

### PLENARY ROOM

9:00 – 11:00 **Session 5 – Topic 19: Adoption of Precision Agriculture – Chair: C. Fabbri**

9:00 – 9:20 **Why are yield sensors seldom used by farmers : a French case study**  
N. Lachia, L. Pichon, P. Marcq, B. Tisseyre, J. Taylor 

9:20 – 9:40 **Reliability of new technologies: Local Ecosystem Readiness Level, a composite index**  
S. Lombardo, D. Sarri, C. Perna, A. Pagliai, V. De Pascale, G. Cencini, R. Lisci, M. Rimediotti, M. Vieri 

9:40 – 10:00 **An Extended Technology Acceptance Model for the Adoption of Drones in German Agriculture**  
M. Michels, C.-F. Von Hobe, P. J. Weller Von Ahlefeld, O. Mußhoff 

10:00 – 10:20 **Precision Agriculture Adoption Farm Size and Soil Variability**  
D. Schimmelpfenning, J. Lowenberg-DeBoer 


10:20 – 10:40 **An 'agri-game' on yield sampling to sensitize winegrowers to the value of spatial data**  
Y. Valloo, B. Oger, G. Brunel, T. Crestey, C. Leroux, B. Tisseyre 


10:40 – 11:00 **DigiMilch – Online yield measurement of wilted grass and fodder crops with forage harvesters**  
F. Worek, S. Thurner 


11:00 – 11:30 *Coffee break*

11:30 – 13:00 **Session 6 – Topic 11: Site-Specific Nutrient, Lime and Seed Management – Chair: S. Thurner**

11:30 – 11:50 **Is really NDVI a valid indicator for nitrogen fertilization management? A case study from Italy**  
C. Fabbri, M. Mancini, R. Vivoli, S. Truschi, S. Orlandini, M. Napoli 

11:50 – 12:10 **High Definition Fertilizer As-Applied Maps for Pneumatic Applicators**  
J. Fulton, R. Colley, S. Shearer, A. Gauci, E. Hawkins 

12:10 – 12:30 **Development of soil productivity maps for precision fertilization**  
A. S. Tsibart, A. Postelmans, J. Dillen, A. Elsen, H. Vandendriessche, G. Van De Ven, W. Saeys 


12:30 – 12:50 **Economic assessment of site-specific pesticide applications**  
S. Rajmis, I. Karpinski, H. Kehlenbeck 

12:50 – 13:10 **Conference Closing**

13:10 – 14:10 *Lunch*

### TERRA ROOM


9:00 – 11:00 **Session 5 – Topic 06: Applications of Unmanned Aerial Systems – Chair: S. Delalieux**


9:00 – 9:20 **Evaluating UAV-based vegetation indices performance and exploration of new wavelengths combination to monitor winter wheat crop's nitrogen status**  
M.-A. B. Bouchard, A. L. H. A. Andriamandroso, C. W. Waterlot, A. S. Siah<sup>1</sup>, C. G. Guille, B. V. Vandoorne 

9:20 – 9:40 **Optimizing peach management based on hyperspectral and unmanned aerial vehicle (UAV) technology**  
A. De Castro, J. M. Maja, J. C. Melgar, G. Schnabel, F. López-Granados, J. M. Peña 

9:40 – 10:00 **Plant phenotyping on-demand: An IoT framework using drones and participatory sensing in greenhouses**  
M. Frangulea, C. Pantos, V. Giuffrida, J. Valente 

10:00 – 10:20 **Leak growth monitoring using multispectral UAV Imagery**  
J. Haumont, P. Lootens, S. Cool, J. Van Beek, D. Raymaekers, E. M. Ampe, T. De Cuypere, O. Bes, J. Bodyn, W. Saeys 

10:20 – 10:40 **Early post-emergence maps to predict crop yield: An application of UAV technology and digitization**  
J. M. Peña, C. Orno-Badía, G. Messina, J. Dorado, J. Recasens 

10:40 – 11:00 **High-precision fungicide application for cotton disease based on UAV remote sensing**  
J. A. Thomasson, T. Wang, X. Wang, T. Isakeit, C. Yang, R. L. Nichols, R. Collett 

11:00 – 11:30 *Coffee break*

11:30 – 13:00 **Session 6 – Topic 02: Precision Horticulture – Chair: J.A. Thomasson**

11:30 – 11:50 **The uncharted territory of drone-based cross-season monitoring for precision horticulture**  
S. Delalieux, L. Tits, Y. Vanbrabant, J. Vandermaesen, B. Somers 

11:50 – 12:10 **Spot spraying in vegetable crops**  
P. Haberey, D. Hodel, L. Collet, C. Bucher, T. Anken, R. Total, M. Keller 

12:10 – 12:30 **Estimation of geometric and structural parameters in super-intensive almond orchards**  
J. Llorens, A. Escolà, E. Casañas, J. R. Rosell-Polo, J. Arnó, J. A. Martínez-Casasnovas 

12:30 – 12:50 **Strawberry flower and fruit detection using deep learning for developing yield prediction models**  
P. Puranik, W. S. Lee, N. Peres, F. Wu, A. Abd-Elrahman, S. Agehara 

12:50 – 13:10 **Conference Closing in Plenary Room**

13:10 – 14:10 *Lunch*

### AQUA ROOM

**9:00 – 11:00** Session 5 – Topic 05/4: Proximal and Remote Sensing of Soil and Crop – Chair: M. Verőné Wojtaszek

9:00 – 9:20 **Can local soil samples improve the accuracy of MIR and XRF-based spectral prediction models?**  
V. Vona, S. Sarjant, M. Luleva, I. M. Kulmány, M. Vona



9:20 – 9:40 **Validation of precision agriculture soil mapping services under practical conditions**  
C. Kempenaar, F. Tigchelhoff, J. A. Booij, S. Nysten, C. G. Kocks



9:40 – 10:00 **Evaluation of a portable sensor suite for real time CWSI monitoring in wheat**  
O. E. Apolo-Apolo, M. Pérez-Ruiz, P. Pedro Castro-Valdecantos, G. Egea



10:00 – 10:20 **Camera-based estimation of sugar beet stem points and weed cover using convolutional neural networks**  
M. Dyrmann, S. K. Skovsen, P. H. Christiansen



10:20 – 10:40 **Semi-supervised semantic segmentation for grape bunch identification in natural images**  
J. Heras, R. Marani, A. Milella



10:40 – 11:00 **Semantic interpretation of multispectral maps for precision agriculture: a machine learning approach**  
L. Comba, A. Biglia, D. Ricauda Aimonino, P. Barge, C. Tortia, P. Gay



**11:00 – 11:30**

*Coffee break*

**11:30 – 13:00** Session 6 – Topic 5/5: Proximal and Remote Sensing of Soil and Crop – Chair: J.M. Peña

11:30 – 11:50 **Comparing Maize Leaf Area Index retrieval from Aerial Hyperspectral images through PROSAIL and Machine Learning techniques**  
A. Kayad, F. A. Rodrigues Jr, M. Sozzi, S. Maclas, F. Marinello



11:50 – 12:10 **In-season prediction of maize lodging characteristic indicators using an active crop sensor**  
R. Dong, Y. Miao, X. Wang



12:10 – 12:30 **Mapping of soil moisture variability within a field by the OPTRAM model**  
M. Verőné Wojtaszek, V. Szabó, J. Kauser, A. Kocsis, L. Lippmann



12:30 – 12:50 **Achieving bread-making strong flour quality in winter wheat using chlorophyll meter readings**  
M. Aranguren, A. Castellón, A. Uribeetxebarria, A. Aizpurua



**12:50 – 13:10** Conference Closing in Plenary Room

**13:10 – 14:10**

*Lunch*