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**ROOM 1**

**PLENARY SESSION I**

- **08:00 am**
  - To be completed

- **10:00**
  - Coffee break

**ROOM 1**

**POWER AND MACHINERY: HARVESTING I**

- **10:30 am**
  - REF315
    - **Modeling grain threshing and separation for process monitoring**
    - Tom KRAUS, Moritz DIEHL, Bart MISSOTTEN, Wouter SAEYS, Tom COEN, Josse DE BAERDEMAEKER

- **10:55**
  - REF072
    - **Development of a traveling platform for a strawberry-harvesting robot**
    - Shigehiko HAYASHI, Satoshi YAMAMOTO, Sadafumi SAITO, Yoshiji OCHIAI, Yasushi KOHNO, Yuji NAGASAKI, Kazunori NINOMIYA, Tomoki YAMASHITA

- **11:20**
  - REF082
    - **Shock absorber reception devices for citrus mechanical harvesting**
    - Coral ORTIZ SANCHEZ, Antonio TORREGROSA, Jose BLASCO

- **11:45**
  - REF070
    - **Development of a mechatronic device for automated fastening of the wire that the HOP (Humulus Lupulus) on in high-trellis hop gardens**
    - Zoltan GOBOR, Georg FRÖHLICH, Johann PORTNER

- **12:10**
  - REF101
    - **Development of suitable algorithm for recognition and locating saffron flower using machine vision**
    - Abdolabas JAFARI, Adel BAKSHIPOUR

- **12:35**
  - Lunch
### ROOM 2

#### FERTILIZATION I

10:30  REF312  
A new crop growth model: decision aid for timing and spacing of inputs in precision farming  
Mikko HAUTALA, Mikko HAKOJARVI

11:00  REF092  
Centrifugal fertiliser spreading: velocity and mass flow measurement by image processing  
Sylvain VILLETTE, Christelle GEE, Richard MARTIN, Emmanuel PIRON, Denis MICLET, Michel PAINDAVOINE

11:30  REF298  
Impact of sludge mechanical behaviour on spatial distribution parameters obtained with centrifugal spreader  
Philippe HERITIER, Jean-Christophe ROUX, Emilie DIEUDE-FAUVEL

12:00  REF031  
Crop response by using knife- or shallow injectorequipment - benefit or a crop damage?  
Lena RODHE, Magnus HALLING

12:35  Lunch
10:30 REF244
Spray drift for different types of nozzles and spraying techniques used for herbicides application in orchards
Artur GODYN, Grzegorz DORUCHOWSKI, Waldemar SWIECHOWSKI, Ryszard HOLOWNICKI

10:55 REF275
Surfactant influence on droplet size and velocity spectra from hollow cone and an air induced sprays
Ariane VALLET, Cyril TINET

11:20 REF124
Spray technique a significant element in the risk mitigation of pesticide losses to water
Manfred ROETTELE, Paolo BALSARI, Greg DORUCHOWSKI, Poul Henning PETERSEN

11:45 REF231
A large-eddy simulation model for pesticide dispersal during spray application
Ali CHAHINE, Sylvain DUPONT, Yves BRUNET, Carole SINFORT

12:10 REF228
An automatic self propelled sprayer for safe pesticide distribution to protected crops
Paolo BALSARI, Gianluca OGGERO

12:35 Lunch
## ERGONOMICS AND OPERATOR SAFETY: MACHINERY I

### 10:30 am

10:30 **REF127**
Taking into account the unknown situations in risks analysis of human-agro-equipment system

Wided BEN YAHIA, Nicolas TRICOT, Frédéric VANDERHAEGEN, Philippe POLET

10:55 **REF134**
Innovation methods integration for safety conflicts management in design - case study: the three-point hitch

Rima GHEMRAOUI, Luc MATHIEU, Nicolas TRICOT

11:20 **REF130**
Assessment of risk of burn injuries from hot surfaces in agricultural and forestry tractors

Eugenio CAVALLO

11:45 **REF241**
R&D works progress on agricultural and forestry transportation units equipped with modern electronic brake system - gooseneck trailers that could be coupled with light trucks or farm tractors

Adam DUBOWSKI, Janusz GRZELAK, Tadeusz PAWLOWSKI, Radoslaw KARBOWSKI, Aleksander RAKOWICZ, Sylwester WEYMANN, Krzysztof ZEMBROWSKI

12:10 **REF061**
New active safety device dedicated to light all-terrain vehicle stability: application to quad bike and off-road mobile robot

Nicolas BOUTON, Roland LENAIN, Benoît THUILOT, Philippe MARTINET, Michel BERDUCHAT

12:35 **Lunch**
10:30     REF167  
Development of web-gis based drought information system for agricultural drought management  
Nam WON HO, Choi JIN YONG, Yoo SEUNG HWAN

10:55     REF149  
Comparison of interpolation methods integrated into a GIS for the study of dasometric variables  
Irene ROMERO-TORO GASCUENA, Susana SASTRE-MERINO, Jara VICENTE-GUILLEN, Mª Jesus GARCIA GARCIA, Esparanza AYUGA-TELLEZ, Concepcion GONZALES-GARCIA, Mª Angeles GRANDE-ORTIZ

11:20     REF151  
Data collection and management solution for wireless sensor networks  
Gil DE SOUSA, Jean-Pierre CHANET, Aurélien JACQUOT, Daniel BOFFETY, Géraldine ANDRE, Kun-Mean HOU

11:45     REF164  
Communication of position information among agents working in agricultural fields using ad-hoc Zigbee networks  
Stavros VOUGIOUKAS, Kyriakos TSIAMMOURIS

12:10     REF310  
Site-specific fertigation with a wireless irrigation control network  
Michael DELWICHE, Robert COATES

12:35 Lunch
<table>
<thead>
<tr>
<th>Time</th>
<th>Reference</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>10:30</td>
<td>REF014</td>
<td>The genotend chip: a tool to analyze gene expression in muscles of beef cattle</td>
<td>Jean-François HOCQUETTE, Carine BERNARD-CAPEL, Véronique VIDAL, Béline JESSON, Hubert LEVEZIEL, Isabelle CASSAR-MALEK</td>
</tr>
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<td>10:55</td>
<td>REF452</td>
<td>Non-destructive estimation of ATP and/or viable cells on meat surface by UV-VIS reflectance spectrum analysis</td>
<td>Seiichi OSHITA, Naomi OHTO, Seiji KAWAGISHI, Makio YOSHINO, Yoshinori KAWAGOE, Satoshi SHINOZAKI, Naoya HIRUMA</td>
</tr>
<tr>
<td>11:20</td>
<td>REF001</td>
<td>Authentification of pasture-feeding in lamb carcass using NIRS</td>
<td>Donato ANDUEZA, Joël BALLET, Juliane POURRAT, Roland JAILLER, Cédric COUSTET, Sophie PRACHE</td>
</tr>
<tr>
<td>11:45</td>
<td>REF009</td>
<td>Traceability of animal-derived food products based on the analysis of their profile in volatile organic compounds</td>
<td>Erwan ENGEL, Jeremy RATEL, Philippe BERGE, Patrick BLINET</td>
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<tr>
<td>12:10</td>
<td>End of session</td>
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<td>12:35</td>
<td>Lunch</td>
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<td>10:30</td>
<td>REF345</td>
<td>Methods of quantifying the degree of opacity canopy architecture of tree species to minimize impact on the landscape</td>
<td>Jacinto GARRIDO VELARDE, Sergio LÓPEZ CASARES, Julio HERNÁNDEZ BLANCO, María Jesús MONTERO PAREJO, Lorenzo GARCÍA MORUNO</td>
</tr>
<tr>
<td>10:55</td>
<td>REF349</td>
<td>Methodological approach to the study and reuse of old traditional agricultural buildings</td>
<td>José María FUENTES, Ana Isabel GARCIA, Francisco AYUGA</td>
</tr>
<tr>
<td>11:20</td>
<td>REF433</td>
<td>The farmbuild model (farm building landscape model): a sampling methodology for the parametric analysis of historical typologies</td>
<td>Patrizia TASSINARI, Stefano BENNI, Daniele TORREGGIANI, Giovanni POLLICINO, Enrica DALL'ARA</td>
</tr>
<tr>
<td>11:45</td>
<td>REF351</td>
<td>The visual role of colours and materials in the rural building integration: a particular case in the west of Spain</td>
<td>María Jesús MONTERO-PAREJO, Sergio LÓPEZ-CASARES, Lorenzo GARCÍA-MORUNO, Julio HERNÁNDEZ-BLANCO</td>
</tr>
<tr>
<td>12:10</td>
<td>REF354</td>
<td>Optimal surroundings elements for integration of rural buildings in different scenic backgrounds</td>
<td>Sergio LÓPEZ CASARES, Julio HERNÁNDEZ BLANCO, María Jesús MONTERO PAREJO, Lorenzo GARCÍA MORUNO</td>
</tr>
<tr>
<td>12:35</td>
<td>Lunch</td>
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</table>
02:00  REF018
Effect of floor design in a dairy cow house on ammonia emission - design approach and run off experiments
Dennis J.W. SNOEK, Peter GROOT KOERKAMP, Gert Jan G.J. MONTENY

02:25  REF485
Effect of ventilation control strategies, pen partition and slurry pit location on ammonia emission in a model pig house
Chayan KUMER SAHA

02:50  REF407
Airborne particles and microclimate distribution in a livestock building
Thomas BARTZANAS, Baxevanou CATERINA, Dimitris FIDAROS, Dimitris PAPANASTASIOU, Constantinos KITTAS

03:15  REF022
System approach to the use of the resource energy and the production of greenhouse gas emissions in dairy farming with focus on feeding strategies
Simone KRAATZ, Werner BERG

03:40  REF024
Developments in innovative dairy cow using systems with low environmental pollution and improved animal welfare
Lien TERRYN, Gert-Jan MONTENY, Aad JONGEBREUR

04:05  REF007
Evaluation of calcium phosphate as an additive to reduce gas emissions from rabbit manure
Fernando ESTELLÉS, Natalia FERNÁNDEZ-VENDRELL, Ana JIMÉNEZ-BLENGUER, Antonio TORRES, Salvador CALVET

04:30  Coffee break
ROOM 2
INFORMATION TECHNOLOGY II: INFORMATION, EXCHANGE AND ONTOLOGY
02:00 pm

02:00  REF160
Ontologies in agriculture
Catherine ROUSSEY, Jean-Pierre CHANET, Jean-Claude CHAMPOMIER, Vincent ABT, Vincent SOULIGNAC

02:25  REF155
AGROXML as a fundamental development for data exchange in the agricultural domain
Martin KUNISCH, Daniel MARTINI

02:50  REF163
The ICT6agri meta knowledge base: designing a web based tool for mapping and analysing research and development on ICT and robotics in agriculture and environmental related businesses
Jürgen VANGEYTE, Stephanie VAN WEYENBERG, Jeroen BAERT, Kristina VON BOBRUTZKI, Iver THYSEN

03:15  REF157
Fitting information systems to the requirements of agricultural processes: a flexible approach using AGROXML and linked data technologies
Daniel MARTINI, Ronnie KULLICK, Mario SCHMITZ, Martin KUNISCH

03:40  REF165
A service-oriented architecture for knowledge about agricultural production standards
Edward NASH, Jens WIEBENSOHN, Raimo NIKKILÄ, Liisa PESONEN, Ilkka SEILONEN, Kai OETZEL, Sascha KLUGER, Claus SOENSEN, Spyros FOUNTAS, Anna VATSANIDOU

04:05  REF166
Ontology engineering to support assessment of compliance to agricultural production standards
Edward NASH, Jens WIEBENSOHN, Raimo NIKKILÄ, Anna VATSANIDOU, Spyros FOUNTAS, Ralf BILL

04:30  Coffee break
ROOM 3
CROP PROTECTION : SPRAYING II
02:00 pm

02:00  REF227
Crop adapted spray application: first field tests on the sprayer prototype developed in the ISAFRUIT project
Paolo BALSARI, Paolo MARUCCO, Mario TAMAGNONE, Grzegorz DORUCHOWSKI, Jan VAN DE ZANDE, Marcel WENNEKER

02:25  REF243
Development of high level electrostatic charging air assisted sprayer utilizing conventional pressure nozzles
Samuel GAN-MOR, Benjamin RONEN, Keisar OHALIAV

02:50  REF240
Spraying quality assessment of a mist blower used on banana crops
Jean-Paul DOUZALS, Carole SINFORT, Eric COTTEUX

03:15  REF311
Residual disposal and cleaning of direct injection systems for pesticide application
Malte DÖRPMUND, Jiri VONDRIKCA, Xiang CAI, Peter SCHULZE LAMMERS

03:40  REF457
Construction and investigation of a field sprayer with direct nozzle injection of Plant Protection Products (PPP)
Martin WALGENBACH, Jiri VONDRIKCA, Roland LUTZ, Xiang CAI, Malte DÖRPMUND, Peter SCHULZE-LAMMERS

04:05  End of session

04:30  Coffee break
### ROOM 4

**ERGONOMICS AND OPERATOR SAFETY: MACHINERY II**

**02:00 pm**

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<td>REF254</td>
<td>Frequency roll response of a farm tractor's cab</td>
<td>Michele MATTETTI, Giovanni MOLARI, Marco PESCE, Massimo GRILLO, Michele FORTE, Enrico SEDONI</td>
</tr>
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<td>REF137</td>
<td>Sensitivity of the absorbed energy into a rops during a rollover situation: comparison to the security level proposed into OECD code 4</td>
<td>Roland LENAIN, Emmanuel HUGO, Thierry LANGLE</td>
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<tr>
<td>REF445</td>
<td>Development and investigation of a completely semi-active suspension system for full spring mounted tractors</td>
<td>Henning MEYER, Stephan HAMMES</td>
</tr>
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<td>REF133</td>
<td>Experimental assessment of safety and comfort of operator's workplace using subjective and objective measurements on two models of tractor</td>
<td>Eugenio CAVALLO, Ester FERRARI</td>
</tr>
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<td>REF126</td>
<td>Taking into account characteristics of falling drop objects to improve agricultural equipment safety</td>
<td>Mamoudou BALL, Simon SAYEGH, Nicolas TRICOT</td>
</tr>
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<td>REF245</td>
<td>Evaluation of the energy absorbed by the rops frame in controlled tractor overturning with different type configurations</td>
<td>Enrico CAPACCI, Andrew Louis GUZZOMI, Valda RONDELLI</td>
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</table>

**04:30** Coffee break
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<th>Authors</th>
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<tbody>
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<td>02:00</td>
<td>REF276</td>
<td>Impact recording system to characterise centrifugal spreading</td>
<td>Sylvain VILLETTE, Emmanuel PIRON, Richard MARTIN, Damien COURREAU, Denis MICLET, Christelle GEE</td>
</tr>
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<td>02:25</td>
<td>REF041</td>
<td>Redistribution of contaminants in pig slurry after direct injection to soil</td>
<td>M. G. Mostofa AMIN, Tina BECH, Anita FORSLUND, Søren O PETERSEN, Mette LÆGDSMAND</td>
</tr>
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<td>02:50</td>
<td>REF262</td>
<td>Mineral spreader eco-design: method and real application example</td>
<td>Emmanuel PIRON, Denis MICLET, Lionel LEVEILÉ, Daniel CLOCHARD, Sylvain VILLETTE</td>
</tr>
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<td>03:15</td>
<td>REF314</td>
<td>Evaluation of variable rate technology for fertilizer application in permanent pastures</td>
<td>João SERRANO, José PEÇA, Nunes PEDRO</td>
</tr>
<tr>
<td>03:40</td>
<td>REF251</td>
<td>A prototype spreader for research</td>
<td>Jean-Christophe ROUX, Jacky MAZOYER, Marc ROUSSELET</td>
</tr>
<tr>
<td>04:05</td>
<td>REF260</td>
<td>Assessing Nitrogen losses after sewage sludge spreading: a method based on simulation models and spreader technological performances</td>
<td>Thomas PACAUD, Marilyse PRADEL, François THIRION, Michel CARIOLLE</td>
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<tr>
<td>04:30</td>
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<td>Coffee break</td>
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<td>02:00</td>
<td>REF017</td>
<td>Analysis of the efficiency of dairy farms feeding systems in Galicia</td>
<td>Sonia IRIMIA FERNÁNDEZ, Carlos José ÁLVAREZ LÓPEZ, César RESCH ZAFRA</td>
</tr>
<tr>
<td>02:25</td>
<td>REF012</td>
<td>Automatic feeding systems for dairy cattle - potential for optimization in dairy farming</td>
<td>Anne GROTHMANN, Franz NYDEGGER, Christoph MORITZ, Carlo BISAGLIA</td>
</tr>
<tr>
<td>02:50</td>
<td>REF040</td>
<td>An automatic fishing machine for sea ranching of fish</td>
<td>Boaz ZION, Assaf BARKI, Yosef G RINSHPON, Lavi ROSENFELD, Ilan KARPLUS</td>
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<td>03:15</td>
<td>REF026</td>
<td>Dairy cubicle housing layout: effect on milk yield</td>
<td>Geir NÆSS, Knut Egil BØE, Olav ØSTERÅS</td>
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<tr>
<td>03:40</td>
<td>REF030</td>
<td>Comparison of labour requirement and mechanization costs of five strategies for zero-grazing of dairy cows in the Netherlands</td>
<td>Johanna POMPE, Peter GROOT KOERKAMP, Anton STOKMAN</td>
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<tr>
<td>04:05</td>
<td>REF029</td>
<td>Impact of process related problems on water intake pattern of broiler chicken</td>
<td>Arno PLUK, Ozlem CANGAR, Claudia BAHR, Erik VRANKEN, Gijs VAN DEN BERG, Daniel BERCKMANS</td>
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<tr>
<td>04:30</td>
<td>Coffee break</td>
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02:00  REF318
Precision farming results based on the mole
Eddie LOONSTRA, Fenny VAN EGMOND

02:25  REF319
Geophilus Electricus – A new soil mapping system
Erika LUECK, Joerg RUEHLMANN

02:50  REF307
Calibration of a visible and near infrared spectroscopy for soil analysis at field scales across three european farms
Boyan KUANG, Abdul Mounem MOUAZEN

03:15  REF317
Influence of past land-use on the geostatical analysis of soil heterogeneity for site specific fertilization
Maxime BECU, Charles DUVAL, Vincent DEBANDT, David MAHIEU, Jean-Marc LLORENS

03:40  REF383
Improvements in the prediction of unsaturated soil hydraulic conductivity using bimodal lognormal relationships
Nunzio ROMANO, Paolo NASTA, Gerardo SEVERINO, Jan W. HOPMANS

04:05  REF386
Effect of moisture content on prediction of organic carbon and Ph using visible and near infrared spectroscopy
Yucel TEKIN, Zeynel TUMSAVAS, Abdul M. MOUAZEN

04:30  Coffee break
02:00  REF071
An underground experimental autonomous platform for soil moisture monitoring
Ioannis GRAVALOS, Spyros LOUTRIDIS, Dimitrios MOSHOU, Theodoros GIALAMAS,
Dimitrios KATERIS, Zisis TSIROPOULOS, Panagiotis XYRADAKIS, Margaritis SAVOULIDIS,
Zisis KOUTSOFITIS

02:25  REF456
Estimating greenhouse ventilation, crop transpiration and roof condensation using
an unknown-input-observer
Eldert J. VAN HENTEN, C. STANGHELLINI, J. BONTSEMA, T. GALLARDO

02:50  REF178
Non destructive NMR methods for watercore detection in apples
Angela MELADO, Pilar BARREIRO, Jesus VAL, Alvaro BLANCO, Jesus RODRIGUEZ-CABELLO,
Ignacio RODRIGUEZ

03:15  REF181
Determine the mechanical bruise area on golden delicious apple using fluorescence
images
Yi-Chich CHIU, Xing-Liang CHOU, Tony E. GRIFT, Mu-Te CHEN

03:40  REF443
Monitoring spatial and temporal distribution of temperature and relative humidity
in greenhouses based on wireless sensor technology
Jos BALENDONCK, Erik VAN OS, Rob VAN DER SCHOOR, Bart VANTUIJL, Paul KEIZER

04:05  REF081
Large scale screening of intact castor seeds using Time Domain (TD)-NMR and
chemometrics
Shahar SHAHAR NIZRI, Paula BERMANN, Zeev WIESMAN, Yisrael PARMET

04:30  Coffee break
## ANIMAL PRODUCTION TECHNOLOGY

**REF025**
**PARTIAL LEAST SQUARES REGRESSION FOR THE PREDICTION OF SELECTED EWE’S MILK PROPERTIES AND DIFFERENTIATING BETWEEN PASTURE AND BOX FEEDING USING VISIBLE AND NEAR INFRARED SPECTROSCOPY**
Abdul Mounem MOUAZEN, Sami DRIDI, Hamadi ROUISSI, Josse DE BAERDEMAEKER, Herman RAMON

**REF035**
**THE POTENTIAL OF VIS/NIR AND MID-IR SPECTROSCOPIC ANALYSIS OF RAW MILK FOR COW HEALTH MONITORING**
Wouter SAEYS, Ben AERNOUTS, Evgeny POLSHIN, Jeroen LAMMERTYN

**REF042**
**USING NIR SPECTROSCOPY FOR DETERMINING THE COWS’ FEEDING FROM CHEESES SAMPLES**
Donato ANDUEZA, Michel JESTIN, Isabelle CONSTANT, Bruno MARTIN

**REF044**
**APPLICATION OF SURFACE ACOUSTIC WAVE TECHNOLOGY WITH OPERATING FREQUENCY OF 2.45 GHZ FOR ELECTRONIC ANIMAL IDENTIFICATION – PRELIMINARY RESULTS**
Heinz BERNHARDT, Susanne THEIS, Steffen PACHE, Steffen ZIETZSCHMANN

**REF045**
**WATER USE EFFICIENCY ON DAIRY FARMS IN GALICIA, SPAIN**
Tomás S. CUESTA, Xan X. NEIRA, Carlos J. ÁLVAREZ

**REF046**
**DESIGN AND EVALUATION OF A FLUX CHAMBER FOR ENVIRONMENTAL AND BEHAVIOR STUDIES IN POULTRY**
Fernando ESTELLÉS BARBER, Victoria BOLUDA, Salvador CALVET, Aránzazu VILLAGRÁ

**REF047**
**LIFE CYCLE ASSESSMENT APPLICATION FOR SLURRY MANAGEMENT IN CONSTRUCTED WETLANDS.**
Alejandro FAGÍN, Md GÓMEZ-LÓPEZ, J. BAYO, A. FAGÍN, A. CABALLERO, A. FAZ

**REF048**
**THE WORK EFFICIENCY IN AUTOMATIC MILKING SYSTEMS IN GALICIAN DAIRY FARM (N.W. SPAIN)**
Jose Manuel PEREIRA, Angel CASTRO, Carlos AMIAMA, Javier BUENO

**REF049**
**DAILY PATTER OF WATER INTAKE OF SUCKER-COW HERD DURING INDOOR WINTER PERIOD**
Juliana MAČUHOVÁ, Christina JAIS, Peter OPPERMANN, Georg WENDL

**REF050**
**MULTIPLE REGRESSION ANALYSIS RESULTS OF EGG WEIGHT ESTIMATION USING MACHINE VISION TECHNIQUE**
Seyed Mehdi NASSIRI, Vahid ASADI, Mohammad Hossein RAOUFAT
REF053
AUTHENTICATION OF MEAT PRODUCTS UNDER QUALITY SIGN FROM VOLATILE BIOMARKERS
Jérémy RATEL, Elizabeth BAÉZA, Erwan ENGEL

REF415
MODULAR STRUCTURED NETWORK FOR THE MANAGEMENT OF LIVESTOCK MANURE IN RURAL AREAS
David GROHMANN, Maria Elena MENCONI

REF416
THE EFFECT OF A FLOATING CELLULAR PLASTIC COVER FOR SLURRY STORAGE ON THE EMISSION PREVENTION OF AMMONIA AND GREENHOUSE GASES
Maarit HELSTEDT, Ilkka SIPILÄ

REF440
EFFECTS OF FEEDING BY USING MOBILE CHICKEN WAGON IN GRASS FIELD AS ORGANIC BROILER PRODUCTION
Yoshiharu HOSOKAWA, Katsumi SAITO

REF367
ASSESSMENT OF DEBRIS FLOW MAGNITUDE IN SMALL CATCHMENTS OF THE LOMBARDY ALPS: THE VAL GOLA CASE STUDY
Daniele DE WRACHIEN, Stefano MAMBRETTI

REF409
LONG-TERM BIODEGRADABILITY IN SOIL BEHAVIOUR OF BIO-BASED BIODEGRADABLE POLYMERS
Demetres BRIASSOULIS, Ewa Rudnik

REF417
SIMULATION OF STEEL AND CONCRETE EMPTY SILOS BEHAVIOR UNDER NONUNIFORM WIND: FINITE ELEMENT APPROACH
Ramin JAFARI, Shadab HASSANIAN

REF418
VISUAL RELATIONSHIPS BETWEEN TYPICAL RURAL BUILDINGS AND NATIVE VEGETATION: A COMPARATIVE STUDY
Julio HERNANDEZ-BLANCO, Jacinto GARRIDO-VELARDE, Janne Margrethe KARLSSON, Lorenzo GARCI-MORUNO, Maria J. MONTERO-PAREJO

REF436
RE-USE OF INDUSTRIAL AND CONSTRUCTION AND DEMOLITION WASTES FOR THE ELABORATION OF RECYCLED ECO-EFFICIENT CONCRETES
Juan ANDRES, Manuel Ignacio GUERRA, Juliá M. MORAN, Pedro J. AGUADO, Cesar MEDINA

REF439
SAFFRON (CROCUS SATIVUS L.) SUBSTRATELESS HYDROPONIC CULTIVATION AND ILLUMINATION WITH LIGHT-EMITTING DIODES
Fátima FOLGOA BAPTISTA, Mariana CASTRO, Jose María DÚRAN, Luis Manuel NAVAS, Pablo MARTÍN-RAMOS, Jesus MARTÍN-GIL
REF460
EFFECT OF PRESS TEMPERATURE ON PHYSICAL AND MECHANICAL PROPERTIES OF PARTICLEBOARD MADE FROM GIANT REED (ARUNDO DONAX L.)
Clara Eugenia FERRANDEZ-VILENA GARCIA, Manuel FERRANDEZ-VILLENA, Teresa GARCIA ORTUÑO, F. Javier ANDREU RODRIGUEZ, M. Teresa FERRANDEZ GARCIA

ERGONOMICS AND HEALTH & SAFETY AT WORK

REF136
LIVING LAB AS USABILITY DEVELOPMENT PLATFORM FOR AGRICULTURAL TECHNOLOGIES
Hannu HAAPALA

REF140
THE ERGONOMICS ANALYSIS TOOLS FOR THE ASSESSMENT OF THE RISK OF MUSCULOSKELETAL DISORDERS DUE TO THE REPETITIVE MOVEMENTS OF THE UPPER LIMBS OF THE WORKERS EMPLOYED IN AGRICULTURE
Massimo CECCHINI, Riccardo MASSANTINI, Danilo MONARCA

REF141
GREENHOUSES ALMERIA TYPE: DEVELOPMENT OF COLLECTIVE PROTECTION SYSTEMS
Jose PEREZ, Ángel CARREÑO, Ángel Jesus CALLERON, Francisco Javier VÁZQUEZ, Julian SÁNCHES-HERMOSILLA, Francisco CESAR PÁEZ, Victor Jesus RINCÓN

BIOENERGY

REF110
EU AGROBIOGAS PROJECT
Paolo BALSARI, Thomas AMON, Helmuth DOHLER, Phil HOBBS, Monika HEIERMANN, Henrik MOLLER

REF113
MANAGEMENT OF ENERGY INPUTS IN A GREENHOUSE FUELLED BY SELF-PRODUCED WOOD BIOMASSES
Elio ROMANO, Carlo BISAGLIA, Federico NUCCI

INFORMATION TECHNOLOGY

REF145
DEVELOPMENT OF A FREEWARE FOR MOBILE DEVICES FOR DETERMINING PIPES IN TRICKLE IRRIGATION DESIGN
Antonio RUIZ-CANALES, José Miguel MOLINA-MARTINEZ

REF156
PINUS UNCI NATA AND PINUS SYLVESTRIS AUTOMATIC PINE CONE APERTURE DETECTION DEVICE
Maria Angeles GRANDE-ORTIZ, Gonzalo TEVAR, Martin VENTURAS, Rafael LLANES

REF170
AN EXAMPLE OF THE INFORMATION SYSTEM BENEFITS: THE MONITORING OF SPRAYERS INSPECTION IN FRANCE
Jean-Claude CHAMPOMIER, Stéphan BERNARD, Vincent POLVÈCHE, Géraldine ANDRÉ, Jean-Pierre CHANET
REF171
VITAMIN B2 DETECTION IN LIVED JEW’S MALLOW (CORCHORUS OLITORIUS) USING UV-EXCITED FLUORESCENCE MONITORING
Mitsuo FUKUDA, Kazuya SAKAI, Kenzo YAMAGUCHI, Kentaro YOGO

REF174
SPATIAL VARIABILITY OF SOIL TEXTURE FOR DEPLOYMENT OF A WIRELESS SENSORS NETWORK (WSN) FOR MANAGEMENT IN IRRIGATION
Antonio RUIZ-CANALES, José Miguel MOLINA-MARTINEZ, David ESCARABAJAL-HENAREJOS

COMMUNICATION AND RURAL DEVELOPMENT

REF347
MEASURE AND ANALYSIS THE FACTORS THAT INFLUENCE ON WHEAT CULTIVATION SUSTAINABILITY IN ISFAHAN PROVINCE OF IRAN
Mohammad GHAHDERIJANJ, Elham ABBASI
ROOM 1
PLENARY SESSION II
08:00 am

To be completed

10:00 Coffee break

ROOM 1
ANIMAL PRODUCTION TECHNOLOGY: AIR QUALITY II
10:30 am

10:30 REF010
Effect of a bioscrubber on NH3, N2O, CH4 and CO2 emissions from a pig facility in Spain
Fernando ESTELLÉS, Alberto ABAIGAR, Pilar MERINO, Salvador CALVET, Maite AQUILAR

10:55 REF051
Influence of animal activity and weight gain on the emission rates of greenhouse gases and ammonia from a fattening pig building
Ngwabie NGWA MARTIN, Jeppsson KNUT-HAKAN, Nimmermark SVEN, Gustafsson GOSTA

11:20 REF410
Morphology and chemical composition of dust from livestock houses
María CAMBRA-LÓPEZ, Lai T.L. HUONG, Txomin HERMOSILLA, Marta MONTERO, André J.A. AARNINK, Nico W.M. OGINK

11:45 REF055
Greenhouse gas emissions from stored slurry with and without different covers
Lena RODHE, Johnny ASCUE, Åke NORDBERG

12:10 Lunch
<table>
<thead>
<tr>
<th>Time</th>
<th>Reference</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>10:30</td>
<td>REF308</td>
<td>Weed mapping using digital image processing and spatial statistics</td>
<td>Mario CUPERTINO DA SILVA JUNIOR, Daniel MARCAL DE QUEIROZ, Francisco DE ASSIS DE CARVALHO PINTO, Jaime GOMEZ Gil, Gonzalo RUIZ RUIZ, Luis Manuel NAVAS GRACIA</td>
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<tr>
<td>10:55</td>
<td>REF057</td>
<td>Automatic detection of broad-leaved dock in Grassland</td>
<td>Thomas ANKEN, Martin HOLPP, Dejan SEATOVIC, Hansjörg KUTTERER</td>
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<td>11:20</td>
<td>REF083</td>
<td>Automatic detection of weeds in corn field with induced fluorescence</td>
<td>Bernard PANNETON, Serge GUILLAUME, Guy SAMSON, Jean-Michel ROGER, Louis LONGCHAMPS</td>
</tr>
<tr>
<td>11:45</td>
<td>REF322</td>
<td>Performance evaluation of a crop / weed discriminating microsprayer</td>
<td>Henrik Skov MIDTIBY, Rasmus Nyholm JØRGENSEN, Kim Johan ANDERSSON</td>
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<tr>
<td>12:10</td>
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### ROOM 3
#### SOIL COMPACTION I
10:30 am

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<tr>
<td>10:30</td>
<td>REF329</td>
<td>Controlled traffic farming (CFT) -why and how.</td>
<td>David TINKER, Tim CHAMEN, Hans Henrik PEDERSEN</td>
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<tr>
<td>10:55</td>
<td>REF239</td>
<td>Machine weight and soil compaction: TASC V2.0.XLS – A practical tool for decision-making in farming</td>
<td>Etienne DISERENS, Myriam CHANET, Anicet MARIONNEAU</td>
</tr>
<tr>
<td>11:20</td>
<td>REF229</td>
<td>Analysis of mechanical soil stress on core section and head section in plant production</td>
<td>Heinz BERNHARDT, Marc SCHREIBER, Hermann SEUFERT</td>
</tr>
<tr>
<td>11:45</td>
<td>REF384</td>
<td>TERRANIMO® - A web-based tool for assessment of the risk of soil compaction due to agricultural field traffic</td>
<td>Matthias STETTLER, Thomas KELLER, Per SCHJØNNING, Mathieu LAMANDÉ, Poul LASSEN, Jørgen PEDERSEN, Peter WEISSKOPF</td>
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<td>12:10</td>
<td>Lunch</td>
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**Tuesday 7th of September**
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<tr>
<td>10:30</td>
<td>REF006</td>
<td>Application of a centralized aerobic treatment option for the local management of piggery slurry</td>
<td>Colin BURTON, Christian SIEGLER, Eva HERRERO, Marta TERESA, Fabrice GUIZIOU, Arturo DAUDEN</td>
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<tr>
<td>10:55</td>
<td>REF423</td>
<td>A statistical model for predicting the effects of C and N biodegradability, humidity and oxygen accessibility on ammonia emission during animal manure composting</td>
<td>Didier OUDART, Paul ROBIN, Mélynda HASSOUNA, Jean-Marie PAILLAT</td>
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<tr>
<td>11:20</td>
<td>REF429</td>
<td>Drainage characteristics of liquids on solid floor surfaces in cattle housing</td>
<td>Beat STEINER, Margret KECK, Katharina WEBER</td>
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<td>11:45</td>
<td>REF425</td>
<td>Combined anaerobic and activated sludge aerobic/anoxic treatment for piggery wastewater</td>
<td>Rajinikanth RAJAGOPAL, Pierre ROUSSEAU, Romain GIRAULT, Fabrice BÉLINE</td>
</tr>
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<td>12:10</td>
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<td>10:30</td>
<td>REF065</td>
<td>Speeding up off-road machinery development by reproducing field vibrations on a hydraulic 4-poster</td>
<td>Tom COEN, Josse DE BAERDEMAEKER, Jan ANTHONIS, Wouter SAEYS</td>
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<tr>
<td>10:55</td>
<td>REF458</td>
<td>Food miles and localized vegetable production in the north Baltic region</td>
<td>Alfred WONG</td>
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<tr>
<td>11:20</td>
<td>REF274</td>
<td>A new single wheel tester - global traction and motion resistance measuring system</td>
<td>Mark SZENTE, Sandor KRISTON, Jean-Francois FORISSIER</td>
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<tr>
<td>11:45</td>
<td>REF238</td>
<td>A review of the impacts of the tires and their usage, on the fuel consumption of agricultural tractors</td>
<td>Domnique J. DESSEVRE</td>
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<td>12:10</td>
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<td>Lunch</td>
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10:30 REF412
Analysis of the response of elastically supported wind-break panels under wind load
Anastasios GIANNOLIS, Demetres BRIASSOULIS, Antonios MISTRIOTIS

10:55 REF404
Mechanical properties of the plastic tubular silo storage
Attila CSATÁR, Fenyvesi LÁSZLÓ

11:20 REF414
Discrete element’s capability of predictions material behaviour in a 3-D scale silo with a hopper at its base
Carlos GONZALEZ-MONTELLANO, Alvaro RAMIREZ, Eutiquio GALLEG0, Jose Maria FUENTES, Francisco AYUGA

11:45 REF434
Coloured covering materials for protected cultivation of cherry trees
Giuliano VOX, Evelia SCHETTINI, Flavio Roberto DE SALVADOR, Giacomo SCARASCIA MUGNOZZA, Giuliano VOX

12:10 Lunch
ROOM 7

POST-HARVEST TECHNOLOGY I (DRYING, SORTING, STORAGE)
10:30 am

10:30 REF305
CFD approach of biomass drying process
Thomas BARTZANAS, Dionysis BOCHTIS, Claus SØRENSEN, Ole GREEN, Spyros FOUNTAS, Athanasios SAPOUNAS

10:55 REF100
Development of smart sensors for the supervision of a solar dryer: agro-products dehydration application
Eva Cristina CORREA-HERNANDO, Francisco Javier ARRANZ, Belen DIEZMA, Heidi Tatiana JIMÉNEZ, Jose Ignacio ROBLA, Luis RUIZ-GARCÍA, Javier GARCÍA-HIERRO, Pilar BARREIRO, Constantino VALERO

11:20 REF218
Selection of the best model for some physical properties of garlic (ALLIUM SATIVUM)
Akbar ARABHOSSEINI, Reza BARZEGAR, Javad KHIZAEI, Mohammad Hossein KIANMEHR

11:45 REF476
Storability of fruit in packages with plastic films
Ilaria MALUA, Klaus GOTTSCHALK

12:10 Lunch
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<tr>
<td>10:30</td>
<td>REF378</td>
<td>Effect of flushing frequency on emitter clogging in surface and subsurface dip irrigation</td>
<td>Jaume PUIG-BARGUES, Gerard ARBAT, Maha ELBANA, Miquel DURAN-ROS, Javier BARRAGÁN, Francisco RAMÍREZ DE CARTAGENA, Freddie R. LAMM</td>
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<td>10:55</td>
<td>REF301</td>
<td>Evaluation of palm trees water status using remote thermal imaging</td>
<td>Victor ALCHANATIS, Adi PRIGOJIN, Yafit COHEN, Asher LEVI, Victoria SOROKER, Yuval COHEN, Effi TRIPLER, Or SHAPIRA</td>
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<td>11:20</td>
<td>REF487</td>
<td>Experimental evaluation of water saving technique for corn irrigation based on upgraded scheduling and simulation of the watering process</td>
<td>Lorenzo ALLAVENA, Patrizia BUSATO</td>
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<td>11:45</td>
<td>REF339</td>
<td>Calibration of vineyard crop coefficients and yield response factor to support precision irrigated viticulture</td>
<td>Javier J. CANCELA, Maria FANDINO, Benjamin J. REY, Luis S. PEREIRA</td>
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<tr>
<td>12:10</td>
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<td>Lunch</td>
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<td>10:30</td>
<td>REF036</td>
<td>Pig housing and reported respiratory symptoms in workers</td>
<td>Nimmermark SVEN</td>
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<tr>
<td>10:55</td>
<td>REF144</td>
<td>An automated wearable system for real-time human position monitoring during manual fruit harvesting</td>
<td>Yiannis AMPATZIDIS, Stavros VOUGIOUKAS</td>
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<tr>
<td>11:20</td>
<td>REF021</td>
<td>Farm fire research</td>
<td>Tapani KIVINEN, Kim KAUSTELL, Satu RAUSSI</td>
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<tr>
<td>11:45</td>
<td>REF139</td>
<td>Working environment in a mobile system for beef production during the winter</td>
<td>Qiu Qing GENG, Eva SALOMON</td>
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<td>12:10</td>
<td>Lunch</td>
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ROOM 1

ANIMAL PRODUCTION TECHNOLOGY: AIR QUALITY III

01:40  REF422
Development of water scrubbers to reduce fine dust emission from poultry houses
Nico OGINK, Jan VAN HARN, André AARNINK, Maria CAMBRA LOPEZ

02:05  REF013
Small group keeping - a new german system for laying hens
Torsten HINZ, Tatjana WINTER

02:30  REF038
Dispersion of ambient ammonia in the surrounding of a broiler farm
Kristina VON BOBRUTZKI, Dieter SCHERER, Hans-Joachim MÜLLER, Werner BERG

02:55  REF039
Dust reduction from aviary housing for laying hens by ionization and oil spraying
Albert WINKEL, Andre AARNINK, Rick VAN EMOUS, Julio MOSQUERA, Nico OGINK

03:20  REF465
Design of manure gas exhaustion to reduce ammonia concentrations in loose-housing systems for laying hens
Gosta GUSTAFSSON, E. VON WACHENFELT

03:45  Coffee break
Long period measurements of rainfall and soil erosion in grass covered and cultivated sloping vineyards in the Alto Monferrato region (NW ITALY).
Marcella Biddoccu, Eugenio Cavallo

The impact of the cropping system management on soil erosion and fertility in the north-eastern Romania
Costica Ailincai, Gerard Jitareanu, Daniel Bucur, Lucian Raus, Feodor Filipov, Despina Ailincai

Effect of conservation tillage and planting methods on the soil properties, grain drill performance, wheat yield, and wheat yield components
Sadegh Afzalinia, Ali Khosravani, Arjang Javadi, Dadgar Mohammadi, Mansur Alavimanesh

No-till and basin tillage for reducing runoff and sediment yield on centre-pivot irrigated maize in a Mediterranean soil
Luis Leopoldo Silva, José Rafael Marques-da-Silva, António M.V. Pisco, César J.V. Torres

Soil structure explains some within-field variation in crop yield
Thomas Keller, Janine Sutter, Knud Nissen, Tomas Rydberg

Instrumentation of no-till and ploughed experimental plots- temperature modeling and measurements around the year
Ossi Knuutila, Mikko Hautala, Ansa Palojarvi, Laura Alakukku

Coffee break
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<tbody>
<tr>
<td>01:40</td>
<td>REF064</td>
<td>Throughput control on a combine harvester using stochastic model-based predictive control</td>
<td>Tom COEN, Josse DE BAERDEMAEKER, Wouter SAEYS</td>
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<tr>
<td>02:05</td>
<td>REF267</td>
<td>Controlling a self-propelled sugar beet cleaner loader using isobus technology and object-oriented open source software</td>
<td>Matthias ROTHMUND, Michael GALLMEIER</td>
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<tr>
<td>02:30</td>
<td>REF234</td>
<td>Effect of high frequencies and low amplitudes of vibration on coffee fruit harvesting efficiency</td>
<td>Geice PAULA VILLIBOR, Daniel MARCAL DE QUEIROZ, Francisco DE ASSIS DE CARVALHO PINTO, Denis MEDINA GUEDES</td>
</tr>
<tr>
<td>02:55</td>
<td>REF088</td>
<td>Suitability of pinus pinea (L.) pine cone forselective mechanical harvesting by vibration</td>
<td>Sergio CASTRO-GARCIA, Gregorio L. BLANCO-ROLDAN, Jesus A. GIL-RIBES</td>
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<td>03:20</td>
<td>REF256</td>
<td>A machine for harvesting and in-field sorting of citrus fruits</td>
<td>Enrique MOLTO, Abelardo GUTIERREZ, Patricia CHUECA, Santiago ALEGRE, Santiago LOPEZ, Enric ARGILES, Rosana MORENO, Belinda CARMONA, Cruz GARCE RA</td>
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<td>03:45</td>
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ROOM 4
FERTILIZATION II
01:40 pm

01:40 REF103
Logistic study to compare slurry distribution: tanker vs umbilical system
Remigio BERRUTO, Patrizia BUSATO

02:05 REF264
Improving environmental performances of organic spreading technologies through the use of life cycle assessment
Marilys PRADEL, Marc ROUSSELET, Thomas PACAUD, Stéphanie LACOUR

02:30 REF268
Environmental performance indicators of organic spreading machines
Marc ROUSSELET, Jean Christophe ROUX, Jacky MAZOYER, Marilys PRADEL, Pierre HAVARD, Jean Yves COSNIER

02:55 REF483
A spreader for solid fraction application in orchards
Paolo BALSARI, Elio DINUCCIO, Fabrizio GIOELLI

03:20 REF253
Slug pellet spreading: the double-disc performances available with a single disc spreader
Denis MICLET, Emmanuel PIRON, Vivien BEURRIER, Xavier CREBASSA, Sylvain VILLETTE

03:45 Coffee break
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<tr>
<td>01:40</td>
<td>REF470</td>
<td>Life cycle assessment of sunflower oil produced in Greece and used as fuel in tractor diesel engines</td>
<td>Athanasios BALAFOUTIS, Fausto FREIRE, George PAPADAKIS</td>
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<td>02:05</td>
<td>REF104</td>
<td>The use of forestry biomass for co-generation in a mountain territory</td>
<td>Antoniotto GUIDOBONO CAVALCHINI, Francesco Maria TANGORRA, Gabriele MARCHESI, Gian Luca ROGNONI</td>
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<td>02:30</td>
<td>REF108</td>
<td>Energy transformation of herbaceous biomass irrigated with treated wastewater</td>
<td>Giovanni MOLARI, Maurizio BORIN, Mirco MILANI, Matteo PASSONI, Attilio TOSCANO, Giulia VILLANI, Demetrio Antonio ZEMA, Santo Marcello ZIMBONE</td>
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<td>02:55</td>
<td>REF109</td>
<td>Comparative assessment of different methods to determine the biogas yield</td>
<td>Susanne OHL, Eberhard HARTUNG</td>
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<td>03:20</td>
<td>REF115</td>
<td>Utilisation of by-products from ethanol production as substrate for anaerobic digestion</td>
<td>Flavio DE PAOLI, Christian LEONHARTSBERGER, Alexander BAUER, Thomas AMON</td>
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<td>01:40</td>
<td>REF403</td>
<td>Properties of thermal screens used for energy saving in greenhouses</td>
<td>Niels Erik ANDERSSON</td>
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<td>02:05</td>
<td>REF430</td>
<td>Improvement of hemispherical light transmittance and haze of greenhouse covering materials using microstructures</td>
<td>Gert-Jan SWINKELS, Piet SONNEVELD, Henk Jan HOLTERMAN</td>
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<td>02:30</td>
<td>REF413</td>
<td>Vegetable cropping in semi-arid north-west India in greenhouse</td>
<td>Girja SHARAN, T. MADHAVAN</td>
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<td>02:55</td>
<td>REF450</td>
<td>Experimental investigation of the potential of Near Infrared Heating (NIR) in comparison to forced air heating in greenhouse</td>
<td>Angeliki KAVGA, Th. PANIDIS, G. ALEXOPOULOS</td>
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<td>03:20</td>
<td>REF431</td>
<td>Greenhouse with a CPV system based on NIR reflecting lamellae</td>
<td>Gert-Jan SWINKELS, Piet SONNEVELD, Bart VAN TUIJL, Gerard BOT</td>
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01:40  REF453
Improving work methods in flowers mixed farms
Gad VITNER, Avital BECHAR

02:05  REF182
Effect of plant surface microstructure and material on bacterial attachment
Bunpot SIRINUTSOMBOON, Michael DELWICHE

02:30  REF069
Simulation based performance evaluation of co-current and counter-current flows secondary packaging plants for food products
Paolo GAY, Gustavo BELFORTE, Lorenzo COMBA

02:55  REF198
Procedure for calibration transfer between seasons for on-line NIR evaluation of SSC in onion breeding lines
Adolfo MOYA-GONZÁLEZ, Pilar BARREIRO, Jean Michel ROGER, Belén DIEZMA, Jaime ORTIZ-CAÑAVATE

03:20  REF193
Non linear finite element analysis of the static mechanical bruising for apple fruit
Ramin JAFARI, Seyed Mehdi NASSIRI

03:45  Coffee break
ROOM 8
RURAL DEVELOPMENT AND EDUCATION
01:40 pm

01:40 REF342
Sustainability indicators for rural development
Marta CARDIN-PEDROSA, Carlos Jose ALVAREZ-LOPEZ

02:05 REF348
Working with people: rural development project in communities Aymaras of Peru
Ignacio DE LOS RIOS, Adolfo CAZORLA MONTERO, Jose Luis YAGUE BLANCO,
Daniel HERNANDEZ CASTELLANO

02:30 REF444
Structural developments towards the biosystems engineering programs of studies in Europe
Demetres BRIASSOULIS, Panagiotis PANAGAKIS, Kestutis NAVICKAS, Laura ALAKUKKU,
Jukka AHOKAS

02:55 REF344
Postgraduate studies in biosystems engineering to acquire a doctor degree in Spain
Esperanza AYUGA-TELLEZ, Conception GONZALES, Angeles GRANDE-ORTIZ,
José Maria FUENTES, Alvaro RAMIREZ, Francisco AYUGA

03:20 REF353
New master's degree programme for rural enterprise management
Antti PELTOLA, Birgitta VARJONEN

03:45 Coffee break
ROOM 9
POWER AND MACHINERY: OPTIMIZATION, ENERGY AND TIRES II
01:40 pm

01:40 REF250
The contribution of field experiments to life cycle assessment of agricultural works: application to spreading works
Stephanie LACOUR, Yves GALIEGUE, Pierre GUISCAFRE, Philippe GALLE, Gilles VAITILINGOM, Marily PRADEL

02:05 REF265
Mobile electric power supply for agricultural machinery and implements
Heinrich PRANKL, Florian DEMMELMAYR, Manfred NADLINGER, Manfred SCHRÖDL

02:30 REF236
Ecofuel: a spatial database towards a less fuel and power consuming agriculture in Brittany
Didier DEBROIZE, Pierre HAVARD, Gilbert COSSEC

02:55 End of session

03:45 Coffee break
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<td>REF085</td>
<td>DESIGN, DEVELOPMENT AND FIELD EVALUATION OF A SEMI–AUTOMATIC HAULED WHEELED SAFFRON HARVESTER</td>
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<td>Akbar SANAEI, Behnam SAFABAHAR</td>
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<td>REF093</td>
<td>EVALUATION OF ROUTE MANAGEMENT SOFTWARE FOR SELF-PROPELLED FORAGE HARVESTERS ROAD DISPLACEMENTS</td>
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<td>Carlos AMIAMA, Javier BUENO, Carlos J. ÁLVAREZ</td>
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<td>REF097</td>
<td>DESIGN, FABRICATION AND EVALUATION OF A STRAIN GAUGE-BASED BRUSHLESS TORQUE METER EQUIPPED WITH MMC CARD DATA LOGGER</td>
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<td>Mohammad Mehdi MAHARLOUIE, Mohammad LOGHAVI, Saadat KAMGAR</td>
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<td>REF123</td>
<td>CLIMATE CHANGE IMPACTS ON TILLAGE SYSTEM AND MACHINERY</td>
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<td>Janos Peter RADICS, Jori ISTVAN, Farkas ZSOLT, Farkas PAL, Olah MENYHERT</td>
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<td>REF125</td>
<td>NEW SEED DRILL FOR SOWING UNDER PLANT PLACE SETTING ADAPTED TO THE COUNTRIES OF THE SOUTH</td>
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<td>Anicet MARIONNEAU, Bruno VADON, Michel RAGUIN, Michel ROCHOUX</td>
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<td>REF225</td>
<td>DEVELOPING A GENERAL FINITE ELEMENT MODEL FOR VIBRATORY SIMULATION OF WHOLE TREE SYSTEM</td>
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<td>Jahangir AUPOUR, Asad MODARRES MOTLAGH, Aladin RAHMANI DIDAR</td>
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<td>REF237</td>
<td>EVALUATION OF DIFFERENT SEEDING PRINCIPLES TO ESTABLISH MAIZE FOR SILAGE</td>
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<td>Markus DEMMEL, Hans KIRCHMEIER, Andreas WEBER</td>
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<td>REF258</td>
<td>IMPROVING THE APPLICATION TECHNIQUE FOR SILAGE ADDITIVE IN LOADER WAGONS AND CHOPPERS</td>
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<td>Mats NYSAND, Jarkko LEPPÄLÄ</td>
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<td>REF266</td>
<td>DESIGN OF A DOUBLE-ROW SUGARCANE BILLET PLANTER</td>
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<td>Jalil RAZAVI, Moslem NAMJOO</td>
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<td>REF272</td>
<td>MODELS OF SOIL COMPACTION BY AGRICULTURAL MACHINERIES WHEELING</td>
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<td>Pieranna SERVADIO, Beni CLAUDIO, Simone BERGONZOLI, Davide DELL’UNTO</td>
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EFFICIENCY OF THE AIR-FLOW DISTRIBUTION SYSTEM OF A PRECISION DRILL IN THE SOWING OF THREE GRADED SEEDS
Roberto FANIGLIULO, Cesare CERVELLINI, Gino BRANNETTI, Renato GRILLI, Daniele POCHI

METHODICAL APPROACH FOR THE COMPARISON OF ALTERNATIVE TRACTION DRIVES IN MOBILE WORKING MACHINES
Markus HECKMANN, Heinz BERNHARDT

APPLE PRODUCTION TRIALS ON A Y SHAPED TRELLISES
Zoltán LÁNG, Sándor KURTÁN, Sándor NAGY, Kálmán SERLEGI, Botond SINÓROS-SZABÓ

IMPROVING THE EFFICIENCY OF MACHINE UTILIZATION BY RATIONALIZATION OF SHIFT-HOUR PERFORMANCE OF POWER MACHINES CONSIDERING THE FARM SIZE
Laszlo MAGO

MECHANICAL THINNING OF PEACHES WITH HAND-HELD BRUSHERS AT BLOOM AND POST-BLOOM
Bernardo MARTIN GORRIZ, Antonio TORREGROSA MIRA, Jesus GARCIA BRUNTON, Regino ARAGON PALLARES

DEPOSITION IN DIFFERENT CANOPY ZONES OF CITRUS TREES VARYING AIR FLOW PROVIDED BY AN AIR-ASSISTED SPRAYER
Enrique ORTÍ, Antonio SOZZI, Luis VAL

CROP CONFIGURATION IN A GREENHOUSE IN RELATION TO THE EFFICIENCY OF OPERATING SELF-PROPELLED EQUIPMENT
Francisco PÁEZ CANO, Víctor Jesús RINCÓN, Julián SÁNCHEZ-HERMOSILLA, Milagros FERNÁNDEZ, Ángel CARRENO, Ángel CALLEJÓN

FIELD PERFORMANCES OF THREE PRECISION DRILLS WITH A DIFFERENT NUMBER OF SOWING UNITS
Roberto FANIGLIULO, Daniele POCHI, Renato GRILLI, Gino BRANNETTI, Cesare CERVELLINI

INFLUENCE OF THE SHAPE OF AGRICULTURAL TIRE AND TREADS ON PRESSURE GRADIENT ON SOIL
Elio ROMANO, Carlo BISAGLIA, Federico NUCCI, Maurizio CUTINI

ENERGY CONSUMPTION IN PRODUCTION OF FODDER BARLEY AND SILAGE IN DAIRY FARMS
Antti SUOKANNAS, Matts NYSAND
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DEVELOPMENT A TRACTOR FRONT-MOUNTED RICE REAPER WITH A HYDRO-MOTOR DRIVE MECHANISM
Reza TABATABAEKOLOOR

REF295
INVESTIGATION THE PICKING TECHNIQUES FOR DEVELOPING AND IMPROVING THE MECHANICAL HARVESTING OF CITRUS
Reza TABATABAEKOLOOR

REF296
CITRUS FRUIT DAMAGE DURING MECHANICAL HARVESTING ACCORDING TO THE RECEPTION DEVICE
Antonio TORREGROSA MIRA, Coral ORTIZ, María Del Mar LÓPEZ,

REF297
PERFORMANCES OF AN AIR-ASSISTED SPRAYER FAN RELATED WITH ENERGY CONSUMPTION
Luis VAL MANTEROLA, Enrique ORTÍ, Antonio SOZZI

REF299
DESIGN, DEVELOPMENT AND EVALUATION OF A GATHERING UNIT OF ALFALFA LOSSES DURING BALING PROCESS
Amin Allah MASOUMI, Sanaz SHOJAEI

REF332
HYDRAULIC CHARACTERISTICS OF TILLED AND UNTILLED FIELD PLOTS OF A ZERO-TILLAGE EXPERIMENT
Alessandro COMEGNA, Antonio COPPOLA

REF333
REAL-TIME MONITORING OF ENVIRONMENTAL FACTORS TO MODEL WHEAT YIELD PRODUCTION
Benjamin DUMONT, Frederic LEBEAU, Francoise VANCUTSEM, Jean-Pierre DESTAIN, Bernard BODSON, Marie-France DESTAIN

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SENSORS CONNECTION FOR DETERMINATION OF YIELD IN ROUND BALERS WITH VARIABLE CHAMBER
Milan KROULIK, Jiri MASEK, Vaclav PROSEK, Pavel PROCHAZKA, Bohuslav JOST

REF389
THE ENERGETIC COMPARATIVE EXAMINATION OF TILLAGE TECHNOLOGIES FOR GROWING OF THE OIL SEED RAPE
Zoltán HUDOBA, László KOCSIS

REF446
DETERMINATION OF ENERGY AND ECONOMIC INDE XES FOR CANOLA (OIL SEED) PRODUCTION IN IRAN.
Mohammad GHAHDERIJANI, Elham ABBASI

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FIELD PERFORMANCE OF DRAFT ANIMAL POWER WEEDING IMPLEMENTS UNDER SMALL HOLDER COTTON FARMING IN THE ZAMBEZI VALLEY IN ZIMBABWE.
Sipho SIBANDA, Timothy Emmanuel SIMALENGA
REF462
CHANGES OF ELECTRIC ENERGY CONSUMPTION IN AGRICULTURE AFTER THE ECONOMIC TRANSFORMATION IN POLAND
Janusz PIECHOCKI

CROP PROTECTION

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CHARACTERIZATION OF A FOG SYSTEM USED FOR PESTICIDE APPLICATION IN GREENHOUSE CROPS
Víctor Jesús RINCÓN, Francisco PÁEZ, Julián SÁNCHEZ-HERMOSILLA, Milagros FERNÁNDEZ, Ángel CARREÑO, José PÉREZ

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A FRAMEWORK FOR THE OPTIMIZATION OF FUNGICIDE SELECTION AGAINST MULTIPLE DISEASES
Bertrand LEGER, Florent HERNANDEZ, Gilles COULEAUD, Olivier NAUD, David GOUACHE

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WEEDS AND CORN CLASSIFICATION USING SHAPE FEATURES OF THE LEAVES BY MEANS OF IMAGE PROCESSING AND NEURAL NETWORKS
Abdolabbas JAFARI, Reza RASEKHI

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ECONOMIC EVALUATION OF A VR HERBICIDE APPLICATION SYSTEM USING MACHINE VISION TECHNOLOGY
Alimohammad SHIRZADIFAR, Mohammad LOGHAVI, Mohammadhossein RAOUFAT, Jamile SHOJAEI

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STUDY ON RESPONSE TIME OF A WEED DETECTOR SYSTEM DESIGNED FOR SITE-SPECIFIC WEED CONTROL BY RESEARCHERS OF INTA.
Gerardo MASIA, Andres MOLTOMI, Leonardo VENTURELLI, Ramiro CID, Sebastian DURO, Adriana FUICA

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SPRAYERS INSPECTIONS AND ITS IMPORTANCE IN PORTUGAL - ECONOMIC AND ENVIRONMENTAL ISSUES
Pedro NUNES, João SERRANO, Jorge MOREIRA, Martins SELMA

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VISUAL ANALYSIS OF VINEYARD FOLIAGE DISTRIBUTION
Gregor ZOLYNSKI, Tim BRAUN, Karsten BERNS

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APPLICATION OF PRECISION AGRICULTURE IN VINES
Aristotelis TAGARAKIS, Perlepes LEONIDAS, Liakos VASILIS, Fountas SPYROS, Kikiras PANAGIOTIS, Gemtos THEOFANIS

REF335
STUDIES ABOUT THE DYNAMICS OF SOME PHYSIOLOGICAL PROCESSES DURING THE GRAPE VINE SHOOT GROWTH
Carmenica Doina JITAREANU, Liana TOMA, Cristina SLABU, Alina Elena MARTA
ROOM 1
ANIMAL WELFARE HEALTH AND BEHAVIOUR I
08:25 am

08:25 REF032
Quarter individual milking in conventional milking parlour
Sandra ROSE-MEIERHÖFER, Ulrich STRÖBEL, Hülya ÖZ, Reiner BRUNSCH

08:50 REF034
Thermal images for early warning of sows in risk of developing shoulder lesions
Rebecka WESTIN, Anna RYDBERG

09:15 REF027
Automatic measurement of rumination and feeding activity using a pressure sensor
Franz NYDEGGER, Lorenz GYGAX, Wendelin EGLI

09:40 REF002
Electronic tagging of sheep - results of a running large field in trial in Germany
Ulrike BAUER, Nikola BENN, Michael KILIAN, Jan HARMS, Georg WENDL

10:05 Coffee break
ROOM 2
WATER II: DRAINAGE, STORAGE AND WATER MANAGEMENT
08:50 am

08:50 REF364
Swat model implementation in agricultural catchments; polish and norwegian-results and recommendations for practical use
Jan BRZOZOWSKI, Zygmunt MIATKOWSKI, Tomasz WALCZYKIEWICZ, Nils VAGSTAD, Johannes DEELSTRA

09:15 REF421
Technical performance of a photovoltaic floating cover system
Miguel REDON SANTAFE, Carlos FERRER FERRER, Carlos FERRER GIISBERT, J.J. FERRAN GOZALVES, J.B. TORREGROSA SOLER, F.J. SANCHEZ ROMERO

09:40 REF062
A ‘universal design framework’ for installation planning and operational management of evaporation suppressing films on agricultural reservoirs
Gavin BRINK, Andrew WANDEL, Pam PITAWAY, Nigel HANCOCK, Selvan PATHER

10:05 Coffee break
BIOENERGY II

08:50 REF116
Optimisation of energy crop production under dry climatic conditions
Christian LEONHARTSBERGER, Alexander BAUER, Ralph KREBS, Hinrich HARLING, Thomas AMON

09:15 REF472
Logistics chains for wood chips from short rotation forestry
Franz HANDLER, Emil BLUMAUER

09:40 REF473
Optimization of biomass production by thermodynamic approach
Neményi MIKLÓS, Milics GÁBOR

10:05 Coffee break
08:50  REF306  
The challenge for precision spraying  
Bernard BONICELLI, Olivier NAUD, Sylvain ROUSSET, Carole SINFORT,  
Vincent DE RUDNICKI, Jean-Marie LESCOT, Bernadette RUELLE, Laurent SCHEYER,  
Eric COTTEUX

09:15  REF080  
Workflow modelling for experimenting a decision system on protection of grapevine against mildews  
Olivier NAUD, Aziz FOFAK-KITIO, Bertrand LEGER

09:40  REF309  
Vineyard leaf roughness characterization by computer vision and cloud computing technics  
Thomas DECOURSELLE, Ludovic JOURNAUX, Jean-Claude SIMON, Jean-Noël PAOLI,  
Frédéric COUTAULT, Johel MITERAN, Fan YANG

10:05  Coffee break
ROOM 5
INFORMATION TECHNOLOGY III: INFORMATION SYSTEM DESIGN AND MANAGEMENT
08:50 am

08:50 REF326
Assessing the potential use of precision farming-technologies in the EU
Bernd POELLING, Luzia HEROLD, Angelika WURBS, Armin WERNER

09:15 REF159
The use of UML to design agricultural data warehouses
Francois PINET, Andre MIRALLES

09:40 REF153
Developing of farm risk map for better knowledge management on farms
Jarkko LEPPÄLÄ

10:05 Coffee break
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<td>08:50</td>
<td>REF435</td>
<td>Biodegradable polymeric materials based on hydrolysed proteins for agricultural application</td>
<td>Giuliano VOX, Luciana SARTORE, Andrea SASSI, Marzia BARBAGLIO, Evelia SCHETTINI</td>
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<td>09:15</td>
<td>REF424</td>
<td>Technical characteristics of regenerated plastic profiles produced through recycling agricultural plastic material</td>
<td>Carmela SICA, Giacomo SCARASCIA-MUGNOZZA, Pietro PICUNO</td>
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<td>09:40</td>
<td>REF405</td>
<td>Experimental investigation of agricultural plastic wastes quality characteristics regarding recycling and energy recovery</td>
<td>Epiphania BABOU, Demetres BRIASSOULIS, Miltiadis HISKAKIS, Stelios ANTIOHOS, Claire PAPADI</td>
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ROOM 7
POWER AND MACHINERY: ROBOTS
08:50 am

08:50   REF063
Maneuvers automation for agricultural vehicle in headland
Christophe CARIOU, Roland LENAIN, Benoit THUILOT, Thierry HUMBERT, Michel BERDUCAT

09:15   REF150
GAOS: Spatial optimisation of crop and nature within agricultural fields
Sytze DE BRUIN, Henk JANSSEN, Aad KLOMPE, Leo KLOMPE, Peter LERINK, Bas VANMEULEBROUK

09:40   REF066
Integrity of an autonomous agricultural vehicle according to the definition of trajectory traversability
Christophe DEBAIN, Pierre DELMAS, Roland LENAIN, Roland CHAPUIS

10:05   Coffee break
ROOM 8
POWER AND MACHINERY: TILLAGE
08:50 am

08:50 REF224
Effect of secondary tillage methods and planting forward speed on the grain drill performance
Sadegh AFZALINIA, Arjang JAVADI, Dadgar MOHAMMADI, Mansur ALAVIMANESH

09:15 REF259
Visualization of the working process of a novel manipulator for a stone protector of stony soil tillage implement
Jüri OLT, Mati HEINLOO

09:40 REF385
DEM simulation as description of the soil-sweep interaction
Kornél TAMÁS, György KERÉNYI, J. István JÓRI

10:05 Coffee break
10:35  REF033
Activity, lying and social behaviour of young horses depending on group size
Sandra ROSE-MEIERHÖFER, Gundula HOFFMANN, Katharina STANDKE, Reiner BRUNSCH

11:00  REF016
A tool for automated animal welfare assessment
Bert IPEMA, Kees LOKHORST, Pieter HOGEWERF, Rudi DE MOL

11:25  REF004
Animal welfare at farm level: overall assessment and software tool
Raphaëlle BOTREAU, Patrice PERNY, Pascal CHAMPCIAUX, Anne LAMADON, Jean-Paul BRUN, Jacques CAPDEVILLE, Isabelle VEISSIER

11:50  REF005
Evaluation of presently used sensor systems for mastitis detection in ams farms in northern Germany
Monika BRANDT, Angelika HAEUSERMANN, Karin KNAPPSTEIN, Eberhard HARTUNG

12:15  REF011
Determining vibration levels and frequencies on trucks and animals during transport
Girma GEBRESENBET

12:40  Lunch
ROOM 2
ERGONOMICS AND OPERATOR SAFETY: PESTICIDE EXPOSURE
10:35 am

10:35 REF128
Operator actual protection against pesticide exposure in french greenhouses
Henri BEYER, Sonia GRIMBHULER

11:00 REF131
An information system dedicated to pesticides users security
Gil DE SOUSA, Sonia GRIMBUHLER, Jean-Pierre CHANET, Jean-Claude CHAMPOMIER

11:25 REF138
Impacts of sprayers and equipments on operator exposure to pesticides: example of french farmers in 2009
Julien MARRE, Sonia GRIMBUHLER

11:50 REF420
Measurements and modelling of pesticides residues in the greenhouse air after low volume spray application
Constantinos KITTAS, Thomas BARTZANAS, Nikolaos KATSOULAS, Nikolaos TSIROPOULOS, Thiery BOULARD

12:15 REF129
Exposition to carcinogenic pesticides of farmers: impact of risk perception
Romain BOISSONOT, Sonia GRIMBUHLER

12:40 Lunch
10:35 **REF372**  
**Controlled traffic farming under central European conditions**  
Martin HOLPP, Thomas ANKEN, Jan REK, Rene REISER, Urs ZIHLMANN, Hans-Rudolf OBE RHOLOZER, Peter WEISSKOPF, Oliver HENSEL

11:00 **REF271**  
**Cone penetration shaft friction - influence of different agricultural materials**  
Peter SCHULZE LAMMERS, Yurui SUN, Wolfgang BUESCHER, Fanjia FENG

11:25 **REF361**  
**Rubber track systems for conventional tractors - effects on soil compaction and traction**  
Johan ARVIDSSON, Hugo WESTLIN, Thomas KELLER, Aron WESTLIN

11:50 **REF324**  
**A combined sensor for on-the-go measurement of soil water content and mechanical resistance: soil bin tests**  
Mojtaba NADERI-BOLDAJI, Ahmad SHARIFI, Bahare JAMSHIDI, Mohammad YOUNESI, Fariborz ABBASI, Saeed MINAEE

12:15 **End of session**

12:40 **Lunch**
## ROOM 4  
**CROP PROTECTION : MANAGEMENT, TRACABILITY AND ORGANIC PROTECTION II**  
10:35 am

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<tr>
<th>Time</th>
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<th>Authors</th>
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<tbody>
<tr>
<td>10:35</td>
<td>REF074</td>
<td>Contribution of formal modelling and field experiment to leverage knowledge and expertise for designing crop protection guidelines</td>
<td>Bertrand LEGER, Olivier NAUD, Laurent DELIERE, Philippe CARTOLARO, David GOUACHE</td>
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<tr>
<td>11:00</td>
<td>REF249</td>
<td>New optimized technique for mechanical control of Elymus Repens</td>
<td>Erik Røggaard KRISTENSEN, Bo MELANDER, Michael NØRREMARK</td>
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<td>11:25</td>
<td>REF235</td>
<td>Embedded NICT tools to control phytochemical treatments and traceability</td>
<td>Vincent DE RUDNICKI, Bernadette RUELLE, Laurent SCHEYER</td>
</tr>
<tr>
<td>11:50</td>
<td>REF325</td>
<td>Evaluation of an automated agrochemical traceability system for crop sprayers</td>
<td>Sven PEETS, D. W. K. BLACKBURN, R. J. GODWIN</td>
</tr>
<tr>
<td>12:15</td>
<td>REF482</td>
<td>Assessment of centrifugal distribution of natural enemies in the open field</td>
<td>Giacomo BLANDINI, Giuseppe EMMA, Sabina FAILLA, Giuseppe MANETTO</td>
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<td>12:40</td>
<td>Lunch</td>
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<td>10:35</td>
<td>REF075</td>
<td>Lidar sensing of straw quality</td>
<td>Bart LENAERTS, Wouter SAEYS, Tom COEN, Bart MISSOTTEN, Josse DE BAERDEMAEKER</td>
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<tr>
<td>11:00</td>
<td>REF323</td>
<td>Hyperspectral remote sensing for precision crop production and soil management</td>
<td>Gábor MILICS, JÓZSEF Deákvári, PÉTER Burai, Lénárt CSABA, Bálint ISTVÁN, Csiba MÁTYÁS, Farouk MOHAMED, Virág ISTVÁN, Nagy VIJAM, Neményi MIKLOS</td>
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<tr>
<td>11:25</td>
<td>REF464</td>
<td>Estimation of leaf area index canopy chlorophyll content based on 3D architecture models and the combination of hyperspectral reflectance and gap fraction measurements. Application to high throughput wheat phenotyping</td>
<td>Alexis COMAR, Frederic BARET, Benoit DESOLAN, Phillipe BURGER, Jean-François HANOCQ</td>
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<tr>
<td>11:50</td>
<td>REF486</td>
<td>Laser scanner on agricultural machinery</td>
<td>Detlef EHLERT, Michael HEISIG, R. ADAMEK</td>
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<tr>
<td>12:15</td>
<td>REF330</td>
<td>Field hyperspectral imagery as a tool for plant monitoring: application to wheat nitrogen content</td>
<td>Nathalie VIGNEAU, Gilles RABATEL, Pierre ROUMET, Martin ECARNOT</td>
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<td>10:35</td>
<td>REF252</td>
<td>Mass flow control for manure spreader</td>
<td>Denis MICLET, Emmanuel PIRON, Laurent POUILLARD, Sylvain VILLETTE</td>
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<tr>
<td>11:00</td>
<td>REF261</td>
<td>A slurry spreader for orchards</td>
<td>Paolo BALSARI, Elio DINUCCIO, Fabrizio GIOELLI</td>
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<tr>
<td>11:25</td>
<td>REF263</td>
<td>CEMIB: an innovative bench for spreader eco-design</td>
<td>Emmanuel PIRON, Denis MICLET, Sylvain VILLETTE</td>
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<tr>
<td>11:50</td>
<td>REF028</td>
<td>Evaluation of maturity and fertilizer capacity of compost derived from swine solid fraction</td>
<td>Niccolò PAMPURO, Eugenio CAVALLO</td>
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<td>12:15</td>
<td>REF313</td>
<td>Toward a 3-D stereovision system for fertilizer granule characterization</td>
<td>Bilal HIJAZI, Jereon BAERT, Fréderic CINTAULT, Julien DUBOIS, Michel PAINDAVOINE, Jan PIETERS, Jürgen VANGEYTE</td>
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<td>12:40</td>
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</table>
10:35 REF015
Compression of chopped maize and grass in bunker silos with vibrating rollers
Thomas HOFFMANN, Hartmut SCHEMEL, Christian FÜRLL

11:00 REF186
Impact of moisture content on compressibility and physical properties of psyllium seed (PLANTAGO OVATA FORSK)
Reza AHMADI, Ahmad KALBASI-ASHTARI, Mohammad GHAHDERIJANI, Seyed Mohammad Taghi GHRIBZAHEDI, Mehran GHASEMLOU

11:25 REF222
A system for the oxygen continuous monitoring inside the malaxation machine to enhance the sicilian extra virgin olive oil typicality
Mariangela VALLONE, Pietro CATANIA, Enrica PIPITONE, Michele CARRARA, Felice PIPITONE

11:50 REF184
Measuring behavior of an acceleration measuring unit implanted in potatoes
Martin GEYER, Ulrike PRAEGER, Ingo TRUPPEL, Bernd HEROLD

12:15 REF068
A mixed integer linear programming approach for the optimization of food traceability Logistics
Fabrizio DABBENE, Paolo GAY

12:40 Lunch
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<tr>
<td>11:25</td>
<td>REF121</td>
<td>Mechanizing sustainable crop production intensification in developing countries – upscaling conservation agriculture</td>
<td>Theodor FRIEDRICH, Josef KIENZLE, Brian SIMS, Amir KASSAM</td>
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<tr>
<td>11:50</td>
<td>REF449</td>
<td>World trends and predicted evolution of the agriculture machinery manufacturing sector</td>
<td>Chakib JENANE, Stefan BOTTINGER, Reiner DOLUSCHITZ, Richard VOLZ, Sean PATERSON</td>
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<tr>
<td>12:15</td>
<td>REF346</td>
<td>Surveys and investigation of effective parameters on farmers satisfaction in mechanization cooperative in villages of Iran</td>
<td>Mohammad GHAHDERIJANI, Ali HADDAD, Elham ABBASI</td>
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<td>Lunch</td>
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<td>02:00</td>
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<td>04:00</td>
<td>Coffee break</td>
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# POSTER AREA

### POSTER SESSION

04:30-05:30 pm

## POSTHarvest Technology

**REF067**

**Development of Smart Sensing Devices for Ubiquitous Supervision of the Cold Chain: Application to Perishable Commodities**

Javier García-Hierro, Pilar Barreiro, Jose Ignacio Robla, Luis Ruiz-Garcia

**REF176**

**Sensor Networks for Monitoring Fruit Postharvest Parameters**

Abelardo Guitierrez, Santiago Lopez, Maria Marques, Maria Del Carmen Gonzalez-Mas

**REF185**

**Influence of Moisture Content on Some Physical and Mechanical Characteristics of Mungbean Grain to Design of Processing Equipments**

Mohammad Gahderijani, Mehran Ghasemlou, Mohammad Gahderijani, Seyed Mohammad Taghi Gharibzahedi, Reza Ahmadi

**REF187**

**Moisture Dependent Physical and Compression Properties of Persian Walnut and its Kernel**

Mohammad Gahderijani, Seyed Mohammad Taghi Gharibzahedi, Seyed Mohammad Mousavi, Manochehr Hamedi, Mehran Ghasemlou

**REF188**

**Some Aspects of the Technological Attributes of Russian Olive Fruit (Elaeagnus angustifolia L.)**

Mohammad Gahderijani, Seyed Mohammad Taghi Gharibzahedi, Seyed Mohammad Mousavi, Somayeh Rahaiiee, Mehran Ghasemlou

**REF195**

**Determination of the Physical and Mechanical Properties of Corn Silage Required for Developing Plastic Silo Maker Devices**

Amin Allah Masoumi, Aref Rahimi Fard, Abbas Hemmat

**REF197**

**Ultrasonic Technique for Evaluating Maturity of Bell Pepper During Ripening**

Amos Mizrach, Timea Ignat, Ze’Ev Schmilovitch, Joseph Fefoldi, Haim Egozi, Ahron Hoffman

**REF199**

**An Analytical Simulation Method for Predicting the Static Bruising in Apple Fruit**

Seyed Mehdi Nassiri, Ramin Jafari

**REF200**

**The Effect of Moisture Content and Temperature on Mechanical Behavior of Date**

Seyed Mehdi Nassiri, Mohsen Alirezaei, Dariush Zare, Askar Farahnaki
1. **OPTIMIZATION OF A DEVICE FOR THE FUMIGATION PROCESS**
Andrea FORMATO, Giorgio NOTA, Giovanni Pio PUCILLO

2. **DEVELOPMENT OF A CALIBRATION MODEL FOR LYCOPENE ANALYSIS BASED ON NIR SPECTROSCOPY**
Ignacio ARANA NAVARRO, Silvia ARAZURI, Carmen JAREN, Nerea ARIAS, Ignacio MACUA, Inmaculada LAHOZ

3. **PREDICTIVE FOOD MICROBIOLOGY ON GROWTH DEPRESSION OF VIBRIO PARAHAEVOLYTICUS IN PINK SHRIMP UNDER CO2**
Yuki ITO, Yoshio MAKINO, Seiichi OSHITA, Yoshinori KAWAGOE, Yukie KAWABUCHI, Tsuyoshi AYAKI, Mikio TANAKA, Kazuhiko HIROSE, Tatsuya SUGAWARA, Takashi HIRATA

4. **THE THEORETICAL AND EXPERIMENTAL MODELS OF TERMINAL VELOCITY OF APPLE IN WATER**
Kamran KHEIRALIPOUR, Ahmad TABATAABAEFAR, Hossein MOBLIC, Shahin RAFIEE, Ali RAJABIPOUR, Ali JAFARI

5. **EVALUATION OF ENZYMATIC BROWNING IN FRESH-CUT APPLE SLICES APPLYING A MULTISPECTRAL VISION SYSTEM**
Loredana LUNADEI, Pamela GALLEGUILLOS, Belén DIEZMA, Lourdes LLEÓ

6. **EFFECTS OF ATMOSPHERE ON DYNAMIC CHANGES IN COMPOUNDS ASSOCIATED WITH GAMMA AMINOBUTYRIC ACID SHUNT**
Nobukazu MAE, Yoshio MAKINO, Seiichi OSHITA, Yoshinori KAWAGOE, Atsushi TANAKA, Takashi AKIHIRO, Kazuhiro AKAMA, Satoshi KOIKE, Chiaki MATSUKURA, Hiroshi EZURA

7. **APPLYING ARTIFICIAL NEURAL NETWORK FOR SHRINKAGE PREDICTION OF SHELLED CORN IN A MICROWAVE ASSISTED FLUIDIZED BED DRYER**
Leila MOMENZADEH, Ali ZOMORODIAN, Dariush MOWLA

8. **CONTACTLESS DETECTION OF COOKING FRONT IN POTATOES BY HYPERSPECTRAL IMAGING**
Nghia NGUYEN DO TRONG, Mizuki TSUTA, Bart M. NICOLAI, Josse DE BAERDEMAEKER, Wouter SAEYS

9. **THE QUALITY OF STRAWBERRIES DURING THE POSTHARVEST HANDLING**
Antonio TORREGROSA MIRA, Lourdes ALCANTARA-GONZÁLEZ, Manuel CABRERA-SIXTO, Coral ORTIZ

10. **DEVELOPMENT OF AN IMAGE ALGORITHM TO ASSESS CHANGES IN LEAF PIGMENTS CONTENT OF FRESH-CUT SPINACH AND LETTUCE LEAVES**
Loredana LUNADEI, Susana CANTALAPIEDRA, Lourdes LLEÓ, Belén DIEZMA, Margarita RUIZ-ALTISENT
THE POTENTIAL OF USING STRIPS OF GIANT REED FOR THE MANUFACTURE OF FRUIT AND VEGETABLE CONTAINERS
Teresa García Ortuño, F. Javier Andreu Rodríguez, Manuel Ferrandez-Viliena, M. Teresa Ferrandez García, Clara Eugenia Ferrandez-Viliena García

AN OPTIMIZED MACHINE FOR FAST GRAPE COOLING BY CRYOGENIC FLUID
Andrea Formato, Andrea Fabiani, A. Frati

INFLUENCE OF STORAGE CONDITIONS ON CANDY GUM QUALITY
Andras Fekete, Gyorgy Csima, Veronika Biczó

PERFORMANCES INDEX IN AUTOMATION IN IRRIGATED GARDENS
Javier J. Cancela, Benjamin J. Rey, Antonio Ruiz-Canales, José M. Molina, Maria Fandino

PERFORMANCE OF A WETLAND – RESERVOIR WASTEWATER TREATMENT AND REUSE SYSTEM RECEIVING AGRICULTURAL DRAINAGE WATER IN NOVA SCOTIA
Ali Madani, Mike Haverstock, Robert Gordon

ASSESSMENT OF DISC AND SCREEN FILTERS PERFORMANCE IN MICROIRRIGATION SYSTEMS USING EFFLUENTS
Jaume Puig-Bargués, Miquel Duran-Ros, Gerard Arbàt, Javier Barragán, Francisco Ramírez de Cartagena

LABORATORY EVALUATION OF THE INFLUENCE OF BULK DENSITY, MOISTURE CONTENT AND ORGANIC MATTER CONTENT ON PENETRATION RESISTANCE IN A SANDY LOAM SOIL.
Mohammed Zakaullah Quraishi, Abdul Mounem Mouazen

CONTROLLED TRAFFIC FARMING – AN ESSENTIAL PART OF REDUCING THE IN-FIELD VARIABILITY OF SOIL STRUCTURE.
David Tinker, Tim Chamen, Hans Henrik Pedersen

COVER CROPS IN OLIVE ORCHARDS. A POSSIBILITY TO MEET KYOTO COMMITMENTS
Francisco Marquez García, Rafaela Ordonez, Jesus Gil Ribes, Emilio Gonzales

PRECISE MEASUREMENT OF RESIDUE COVER BY MEANS OF IMAGE PROCESSING TECHNIQUES
Abdolabbs Jafari, Vahid Asadi
VALIDATING A STREAM FLOW PREDICTION MODEL FOR UNGAUGED WATERSHEDS IN SPAIN
Jara VICENTE-GUILLEN, Daniel Otero Cabeza De Vaca, Jose Luis CHAVEZ, Ana Isabel GARCIA GARCIA

DISSOLVED OXYGEN RECOVERY IN WATER FROM A HYPOXIC COVERED AGRICULTURAL WATER RESERVOIR
Jose MAESTRE VALERO, Victoriano MARTÍNEZ ALVAREZ,

SOIL PROPERTIES EVOLUTION INFLUENCED BY SOIL USAGE AND SOIL TILLAGE SYSTEM
Teodor RUSU, Petru GUS, Ileana BOGDAN, Paula Ioana MORARU, Adrian Ioan POP, Doina CLAPA, Ioan PACURAR, Lavinia Ioana POP, Mara Lucia SOPTEREAN, Marcel Matei DUDA

SOIL TEMPERATURES, WATER AND HUMUS CONSERVATION OF THE TRANSYLVANIAN PLAIN, ROMANIA
Teodor RUSU, David WEINDORF, Beatrix HAGGARD, Horea CACOVEAN, Paula Ioana MORARU, Mara Lucia SOPTEREAN, Adrian Ioan POP, Ioan PRACURAR, Lavinia Ioana POP

CHARACTERIZATION OF IRRIGATION SYSTEMS IN GOLF COURSES USING PERFORMANCE INDICATORS OF WATER AND ENERGY USE. I. METHODOLOGY
Antonio RUIZ-CANALES, Juan Antonio RODRÍGUEZ-DÍAZ, José Miguel MOLINA-MARTÍNEZ, Eduardo GONZÁLEZ-MARÍA, Amparo Melián-Navarro

SOIL PULVERIZATION MEASUREMENT IN DIFFERENT TILLAGE TREATMENTS BY MEANS OF IMAGE PROCESSING
Abdolabbas JAFARI, Ramin JAFARI

MEETING THE CHALLENGES OF SOIL AND WATER ENGINEERING IN THE 21ST CENTURY: A NEW RESEARCH FACILITY
C. LLEWELLYN, A. MOUAZEN, R. J. READ, R. J. RICKSON

THE COMBINED USE OF SHADE-CLOTH COVERS AND MONOLAYERS TO PREVENT EVAPORATION IN IRRIGATION RESERVOIRS
Belen GALLEGOS-LVIRA, V. MARTINEZ-ALVAREZ, P. PITTAWAY, T. SYMES, N. HANCOCK

FIELD SCALE SOLUTE TRANSPORT MODELING FROM HORIZONTALLY VARIABLE LOCAL-SCALE TRANSPORT PARAMETERS
Alessandro COMEGNA, Antonio COPPOLA, Vincenzo COMEGNA, Gerardo SEVERINO, Angelo SOMMELA