollendorfs

S4_EH01: 6: **Experimental validation of a mathematical model for the estimation of energy requirements in infrared heated greenhouses**
A. Kavga, G. Alexopoulos, V. Bontozoglou, Th. Panidis

S4 Room SR04: Field operations
Thursday, 30/06/2011: 11:00am - 1:00pm – 20 minutes/presentation

*Session Chair: Dionysis Bochtis*

S4_SR04: 1: **Harvesting residual corn stover for animal bedding**
Pierre-Luc Lizotte, Philippe Savoie

S4_SR04: 2: **Precision enclosing of a harvesting aid tool about a spined fruit**
Hipolito Ortiz-Laurel, Dietmar Rössel-Kipping

S4_SR04: 3: **Study on a crawler type vehicle for operating in deep water paddy rice field planted with water dropwort**
Hyeonjong Jun, Taegyoung Kang, Chaesik Lee, Choungkeun Lee, Duckkyu Choi, Yong Choi

S4_SR04: 4: **Clearing and valuing natural woody crops with a bio-baler**
François-Simon Robert, Pierre Luc Hébert, Philippe Savoie

S4_SR04: 5: **Technology used in application control of Leptopharsa heveae in rubber tree**
Henrique Borges Neves Campos, Lilian Lúcia Costa, Gustavo N. Romani, Marcelo da Costa Ferreira

S4_SR04: 6: **Damage to the residual stand due to animal and tractor yarding**
Eugen Iordache, Derczeni Rudolf, Bogdan Iancu, Cristian Valu
**S4_Room SR08: Information systems and precision farming**  
Thursday, 30/06/2011: 11:00am - 1:00pm – 20 minutes/presentation

*Session Chair: Claus Aage Gron Soerensen*

S4_SR08: 1: **A Modular Sensor Fusion Approach for Agricultural Machines**  
Sebastian Blank, Georg Kormann, Karsten Berns

S4_SR08: 2: **Use of biospeckle laser to evaluate water behavior at Coffee leaves**  
Juliana Vilela Lourenço, Roberto Alves Braga Júnior, Mauricio Pinheiro Machado, Luis Antônio Lima, Giovanni Francisco Rabelo, Rafael Oliveira Farí

S4_SR08: 3: **Evaluation of Seeds Trajectories in a Pneumatic Dosage System**  
Gastón Bourges, Gustavo Nardón, Mabel Medina

S4_SR08: 4: **Development and first tests of a system for the automatic identification of operating machines based on RF technology**  
Aldo Calcante, Fabrizio Mazzetto

S4_SR08: 5: **Optical device evaluation for early diagnosis in vineyard**  
Aldo Calcante, Aira Mena, Fabrizio Mazzetto

A.R. Shafizadeh, Abbas Hemmat, J. Ghaisari, H. Shariatmadari

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**S4_Room SR09: Labour, ergonomics, safety and health**  
Thursday, 30/06/2011: 11:00am - 1:00pm – 20 minutes/presentation

*Session Chair: Tadeusz Juliszewski*

S4_SR09: 1: **Bird or manager - Who is liable on dust and ammonia in layers stables?**  
Tatjana Winter

S4_SR09: 2: **Safety of Tractor PTO Drive Shafts: Survey on Maintenance on a Sample of Farms in Central Italy**  
Massimo Cecchini, Danilo Monarca, Paolo Biondi, Giuseppina Menghini, Andrea Brenciaglia, Andrea Colantoni

S4_SR09: 3: **A safety assessment of the agricultural sector in Turkey**  
Yusuf Dilay, Adem Ozkan, Cevat Aydin
S4_SR09: 4: An environmental evaluation of agricultural in-field traffic and tillage practices
Vicent Gasso-Tortajada, Claus G. Sørensen, Frank W. Oudshoorn, Dionysis Bochtis

S4_SR09: 5: Screening of working environment in riding and trotting schools
Qiu Qing Geng, Niklas Adolfsson

S4_SR09: 6: Human reliability in energy equipment service
A. Gushchinsky, M. Galchenko

S4_Room SR10: Processing, post harvest technology, logistics
Thursday, 30/06/2011: 11:00am - 1:00pm – 20 minutes/presentation

Session Chair: Veli-Matti Tuure

S4_SR10: 1: Drying of jujube fruit: comparison of prediction from mathematical models and artificial neural network
Ali Motevali, Ahmad Abbaszadeh, Saeid Minaei, Gholamhassan Nagafi

S4_SR10: 2: Exergy and Energy Investigation of Microwave Assisted Thin-Layer Drying of Pomegranate Arils Using Artificial Neural Networks and Response Surface Methodology
Ali Motevali, Saeid Minaei, Ali Mhammad Nikbakht

S4_SR10: 3: Osmotic dehydration of Agaricus bisporus: Drying kinetics and mass transfer modelling
Rezagah Maryam, Kashaninejad Mahdi, Mizaei, Habib, Khomeiri Morteza

S4_SR10: 4: Modelling head rice yield prediction in a two stage rough rice drying using artificial neural network
Morteza Sadeghi, Ehsan Nasrnia, Amin Allah Masoumi, Mojtaba Tohidi, Abbas Hemmat

S4_SR10: 5: A New Approach for Modeling of Hot Air-microwave Thin Layer Drying of Soybean
Dariush Zare, Mohsen Ranjbaran

S4_SR10: 6: Kinetics of apricot thin layer drying in a mixed and indirect mode solar dryer
Ali Zamorodian, Mojtaba Dadashzadeh, Shirin Samani
S5_Room EH01: Open Topics
Thursday, 30/06/2011: 2:20pm - 4:00pm – 20 minutes/presentation

Session Chair: Heinz Bernhardt

S5_EH01: 1: Evaluation of Factors Affecting the Productivity of Agricultural Mechanization Service Enterprises in Isfahan Province, Iran
Maryam Peimani, Amir Mozafar Amini, Jalil Razavi

S5_EH01: 2: Fumonisins incidence in Maize Stored in Family Farms Cribs in the Central Region of the State of Minas Gerais, Brazil
Valéria Aparecida Vieira Queiroz, Gilberto Lula Oliveira Alves, Priscila Ferreira, Renata Regina Pereira Conceição, Simone Mendes Martins, Rodrigo Veras Costa, Paulo Eduardo de Aquino Ribeiro

S5_EH01: 3: Studies on Effective Light Quality for Growing Lettuce in Plant Factory
Yuta Saito, Hiroshi Shimizu, Hiroshi Nakashima, Juro Miyasaka, Katsuaki Ohdoi

S5_EH01: 4: System Establishment of ATPS for One-Step Purification of Glutamate Decarboxylase from E. coli after Cell Disruption
Wanying Yao, Xiao Wu, Jun Zhu, Bo Sun, Cutis Miller

S5_EH01: 5: Copper and Zinc in Drainage Water and Soil from Swine Wastewater applied to Oilseed Radish Crop
Pegoraro Thaisa, Sampaio Silvio Cesar, Ferreira Maria Herminia Tavares, Coelho Silvia Renata Machado, Palma Denise, Carneiro Leocir Jose, Fiori Marciane

S5_Room SR04: Field operations
Thursday, 30/06/2011: 2:20pm - 4:00pm – 20 minutes/presentation

Session Chair: Remigio Berruto

S5_SR04: 1: Operational performance of auto-section spraying technologies
Efthymios Rodias, Dionysis Bochtis, Claus Sorensen, George Papadakis, Athanasios Natsis, Labrinos Grigorias

S5_SR04: 2: Practical Experiences in the Use of Spreaders with Trailing Hoses Collected by Survey
Joachim Sauter, Roy Latsch, Michael Dubach

S5_SR04: 3: An Examination of the Field Level Operations for Sugarcane in the Punjab State of India: How do these Bang upon Farming Systems?
Veena Goel
S5_SR04: 4: First results on the use of an innovative machine for soil tillage in terraces or steep sloped areas
F. Pipitone, P. Catania, M. Vallone, G. Spartà

S5_SR04: 5: Condition monitoring of Mechanical Subsystems of Agricultural Vehicles Based on Fusion of Vibration Features
D. Moshou, D. Kateris, N. Sawalhi, I. Gravalos, S. Loutridis, T. Gialamas, P. Xyradakis, Z. Tsiropoulos

S5_Room SR08: Information systems and precision farming
Thursday, 30/06/2011: 2:20pm - 4:00pm – 20 minutes/presentation

Session Chair: Pietro Piccarolo

S5_SR08: 1: An economic analysis of the precision fertilization
Maria Walczykova

S5_SR08: 2: Design, Construction and Evaluation of an Intelligent System for Controlling Individual Dairy Cow Feed Intake
V. Akbaridehaghi, Abbas Hemmat, A.A. Masoumi, J. Ghaisari, M. Khorvash

S5_SR08: 3: An optimal decision support tool for the split process in Waxflowers
Avital Bechar, Gad Vitner

S5_SR08: 4: Automated detection of mechanically induced bruise areas in golden delicious apples using fluorescence imagery
Chiu, Yi-Chich; Chou, Xing-Liang; Grift, Tony E.; Chen, Mu-Te

S5_SR08: 5: LS-SVM regression for the camera characterization of a computer vision system
Giorgio Peri, Roberto Romaniello, Antonietta Baiano

S5_Room SR09: Labour, ergonomics, safety and health
Thursday, 30/06/2011: 2:20pm - 4:00pm – 20 minutes/presentation

Session Chair: Ladislav Nozdrovicky

S5_SR09: 1: Standardisation - one way for better protection of operators against pesticides
Torsten Hinz
S5_SR09: 2: Safety and Health in Logging Operations in Ondo State Afforestation Project (OSAP) South West Nigeria
Ayodeji Oludare Omole

S5_SR09: 3: Frequent Accident Scenarios with Vehicles, Machinery and Devices for Agricultural and Forestry Operations in Bavarian Agriculture
Veronika Helfendörfer, Elisabeth Quendler, Josef Boxberger, Roswitha Baumung

S5_SR09: 4: Developing bill of materials (BOM) for agricultural products to increase productivity
Vitner Gad, Bechar Avital

S5_SR09: 5: Vibrations transmitted to the hand-arm system by electric shakers during olive harvesting
E. Cerruto, G. Manetto, G. Schillaci

S5_Room SR10: Processing, post harvest technology, logistics
Thursday, 30/06/2011: 2:20pm - 4:00pm – 20 minutes/presentation

Session Chair: Tarmo Luoma

S5_SR10: 1: Effects of storage duration and conditions on some characteristics of kiwifruit cv. Hayward
Reza Tabatabaeekoloor

S5_SR10: 2: Impacts of drying air temperature and bulk depth on walnut drying rate in an indirect solar dryer
Ali Zomorodian, Shirin Samani

S5_SR10: 3: Hermetic maize storage systems for subsistence farmers
Bern Carl J.

S5_SR10: 4: Sorting orange fruit by using machine vision and neural networks techniques
Rasekhi Reza, Raoufat Mohamad Hossein
S6_Room EH01: Final Session
Thursday, 30/06/2011: 5:40pm - 6:00pm – 10 minutes/presentation

Session Chair: Andreas Gronauer

S6_EH01: 1: Review and vision to the conference
Elisabeth Quendler

S6_EH01: 2: Presentation of the next conference place
Claus Aage Gron Soerensen

S6_EH01: 3: Passing over of the hammer (CIOSTA-emblem)
Elisabeth Quendler/Claus Aage Gron Soerensen
Poster Programme

Session Chair: Giuseppe Zimbalatti
Session Chair: Giampaolo Schillaci

Basement PO1: Labour, ergonomics, safety and health
Thursday, 30/06/2011: 4:40pm - 5:40pm

PO1: 1: Effect of biostimulant on processing tomato under conventional and organic cropping system
Grazia Disciglio, Giuseppe Gatta, Angela Libutti, Annalisa Tarantino

PO1: 2: Biotechnology options in agricultural engineering
Valeriy Dubrovin, Maksym Melnychuk

PO1: 3: Technical aspects of ecological safety farm industry
Alexander Petrovich Kartoshkin, Valery Vasilievich Belyakov

PO1: 4: Working in the Shadows of Death: The Case of Municipal Tree Managers in a Nigerian University
Ayodeji Oludare Omole

PO1: 5: Disinfection of sewage water from a livestock farm by sodium ferrate (VI)
Dmitry Yulievich Stupin, Aleksey Valerievich Vagin

PO1: 6: Personal safety control at slaughtering of cattle
Elena Ilinichna Ovchinnikova, Roman Vladimirovich Shkrabak, Vladimir Vladimirovich Shkrabak, Vladimir Stepanovich Shkrabak, Yulia Aleksandrovna Posypaeva

PO1: 7: A new approach to assess labour time requirement, work safety, work load and job satisfaction on Flemish dairy farms
Robin De Sutter, Bart Sonck

PO1: 8: Labour input in specialized young bull production in Sweden
E. Bostad, C. Swensson, S. Pinzke

PO1: 9: Occupational safety and health in logging operations at ondo state afforestation project
Omole Ayodeji Oludare

PO1: 10: Safety of agricultural machinery and its use in equestrian fields
A. Checchi, S.Casazza
PO1: 11: Application to the agricultural sector of advanced technologies for the evaluation and the control of the risks
Andrea Formato, Giampiero Scaglione, Giampio Pucillo, Antonio Abagnale

PO1: 12: Capture and produce electricity from the air
A. Quattrone, P. G. Benintende, G. Costa

PO1: 13: Preliminary study about a safe automatic system for stretching plastic film used for greenhouses covering
Domenico Longo, Alba Pennisi, Luciano Caruso, Andrea Conti, Davide Camilleri,
Silvio Balloni, Giampaolo Schillaci, Elio Romano

PO1: 14: First Results on Ergonomics Studies of the Machine Milking of Asses
Camillieri Davide, Failla Sabina, Restuccia Andrea, Schillaci Giampaolo

PO1: 15: A survey on equipment used for pesticides spraying in Mediterranean greenhouses
Luciano Caruso, Giampaolo Schillaci, Andrea Conti, Davide Camillieri

PO1: 16: Environmental and operator safety during pesticide applications in greenhouses
E. Cerruto, G. Schillaci, L. Caruso, G. Emma, S. Balloni, A. Conti

PO1: 17: Safety issues in greenhouse film covering operations, applicable regulations and on-field test
L. Caruso, S. Balloni, D. Longo, A. Pennisi, A. Conti, D. Camilleri, G. Schillaci

PO1: 18: Olive oil mills acoustic levels during a continuous processing

PO1: 19: Operational working time assessment of an innovative system for pesticide distribution in greenhouse
G. Zimbalatti, B. Bernardi

Basement_PO2: System engineering, management, traceability
Thursday, 30/06/2011: 4:40pm - 5:40pm

PO2: 1: Energy Coefficient for Irrigated Wheat Production in the Desert Vicinity in Iran
Mansoor Behroozi Lar, Zahra Khodarahmpour

PO2: 2: Compaction behaviour of Alfalfa grinds
Davoud Ghanbarian, A. Karami
PO2: 3: Prototype of storage system for preservation of extra-virgin olive oil characteristics
A. Leone, R. Romaniello, G. Peri

PO2: 4: Development and Evaluation of a Cyclon Seperator unit for Gathering the Alfalfa Shattered Leaves During Baling
Amin Allah Masoumi, Jamileh Shojaei Arani

PO2: 5: Repose angles of brown rice grains in a rotary drum
Jafar Massah

PO2: 6: Heat flux for the soil surface darkness
Jafar Massah

PO2: 7: Solutions for rehabilitation of polluted areas by mining activities in Banat region, Romania
Iacob Nemes

PO2: 8: Motor method evaluation of fuel-air mixtures created by using qualitative and quantitative methods
Jüri Olt, Villu Mikita, Risto Ilves, Arne Küüt

PO2: 9: Decomposition of organic waste into porous caps in autumn and winter
D. C. Pereira, L.A.M Costa, M.S.S.M Costa

PO2: 10: Chopped stones in forage ration – a danger to cow health, performance and fertility?
Thomas Reiter

PO2: 11: Higher energy efficiency with state of the art loader wagons
Thomas Reiter

PO2: 12: Development and Laboratory Evaluation of an Automatic Alfalfa and Crop Residue Bale Mechanism Pick Up
Samaneh Sadeghzadeh, Jalil Razavi

PO2: 13: The challenges of dairy business management: A UK case study
Federico Topolansky Barbe, Magdalena Gonzalez Triay

PO2: 14: The Strategy concerning the fruit marketing from the North East region of Romania
Cornelia Elena Tureac, Anca Gabriela Turtureanu, Florin Postolache, Alin Constantin Filip, Alexandra Maria Ivan
PO2: 15: Calculation of biomass volume of the citrus trees in base on adapted dendrometry focused on management of the plantations and energy or industrial utilization of its residual materials
Borja Velazquez-Marti, Javier Estornell, Isabel Lopez-Cortes, Jesus Marti-Gavila

PO2: 16: Simulation modelling of thermal losses in a four stroke diesel engine using fuzzy logic
Saadat Kamgar, Nejat Sadeghi

PO2: 17: Sizing Optimisation of A Subsoiler Framework Using Advanced

PO2: 18: Particle detection system products and insecticide herbicides
A. Quattrone, P. G. Benintende, G. Costa

PO2: 19: Determination of basic design parameters of rose flower cleaner machine
G. R. Chegini, A. Heidari

PO2: 20: Study of droplet size distribution characteristics of a spray dryer-rotary atomizer using PDA method
G.R. Chegini, B. Bashiri

PO2: 21: Effect of load transfer with traction control on fuel consumption and field performance during ploughing with 2x5 and 2x7 mouldboard plough
M. Haas, M. Schüller, G. Moitzi, H. Wagentristl, H. Weingartmann, J. Boxberger

PO2: 22: Control of head of onion harvester by sensor
J. Massah, A. Lotfi and A. Arabhosseini

PO2: 23: Tree holes detecting by ultrasound
C. B. Secco, R. Gonçalves, D. G. P. Cerri, E. C. Vasques, F. A. Batista

PO2: 24: Application of hydoseeding for environmental protection in the Mediterranean area
Catania Pietro, Carrara Michele, Salvia Marco, Pipitone Valeria, Vallone Mariangela

PO2: 25: Velocity of ultrasonic waves in freshly-felled logs as a parameter for wood grading
C. Bertoldo, R. Gonçalves, M. V. Massak, F. Batista, C. B. Secco
PO3: 1: Role of nitrogen fertilizer levels and bio-inoculants in development of Canola (Brassica napus L.)
El Sayed Fathi El Hahhasha, Moemen Hamed Taha

PO3: 2: Study of a soil thermo-sterilizer machine
Andrea Formato, Giampio Pucillo, Antonio Abagnale

PO3: 3: The investigation of the work quality for wheat harvesting process
Hiwa Golpira

PO3: 4: Technical and economical comparison of conventional, modified and no-till seeders for direct seeding of maize
Davut Karayel, Murad Canakci, Mehmet Topakci, Ali Koc

PO3: 5: Study of Application System of Digested Slurry after Anaerobic Digestion as Liquid Fertilizer
Katsuaki Ohdoi, Chan Seok Ryu, Michihisa Iida, Hiroshi Shimizu, Hiroshi Nakashima, Juro Miyasaka

PO3: 6: Visualisation of motion of fertilizer’s granules on the plane of spinning spreading disc of a disc spreader
Jüri Olt, Mati Heinloo

PO3: 7: The quality of production traits in Salvia officinalis L. under the influence of sowing norm
Mihai Radu Pop

PO3: 8: Design, Development and Evaluation of a Yield Monitoring System
Jalil Razavi, Hoda Kargarpour, MahmoodReza Salar, Samaneh Sadeghzadeh, Zahra Rezaee

PO3: 9: Chestnuts facilitated harvest systems in steep zones
Andrea Formato, Giampiero Scaglione, Giampio Pucillo, Antonio Abagnale

PO3: 10: The Effect of Sprinkler Irrigation on Some Soil Physical Properties and Yield of Corn for Spring and Autumn Seasons
Jasim Alzubaidy, Abdulrazzak Abdullatif, K. M. Alkazaz, M. S. Naum, H. H. Ajiobury

PO3: 11: Observations on Wood Dust emissions during Mechanical Pre-pruning in Vineyards
Schillaci G., Caruso L., Balloni S., Bonsignore R., Romano E.
PO3: 12: Spray deposits and ground losses when using a self-propelled sprayer in greenhouse applications
E. Cerruto, A. Conti, S. Balloni, G. Emma, L. Caruso

PO3: 13: Effect of spray tips and concentration of control in Syrup Ipomeoa spp. in pre-emergence
Henrique Borges Neves Campos, Lilian Lúcia Costa, Raphael Emílio Lemos, José Fernando Jurca Grigolli, Marcelo da Costa Ferreira

PO3: 14: Associated spraying to control of Spodoptera frugiperda due spraying volume and nozzle
Henrique Borges Neves Campos, Lilian Lúcia Costa, João Emanuel Guimarães, Marcelo da Costa Ferreira, José Carlos Barbosa

Basement_PO4: Livestock management
Thursday, 30/06/2011: 4:40pm - 5:40pm

PO4: 1: Efficiency Analysis of Poultry Production Enterprises Using Data Envelopment Analysis Approach (Case of Bandr Anzali Township, Iran)
Mohammad Sadegh Allahyari

PO4: 2: Selection for Immunity improvement and Prion scrapie control in goats based on respective sperm-genetic markers polymorphism and nucleotide sequences
Elie Kamil Barbour

PO4: 3: Selection for production improvement in goats based on sperm-genetic markers polymorphism
Elie Kamil Barbour, Maya Fawzi Saade

PO4: 4: Health monitoring of sows with data from electronic sow feeder
B. Hinrichs, S. Hoy

PO4: 5: Compression Behavior of Manure in Pellet Processing
Mohammad Hossein Kianmehr, Hadi Alemi

PO4: 6: Software and Hardware Components for Sustainable Recirculatory Aquacultural Systems in Savannah Ectone Zone of Nigeria
Joshua Olanrewaju Olaoye
PO5: 1: Investigation of the effect of thickness and irradiation time on 
storability and bacterial activity in liquid egg 
Saman Abdanan, Saeed Minaei, Azodin Mohajerani, Mohamad Amin Karimi 
Torshizi, Nima Khoramabadi, Ashraf Mobarez

PO5: 2: Thin Layer Convective Air Drying of Onion 
C. Ertekin, O. Yaldiz

PO5: 3: Pressure drop and power consumption in a dense-phase suction 
pneumatic conveying system for corn 
Hasan Ghafori, Abbas Hemmat, Ali Mohammad Borghaeae

PO5: 4: Modeling of drying Hypericum perforatum L. 
Hossein Ahmadi Chenarbon, Saeed Minaei, Ali Reza Bassiri, Morteza Almassi, 
Akbar Arabhosseini

PO5: 5: Determination of Some Physical and Mechanical Properties of 
Cantaloupe Fruit of Semsouri Variety 
Seyed Reza Hassan-Beygi, Mahmood Lotfi, Mandana Rabizadeh

PO5: 6: Terminal velocity of saffron (Crocus Sativus L.) flower and its 
components 
Seyed Reza Hassan-Beygi, Hadi Vale Ghoozhd

PO5: 7: Determining Coefficient of Friction of Saffron (Crocus sativus L.) 
Flower and Its Components 
Seyed Reza Hassan-Beygi, Hadi Vale Ghoozhd, Mohammad Hossein Kianmehr

PO5: 8: Determination of Compaction Energy and Some Mechanical 
Properties of Corn Silage 
Amin Allah Masoumi, Aref Rahimifard, Abbas Hemmat

PO5: 9: A Three-Element Model for Densification of Corn Silage and The 
Effect of Loading Rate on Its Characteristics 
Amin Allah Masoumi, Aref Rahimifard, Abbas Hemmat

PO5: 10: Simulation and Validation of Microwave-assisted Fluidized Bed 
Drying of Soybean 
Dariush Zare, Mohsen Ranjaran, Mehrdad Niakousari

PO5: 11: Investigating the Drying Time of Green Pea in a Microwave Assisted 
Fluidized Bed Dryer Using Artificial Neural Network 
Ali Zomorodian, Leili Momenzade
PO5: 12: Realization of an indirect solar dryer with a plan sensor for fruits and vegetables
Kaci Ferhat, Kouider Fatma Zohra, Laabassi Karim, Etsouri Salim

PO5: 13: Effect of drying method on colour changes of Gerbera
Can Ertekin, Sibel Mansuroglu, Nursel Heybeli, Emrah Yildirim

PO5: 14: Thin Layer Convective Air Drying of Onion
C. Ertekin, O. Yaldiz

PO5: 15: Dark fermentative bio-hydrogen production from sugar-beet processing wastes
Leyla Ozkan, Tuba H. Erguder, Goksel N. Demirer

PO5: 16: Analysis of a plant for the cryo-maceration of the grapes
Andrea Formato, Giampiero Scaglione, Giampio Pucillo, Antonio Abagnale

PO5: 17: Mechanical damage to white navy beans as affected by moisture content, impact velocity and seed orientation
F. Shahbazi, A. Saffar, M. Analooei

PO5: 18: Investigating a Gaseous Assisted Solar Cabinet Dryers Using CFD
Amanlou Yasaman, Fadaia Dawud, Zomorodian Ali

PO5: 19: Determination of the Strenght Parameters to Design of the Carnation Sorting Machine
Deniz Yilmaz, Tuba Tuba Dilmacunal, Mehmet Emin Gokduman, Kamil Ekinci, Mehmet Ali Koyuncu

PO5: 20: Growth and Disease Control of Welsh Onion in Continuous Cropping Fields by Application of an Aerobically Digested Swine Liquid Fertilizer
Minagawa Hideo

PO5: 21: Middle Infrared Drying of Tomato

Basement_PO6: Renewable energy and efficiency
Thursday, 30/06/2011: 4:40pm - 5:40pm

PO6: 1: Renewable Energy of High Environmental Quality in the EU and Turkey Case Study from Hydrogen Energy in the Black Sea Region
Erhan Atay

PO6: 2: Field efficiency and its use for energy coefficient determination
Gholamreza Bamimohamadi, Mansoor Behroozilar, Zahra Khodarahmpour
PO6: 3: Environmental impacts from the construction of wind farm in forested areas
Vasileios Drosos, Angelos – Sarantis Liampas, Rigas Giovannopoulos

PO6: 4: Technical and investment assessment regarding short rotation coppice plantations of black locust in south Romania
Bogdan Popa, Eugen Iordache

PO6: 5: Energy use pattern of some tuber plants cultivation over Turkey
Can Ertekin

PO6: 6: Efficient energy supply for sustainable development of agriculture
Valery Nikolaevich Karpov, Zarifdzan Sharifovich Yuldashev

PO6: 7: Shear cutting of common reed and hemp stalk materials for renewable energy
Andris Kronbergs, Eriks Kronbergs, Elgars Siraks, Mareks Smits

PO6: 8: Photovoltaic pumps: tests and practical applications
Andrea Petroselli, Paolo Biondi, Leonelli Antonio, Pica Marco

PO6: 9: Comparison of vegetation growth, rice taste and brown rice yield depending on application methods and timing of anaerobic digested sludge
Chanseok Ryu, Masahiko Suguri, Michihisa Iida, Katsuaki Ohdoi, Mikio Umeda

PO6: 10: Energy Productivity of corn Production at Different Farm Land Levels in Beiza Area in Iran
Davoud Sabzvari, Mortaza Almassi

PO6: 11: Comparison of Fuel (Energy) Consumed and Crop production of Two tillage systems
Davoud Sabzvari, Morteza Almassi

PO6: 12: Power installations audit for the purpose of harmful substances emission minimization
Tamara Salova

PO6: 13: Alternative Energy for Nepal
Tiwari, Hari /Babu Tiwari

PO6: 14: Investigation of Effective Parameters in Operation of Hydraulic Ram Pump Fabricated from Polyethylene
Nader Sakenian Dehkordi

PO6: 15: Production of bioethanol from natural meadow biomass and herbaceous waste
Martí Tutt, Jüri Olt
**PO6: 16:** Development of non-row specific harvesting equipment for arboreal energy plants  
Balazs Vidovics, Janos Peter Radics, Istvan J. Jori, Janos Simonovics

**PO6: 17:** Emissions characteristics of spark ignition engine operating on pure and high alcohol blended gasoline fuels  
Panagiotis Xyradakis, Theodoros Gialamas, Ioannis Gravalos, Dimitrios Moshou, Dimitrios Kateris, Zisis Tsiropoulos, Austinos Augusti, Konstantinos Tsatsarelis

**PO6: 18:** The energy potential of the Albian water. Study of the exploitable potential of Algerian drillings  
Etsouri Salim, Etsouri Kaddour, Kaci Ferhat

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**Basement_PO7:** Information systems and precision farming  
Thursday, 30/06/2011: 4:40pm - 5:40pm

**PO7: 1:** Setting out the basic network to achieve the water supply network from a rural settlement of the west side of Romania  
Luminita Livia Barliba, Cosmin Popescu, Gabriel Eles, Barliba Costel

**PO7: 2:** Assessment of Soil Suitability for Agriculture Using GIS Spatial Analyst Model Technique  
Hala Ebaid, Asia El- Falaky

**PO7: 3:** Comparison of conventional regression methods and artificial neural networks for potato mass modelling with dimensional attributes  
D. Ghanbarian, R. Farhadi

**PO7: 4:** Development and evaluation of a guidance-assistant algorithm for agricultural vehicles in subsoiling operation  
Saadat Kamgar, Sajad Kiani

**PO7: 5:** Development of a Computer Controlled System for the Evaluation of the Milking Machine Pulsator and Liner  
Radu Rosca, Ioan Tenu, Petru Carlescu, Edward Rakosi

**PO7: 6** Substantiation of differentiated doses of artificial fertilizers as a base of control by technological machines in precision agriculture  
Victor Aleksandrovich Smelik, Nadezhda Aleksandrovna Tsyganova, Igor Zinovievich Teplinsky

**PO7: 7:** Inferential assessment of soil consumption: a case study for high resolution detection  
Daniele Torreggiani, Stefano Benni, Patrizia Tassinari
PO7: 8: Assessment of natural ventilation systems in freestall dairy barns in Galicia (Spain). Methodology for diagnosing problems and proposing solutions for optimization
Manuel Luis Torres Labandeira, Elena Fernandez Rodriguez, Ramón Mariño Allegue

PO7: 9: Artificial Neural Networks for Evaluation of Carcass and Meat Quality
Bozkurt Yalcin, Doğan Cihan, Uzun Nazif

PO7: 10: An autonomous multifunctional electrical vehicle able to move inside greenhouses using artificial vision methodologies and low cost sensors
Longo D., Pennisi A., Muscato G., Schillaci G., Caruso L., Balloni S.

Basement_PO8: Open topics
Thursday, 30/06/2011: 4:40pm - 5:40pm

PO8: 1: Effective Factors on Success of Small and Medium Enterprises in Agriculture Sector
Mohammad Sadegh Allahyari

PO8: 2: Reliability of topographical diagrams in forest practice
Vasileios Drosos

PO8: 3: Wind energy potential estimation in Iran
Amir Gandomkar

PO8: 4: Stress-sinkage simulation under a plate sinkage test using a viscoelastic finite element soil model
Abbas Hemmat, Naser Nankali, Nahid Aghilinategh

PO8: 5: Forward Environmentally Friendly Industrial Farms in North-West Region of Russia: Problems and Perspectives
Vladislav Borisovich Minin, Harri Huhta, Valery Vasily Belyakov

PO8: 6: Assessment of the evapotranspiration demand per planning regions in Bulgaria
Milena Moteva, Valentin Kazandjieiv, Veska Georgieva

PO8: 7: Pacific pomfret skin gelatin gel and rheological characterization
Fernando Alberto Osorio, Allen Flores, Sebastian Rojas, Olivier Skurtys, Javier Enrione, Silvia Matiacevich, Ruben Bustos

PO8: 8: Movement of potassium sources in soil associated with the straw of grasse and legumes consortium
D. C. Pereira
PO8: 9: Adapting to drought from sustainable dimensions in Nomads via factor explaining (Kerman Province of Iran)
Shahab Aldin Shokri, S. Mahmoud Hosseini, S. Mehdi Mirdamadi, S. Jamal Farajo-Lah Hosseini

PO8: 10: Assessment of economical efficiency of using the potential of production in the agricultural sector and economic argumentation of its optimal dimensions
Anca Gabriela Turtureanu, Cornelia Elena Tureac, Florin Postolache, Alexandra Maira Ivan, Alin Constantin Filip

PO8: 11: The Alternative In Socio-Economic Theory
M.V. Velichko, V.A. Efimov

PO8: 12: Study the effect of regional variation in rainfall on mineralogical composition on some selected soils from North Iraq
Aalhasan, Adel Mawlood Salih

PO8: 13: Effect of Splitting and Rate of Phosphorous Fertilization on Calcareous Soil on Growth and Yield Wheat (Triticum aestivum) Iraq
Alrashidi Salih Mohamad

PO8: 14: Pellets Markets and Industry in Romania
Iordache Eugen

PO8: 15: Evaluation of nitrogen fertilizer and plant density effects on yield and yield components of Fenugreek in rotation with Rice
Zandi Peiman, Shirani-Rad Amir Hossein, Daneshian Jahanfar, Bazrkar-Khatibani Leila

PO8: 16: Emissions of nitrous oxide (N2O), carbon dioxide (CO2) ethane (CH4) from a sugarcane crop under different soil management in Sao Paulo State, Brazil
E. R. Sousa Neto, J. B. Carmo, C. Andrade, V. P. Vargas, G. C. Gava, R. Fantini, L. A. Martinelli

PO8: 17: The Effect of Harvest Labor Cost of Some Fruit on The Crop Price
G. Cicek, S. K. Sumer, S. Ozpinar, H. Kocabiyik

PO8: 18: Ability of watercress (Nasturtium officinale) and pennyroyal (Mentha pulegium) in lead biosorption under hydroponic culture
M. Khoramivafa, K. Shokri, S. Jalalihonarmand

PO8: 19: Factors negating production efficiency and sustainable use of forest resources for sustainable forestry in Nigeria
Okpo Esio Unanaonwi
PO8: 20: Effects of conventional and conservation tillage on some soil properties in southern Turkey
Z. B. Barut, I. Celik

PO8: 21: Opinions and researches about the possibility of applying controlled drainage in western Romania
R. Halbac-Cotoara-Zamfir, I. A. Costescu