

# PROGRAMME

<b>10° Etnean Occupational Medicine Workshop</b> "Sicurezza e Salute nella Fascia Trasformata" ITALIAN language	<b>Wednesday, September 6, 2023</b>	
	8.30	Opening Ceremony Consortium Hall – via Solarino, 87 – Ragusa Ibla
	Chairpersons	Prof.ssa Caterina Ledda - Prof. Venerando Rapisarda Department of Clinical and Experimental Medicine University of Catania
	9.00 -13.00	Oral presentations
	13.00	Hyblean Cocktail



**Tuesday, September 5, 2023 - SDS DISUM, Piazza Chiaramonte, Ragusa Ibla**

19.30 Welcome Party

**Wednesday, September 6, 2023 – "Consortium" Hall via Solarino, 87 Ragusa Ibla**

13.00 Hyblean Cocktail

**15.00 – 18.00 SHWA Opening Ceremony**

Welcome Address

Prof. Giampaolo Schillaci *SHWA Convener - University of Catania*  
Prof. Remigio Berruto *CIGR President - University of Turin*  
Prof. Massimo Cecchini *AIIA V Section President - Tuscia University*  
Prof. Pietro Piccarolo *UNASA President - Ragusa SHWA Mentor*

**Lectio Magistralis**

Dunies G. - *Department of Public Health Policy, School Public Health - University West Attica, Greece*

*Leptospirosis, One Health Policy Example*

Lundqvist P. - *Swedish University of Agricultural Sciences - Swedish and International Perspectives on Health & Safety in Agriculture*

*International Perspectives on Farmers' Psychosocial Working Conditions and Mental Health*

Severini S. - *Department of Agriculture and Forest Sciences, Tuscia University, Viterbo, Italy*

*Risks and Vulnerabilities of the EU Food Supply and Risk Management Tools at the Farm Level*

**Main Communication**

Bisaglia C. - *CREA, Research Centre for Engineering and Agro-Food Processing, Italy*

Edstrand C., Domino H. B., Norup M. - *SEGES Innovation, Aarhus N, Denmark*

Jakob M. - *Department of Technology Assessment and Substance Cycles Leibniz Institute for Agricultural Engineering and Bioeconomy Potsdam, Germany*

Rosecrance J. - *Occupational Ergonomics & Safety Program Director, High Plains Intermountain Center for Agricultural Health and Safety (HICAHS), Colorado State University, United States*

18.00 Ragusa Ibla Free Time

Thursday, September 7, 2023

SDS DISUM, Piazza Chiaramonte, Ragusa Ibla

Room A 9.00 – 10.30 (12 minutes per presentation and overall debate at the end)

Plenary Session – Topic 2 & 9  
WMSDs and Occupational Health

Chairperson: Rosecrance J.

**An Assessment of Stooped Postures During Manual Weeding Tasks and Recommendations for Managing Work Practices**

*Rosecrance, Pennington, Sanders, Masci*

**Introduction of Passive Trunk Supporting Exoskeletons on an Asparagus Farm**

*Jakob*

**The Use of Exoskeletons in Daily Agricultural Work Processes**

*Norup, Domino*

**AgriStress Helpline: 24/7 Crisis Line Built for Farmers and Ranchers**

*Roy, Haskins*

**Assessing the Physical Mismatch between All-Terrain Vehicle Controls and Youth Strength: Implications for Agricultural Safety**

*De Moura Araujo, Khorsandi*

**Evaluating Youth's Physical Capabilities to Ride Utility All-Terrain Vehicles: Anthropometric Reach and Field of Vision**

*De Moura Araujo, Khorsandi*

10.30 – 11.00 "Barocco" Coffee break

Room A 11.00 – 13.00	Room B 11.00 – 13.00
Parallel session A – Topic 9	Parallel session B – Topic 3 & 5
Occupational Health	Machine Milking, Animal Welfare, Sustainable Livestock Farming Instrumentation, Equipment, Periodic Procedures and Tests
Chairperson: Jakob M.	Chairperson: Arcidiacono C.
<b>Lights and Shadows of Agricultural Workplace Safety Legislation in the Main EU States</b> <i>Di Stefano, Colantoni, Di Domenico, Monarca</i>	<b>Effect of Automatic Feeding System on Feeding Behaviour and Agonistic Interactions at the Headlock in Dairy Cows</b> <i>Motta, Borciani, Gastaldo</i>
<b>Immersive Process Ergonomics by Wearable Devices: from Automotive Experience to the Applicability of Technology in all Manufacturing Sectors</b> <i>Spada, Carnazzo</i>	<b>Efficient Use of Artificial Lighting and Intensive Use of Natural Light in Milking Parlours: the MUNGILUX Project</b> <i>Tangorra, Zucali, Calcante</i>
<b>Work-Related Injuries and Illnesses among Restaurant Workers: a Review</b> <i>Failla, Furnitto, Schillaci</i>	<b>Vertical Profile of Noxious Gas Concentrations in an Open Dairy Barn in Mediterranean Area</b> <i>D'Urso, Arcidiacono, Cascone</i>
<b>Ergonomic Evaluation in the Use of Manual Agricultural Tools: New Analysis Methodologies</b> <i>Rapisarda, Matera, Filetti, Romano, Scorciapino, Rapisarda, Musumeci, Roggio, Vitale</i>	<b>Dynamic Chamber Technique to Measure Ammonia and GHG Emissions from Traditional and Vegetal Cats' Litter</b> <i>Costa, Buoio, Ighina, Giardini, Ardemagni</i>
<b>A Survey for the Introduction of New Parameters for the Assessment of Work-Related Stress in Agriculture</b> <i>Alemanno, Cossio, Riccioni, Andreotti, Milioni, Cecchini, Di Stefano</i>	<b>An Innovative Indoor and Controlled Sustainable Snail Breeding System</b> <i>Greco, Catania, Orlando, Vallone, Mammano</i>
<b>Work Safety Issues in Non-Professional Vegetables Gardens</b> <i>Gubiani, Bietresato, Zucchiatti, Da Broi, Simeoni</i>	<b>Relationship between Heavy Metals Concentration Detected on Honeybees and their Activity Level</b> <i>Costa, Buoio, Mortarino, Rizzi, Di Giancamillo, Tangorra, Castelvechio, Fedrizzi, Accurso, Locatelli</i>
<b>A Wearable Tracking System to Evaluate SARS-Cov-2 Virus Transmission Risk During Pruning Operation</b> <i>Catania, Canicatti, Ferro, Roma, Vallone</i>	<b>Ammonia Remediation in Recirculating Aquaculture Systems: Photocatalysis Vs Electro- Photocatalysis</b> <i>Cialini, Bazzocchi, Di Giancamillo, Livolsi, Chiarello, Franz, Selli, Costa, Buoio</i>

13.00 – 14.30 Typical Lunch

Room A 14.30 – 16.30	Room B 14.30 – 16.30
Parallel session B – Topic 9 & 8	Parallel session B – Topic 14 & 13
Occupational Health	ROPS and Stability Research
Noise, vibration, dust, endotoxin, microorganism	Environment Safety, People Health Protection and Welfare
Chairperson: Monarca D.	Chairperson: Pessina D.
<b>Safety and Ergonomics on Forestry Sites. A Sector Overview and Bibliometric Analysis</b> <i>Toscano, Fiorentino, De Iorio, Moretti, D'Antonio</i>	<b>A Fully-Assisted Folding Rear Rollbar for Agricultural and Forestry Tractors: the QROPS</b> <i>Pessina, Galli, Vita, Puri, Laurendi</i>
<b>Analysis of the Formation and Safety of Non-Specialised Operators Working on Public Urban Green Sites</b> <i>D'Antonio, Fiorentino, De Iorio, Moretti, Toscano</i>	<b>Compact Tractor 4.0: an Investigation for the Development of a Low-Profile Full Electric Specialized Tractor</b> <i>Gattamelata, Cecchini, Vita, Puri, Monarca, Rigon, Ortenzi, Bella, Mendecka, Facchinetti, Pessina, Galli</i>
<b>Frequency Analysis from Electric Portable Harvesters for Olives</b> <i>Cerruto, Capace, Manetto</i>	<b>A Survey on Drivers' Health Impact of Pollutant Gaseous Emissions of Agricultural Machinery</b> <i>Galli, Facchinetti, Gibin, Pessina</i>
<b>Inhalable Wood Dust Produced during Chainsaw Operations</b> <i>Biocca, Gallo, Fanigliulo, Carnevale, Vincenti, Gallucci, Paris, Fornaciari, Grilli, Benigni, Pochi, Palma</i>	<b>Has The Risk of Agricultural Tractors Overturning Changed in the COVID Period?</b> <i>Facchinetti, Galli, Piazza, Pessina</i>
<b>Whole Body Vibration Exposure in Olive Harvesting by Means of Tractor-Mounted Harvesters: A Case Study</b> <i>Coltrinari, Cecchini, Bartolacci, Monarca</i>	<b>Climate Change, Chemical Risk Management in Agriculture from a "One Health" Perspective</b> <i>Cioccolo, Colantoni, Collalti, Gherardi</i>
<b>Application of ANN for the Identification of Discriminating Variables by Noise Analysis on Portable Motorised Equipment</b> <i>Riccioni, Bianchini, Assettati, Coltrinari, Tilesi, Cecchini, Ortenzi</i>	<b>Hepatitis E Virus Detection in Swine Slurries of Abruzzo: Considerations on Virus Occurrence and Workers' Exposure.</b> <i>Brambilla, Bisaglia, Filisetti, Giovanazzo, Mancini, Veneri, Bonanno Ferraro, Iaconelli, Vicenza, Suffredini, La Rosa, Lazzari</i>
<b>Indirect Quantification of Agricultural Workers' Muscular Fatigue due to Vibrations Exposure, Aimed at Preventing Possible Accidents at Work</b> <i>Gubiani, Bietresato, Zucchiatti, Da Broi</i>	<b>Environmental and Economic Aspects in Irrigation Systems Analyses for Industrial Crops</b> <i>Palmieri, Gallucci, Santangelo, Scarfone, Assirelli</i>

19.30 SHWA Party and performances

Friday, September 8, 2023

SDS DISUM Piazza Chiaramonte Ragusa Ibla

Room A 9.00 – 10.45	Room B 9.00 – 10.45
Parallel session A – Topic 12 & 13	Parallel session B – Topic 14
Effect of landscapes on human health and welfare Environment Safety, People Health Protection and Welfare	ROPS and Stability Research
Chairperson: Biocca M.	Chairperson: Khorsandi F.
<b>Landscape, Climate Change and Human Health. The role of Land Use in Sicily</b> <i>Fischer, Pappalardo, Martinico</i>	<b>Survey on the Stability of Tractor-Implement Combination on Increasing Slopes</b> <i>Galli, Cutini, Bisaglia, Pessina</i>
<b>A GIS-Based Model to Estimate Sheep Wool Waste Availability for their Sustainable Re-Use and Valorisation</b> <i>Midolo, Cascone, Porto, Valenti</i>	<b>Assessing Agricultural All-Terrain Vehicle's Static Stability: An Analysis of the Influence of Attachments in Agricultural Settings</b> <i>Lima dos Santos Fernando, Khorsandi</i>
<b>Preliminary Results on the Correlation Between Drop Size, Foliar Deposition and Surface Coverage to Reduce Agrochemical Use</b> <i>Manetto, Privitera, Avola, Cerruto</i>	<b>Assessing the Impact of Friction and Speed on Actuation Forces of Foldable Roll-Over Protective Structures.</b> <i>Khorsandi, Ayers</i>
<b>Combustion Emission Profile in a Fluidized Bed Biomass Boiler</b> <i>Gallucci, Paris, Carnevale, Vincenti, Salerno, Serafini, Di Stefano, Colantoni, Assirelli, Palma</i>	<b>Applicability to Narrow Track Tractors of an Official Standard for the Calculation of Self-propelled Agricultural Machines Stability</b> <i>Cutini, Bisaglia, Facchinetti, Pessina, Galli</i>
<b>Beet Sowing Seed Production: Environmental and Economic Aspects in Irrigation System Some Insights</b> <i>Assirelli, Gallucci, Palmieri</i>	<b>Experimental Validation of the Influence of Obstacles on Tractor Rollover Stability</b> <i>Carabin, Becce, Mandler, Nicolosi, Mazzetto</i>
<b>Quinoa Cultivation in Italy: Some Insights in Seed Production</b> <i>Assirelli, Palmieri, Santangelo, Manganiello, De Santis, Stagno, Rocuzzo, Rinaldi</i>	<b>Semi-Quantitative Risk Assessment Framework for Tractor Rollover Prevention Systems Based on the Functional Resonance Analysis Method (FRAM)</b> <i>Rossi, Cecchini, Monarca, Alemanno, Macor, Assettati</i>
<b>Using a Low-Cost Portable Device to Assess Bergamot Fruit Colour in the Field</b> <i>Anello, Mateo, Benalia, Zimbalatti, Blasco, Gomez Sanchis, Bernardi</i>	<b>An Evaluation of Operator Perception in Manual Handling of Front Foldable Rollover Protective Structures Mounted in Narrow-Track Tractors</b> <i>Capacci, Franceschetti, Piovaccari, Martelli, Rondelli</i>

### 10.45 – 11.15 "Barocco" Coffee break

Room A 11.15 – 13.15
Plenary Session – Topic 7
Agriculture 4.0, Automation, Remote Control, Robot and Innovative Vehicle
Chairperson: Bisaglia C.
<b>Development of a Prototype of a Self-Driving Electric Vehicle: the MAGA Project</b> <i>Pampuro, Assandri, Cavallo</i>
<b>A Functional Classification for Agricultural Robots</b> <i>Sozzi, Marinello, Sartori</i>
<b>Comparing the Performance of Traditional and Autonomous Tractors in Maize Sowing: an Overall Evaluation of Agricultural Robot Adoption</b> <i>Bettucci, Sozzi, Gasparini, Marinello, Sartori</i>
<b>Design of Manure Spreader Wagon for Sewage Sludge's Precision Distribution</b> <i>Lazzari, Giovinazzo, Bisaglia, Romano, Cutini, Assirelli, Cabassi, Brambilla</i>
<b>Sentinel2 Satellite Images to Discriminate Organic Cereal Crops in Southern Italy</b> <i>Fiorentino, D'Antonio, Donvito, Toscano</i>
<b>Potentiality of Multispectral Vegetation Indexes for Evaluating the Influence of the Sowing Technique on Durum Wheat Cultivation Density</b> <i>Furnitto, Ramirez Cuesta, Sottosanti, Longo, Schillaci, Failla</i>
<b>Pruning Weight Estimation Using Multispectral Sensors in a Vineyard in Southern Italy</b> <i>Ferro, Catania, Canicatti, Roma, Orlando</i>
<b>Water Management Sensing and Technology in Citrus Orchards</b> <i>Rocuzzo, Randazzo, Stagno, Calcagno, Assirelli</i>

### 13.00 – 14.30 Typical Lunch

Room A 14.45 – 16.45
Symposium – Topic 11 & 15
Precision Farming and Traceability - SHWA & Augmented reality, Gamification, IoT
Chairperson: Caffaro F. and Lundqvist P.
<b>Farmers' Perception of Smart Farming Technologies: Investigating Aspects to Enhance Agriculture Digitalization</b> <i>Vigoroso, Pampuro, Cavallo, Caffaro</i>
<b>Precision Agriculture, Ergonomic Risks from the Use of Assisted Driving Systems</b> <i>Vitale, Matera, Filetti, Famoso, Rapisarda, Musumeci, Roggio, Rapisarda, Romano</i>
<b>Design of a Wireless and Digital-Based System for Obstacle Detection of Fixed and Moving Obstacles in Agriculture</b> <i>Monarca, Vita, Pessina, Cutini, Gattamelata, Puri, Assettati, Cecchini, Rossi, Macor, Rigon, Alemanno, Galli</i>
<b>Gamification for Safe and Innovative Agriculture</b> <i>Macor, Rossi, Cecchini, Monarca, Cossio</i>
<b>Co-Designing Game Training Solutions to Improve Safety in the Agricultural Sector: Insights for the Correct Use of Foldable Roll-Over Protective Structure</b> <i>Vigoroso, Caffaro, Cavallo, Pampuro</i>
<b>IoT LoRaWAN Device for Measuring Electrical Consumption in Agricultural Sector: Installation in Dairy Farming and Greenhouse Floriculture</b> <i>Lazzari, Bragaglio, Bisaglia, Brambilla, Giovinazzo, Filisetti, Fedrizzi, Figorilli, Vasta, Tocci, Cacini, Cutini</i>
<b>Agricultural Application of LoRaWAN Technology</b> <i>Figorilli, Cappellozza, Pietrella, Vasta, Tocci, Assirelli, Cutini</i>

### 17.00 "Young researcher award" and Closure Ceremony

### 20.00 Mediterranean Aperitif

Saturday, September 9, 2023

Technical Tour