



Società Italiana di Agronomia

52° Convegno nazionale



La ricerca agronomica per la transizione verde

Galoppatoio reale - Reggia di Portici

25 - 27 Settembre 2023

PROGRAMMA

Lunedì 25 Settembre 2023

08:30 - 09:30 **Registrazione partecipanti**

09:30 - 10:30 **Apertura del 52° Convegno della Società Italiana di Agronomia**

Prof. Matteo Lorito – Magnifico Rettore dell'Università degli Studi di Napoli Federico II

Prof. Danilo Ercolini – Direttore Dipartimento di Agraria - Università degli Studi di Napoli Federico II

Prof. Albino Maggio – Presidente del Comitato Organizzatore - Università degli Studi di Napoli Federico II

Prof. Michele Perniola – Presidente della Società Italiana di Agronomia

10:30 - 13:00 **Sessione 1 - RECUPERO** - Sviluppo delle aree marginali

Chair: *Prof. Nunzio Fiorentino* – Università di Napoli

10:30 – 11:00 Keynote – Prof. Gianluca Brunori - *Marginal areas in the ecological transition: possible scenarios and developmental paths*

11:00-11:30 Coffee break

Presentazioni orali

Ora	Autori	Titolo
11:30-11:45	<i>Calcutta A., D'Emanuele E., Infantino S., Naselli E., Barbera A.C.</i>	Micro-plastic effects on agricultural soil: a bibliometric analysis
11:45-12:00	<i>Cammerino A.R.B., Ingaramo M., Monteleone M.</i>	Developing a planning process for a coastal wetland and assessing the role of agriculture in ecosystem services and biodiversity

12:00-12:15	<i>Morra L., Virzi N., Bilotto M., Enotrio T., Merola A., Leonardi A., Licciardello S., Li Puma E., Sciacca F., Palumbo M.</i>	Biomass and seed yields of cardoon (<i>Cynara cardunculus</i> L.) fertilized by biowaste compost in two inland hill areas of southern Italy
12:15-12:30	<i>Tedone L., Fusco G.M., Nicastro R., Carillo P.</i>	Influence of tillage and nitrogen fertilization on durum wheat metabolite profiling and yield

12:30-13:00 Discussione

13:00-15:00 **Lunch**

15:00 - 17:30 **Sessione 2 - CIRCOLARITÀ** - Sviluppo di strategie di economia circolare nel settore agro-alimentare

Chair: Prof. Giorgio Testa – Università di Catania

15:00 – 15:30 Keynote – Prof. Luigi Cembalo - *Opportunities and challenges of circular economy designs for an ecological transition*

15:30-16:00 Coffee break

Presentazioni orali

Ora	Autori	Titolo
16:00-16:15	<i>Denora M., Candido V., De Mastro F., Gatta G., De Ceglie C., Bartholomeus R.P., Brunetti G., Perniola M.</i>	Reuse of wastewater in agriculture: risks or benefits? A pilot-scale study on durum wheat (<i>Triticum durum</i> Desf.)
16:15-16:30	<i>Di Mola I., Cozzolino E., Ottaiano L., Marra R., Esposito F., Fiorentino N., Fagnano M., Mori M.</i>	Effect of different fertilization strategies and biostimulant application on yield and quality traits of eggplant (<i>Solanum melongena</i> L.)
16:30-16:45	<i>Ferrero F., Tabacco E., Rolando G., Borreani G.</i>	Planning and managing a forage system to constrain nitrogen surplus in dairy farms
16:45-17:00	<i>Sessa M.G., Zanetti F., Alberghini B., Parenti A., Berzuini S., Vecchi A., Ciancolini A., Falce M., Ravaglia P., Villano D., Baldi G., Facciolla E., Monti A.</i>	Use of camelina-derived pelargonic acid to accelerate seed-drying of camelina: an example of circularity of H-EU Project CARINA

17:00-17:30 Discussione

17:30-18:30 **Premio SIA - Tesi di dottorato** (Prof. Michele Perniola – Prof. Luca Bechini)

Dott.ssa Michela Battisti - Improved management strategies and renewable sources for sustainable phosphorus crop fertilization (Università degli Studi di Torino)

Dott.ssa Mara Gabbrielli - Measuring and modelling cover crop growth and agronomic effects (Università degli Studi di Milano)

Dott. Giorgio Impollonia - UAV multispectral remote sensing for high-throughput phenotyping of hemp and miscanthus traits (Università Cattolica del Sacro Cuore)

18:30-19:30 **Visita al Museo Ercolanense**

19:30-21:30 **Light dinner** - Reggia di Portici, Terrazzo dell'Esedra

Martedì 26 Settembre 2023

09:00 - 11:00 **Sessione 3. BASSO IMPATTO** - Riduzione degli sprechi e dell'impatto ambientale

Chair: Prof. Salvatore La Bella – Università di Palermo

09:00 – 09:30 Keynote – Prof. Michele Pisante - *Agronomy challenges to improve productivity efficiency and environmental impact*

Presentazioni orali

Ora	Autori	Titolo
09:30-09:45	<i>Battaglia V., Cermola M., Mormile P., Lahoz E.</i>	A new sustainable method of soil solarization for management of soil pathogens
09:45-10:00	<i>Benincasa P., Dominici F., Luzi F., Governatori C., Gazza L., Galassi E., Tosti G., Puglia D.</i>	Producing thermoplastics from wheat flour surpluses: mechanical performances of films as related to crop N status, flour baking properties and gluten composition
10:00-10:15	<i>Cirillo V., Russo C., Pollaro N., Carbone F.A., Di Matteo A., Maggio A.</i>	Shade-avoidance response for enhanced tolerance to weed competition in a local wheat variety
10:15-10:30	<i>Papandrea G., Fogliatto S., Bennani Z., Di Furia I., Beltramo A., Vidotto F.</i>	Green mulch for weed management in organic rice

10:30-11:00 Discussione

11:00-11:15 **Coffee break**

11:15-13:00 **Sessione 4. RESILIENZA** - Adattamento delle produzioni ai criteri di sostenibilità e ai cambiamenti climatici

Chair: Dott. Domenico Ventrella – CREA Agricoltura e Ambiente

11:15 – 11:45 Keynote – Prof. Gianni Barcaccia - *Using plant genomics for breeding resilient traits in crop varieties*

Presentazioni orali

Ora	Autori	Titolo
11:45-12:00	<i>Alandia G., Sharma N., Jensen S.M., Liu F., Brinks H., Wander J., Grozdnanic D., Sanchez L., Amrad A., Marusig D., Delle Vedove G.</i>	Adapting crops for the green transition: smart protein project experiences for plant protein production across Europe
12:00-12:15	<i>Castellini M., Preite A., Giglio L., Rinaldi M.</i>	Application of multi-height beerkan method and BEST-procedure to study the water impact effects on soil hydraulic properties under alternative soil management
12:15-12:30	<i>Guarnaccia P., Zingale S., Anastasi U., Indovino G., Spina A., Dinelli G., Bosi S., Truzzi F., Trucchi B., Benedettelli S.</i>	A new approach for developing sustainable and health-promoting durum wheat composite cross populations
12:30-12:45	<i>Leoni F., Carlesi S., Antichi D., Frasconi C., Moonen A.C.</i>	A two-step evaluation of permanent legume living mulches for organic and conservative vegetable systems

12:45-13:00 Discussione

13:00 – 13:30 Keynote – Prof. Elisa Marraccini e Dott.ssa Vittoria Giannini – “On farm experimentation” in agriculture: challenges, limits and opportunities.

13:30-14:30 **Lunch**

14:30-15:30 **Poster session**

15:30-18:30 Assemblea ordinaria dei soci e rinnovo delle cariche sociali

19.30 Ritrovo per raggiungere il Museo ferroviario Pietrarsa

20:30-23:30 **Cena sociale** & Premiazione miglior poster

Mercoledì 27 Settembre 2023

9:00-11:00 **Sessione 5 - TRACCIABILITÀ** - Promozione della sicurezza, tracciabilità e tipicità delle filiere

Chair: *Prof.ssa Petronia Carillo* – Università della Campania “Luigi Vanvitelli”

09:00 – 09:30 Keynote – Dott. Ing. Paolo Menesatti - *Digital systems and applications to support quality and traceability in the agri-food and forestry supply chains*

Presentazioni orali

Ora	Autori	Titolo
09:30-09:45	<i>Dinelli G., Alpi M., Frassinetti E., Marotti I.</i>	Evaluation of different growing systems on the productive and quality features of saffron (<i>Crocus sativus</i> L.)
09:45-10:00	<i>Locatelli S., Scarpino V., Lanzanova C., Romano E., Reyneri A.</i>	Multi-mycotoxin long-term monitoring survey on north-Italian maize over an 11-year period (2011–2021): The co-occurrence of regulated, masked and emerging mycotoxins and fungal metabolites
10:00-10:15	<i>Ruggiero L., Ofano R., Agrelli D., Amalfitano C., Adamo P.</i>	Multielement profile and chemometrics for traceability of Pomodorino del Piennolo del Vesuvio PDO
10:15-10:30	<i>Vesely F.M., Schucknecht A., Boschetti M., Candiani G., Pepe M., Bocchi S., Fava F.</i>	Combining a crop model and remote sensing for crop trait retrieval: a methodological framework

10:30-10:45 Discussione

10:45-12:00 Discussione finale e chiusura convegno

12:00-13:00 **Lunch**

13.00 Partenza per Castelvoturno

14.00-17.00 Visita all’Azienda pilota di Castelvoturno sede del progetto Green Farm

18.00 Rientro presso le strutture alberghiere/Stazione Centrale di Napoli

Comitato Scientifico

Michele Perniola
Luca Bechini
Anna Dalla Marta
Michela Farneselli
Salvatore La Bella
Giorgio Testa
Domenico Ventrella
Antonio Pulina
Carmelo Maucieri

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Ida Di Mola
Lucia Ottaiano
Emilio Di Stasio
Eugenio Cozzolino
Linda Carrino
Marco Esposito
Antonio Minoliti
Maria Eleonora Pelosi
Claudio Russo
Nausicaa Pollaro
Daniele Todisco
Michela Terrecuso
Francesco Carbone

POSTERS

Sessione 1 - RECUPERO - Sviluppo delle aree marginali

Anastasi et al.	Productivity and product quality of organically grown saffron in the Etna area
Basso et al.	Field vegetation parameters for pasture above-ground biomass estimation: a case study
Carrino et al.	Phytomanagement of a shooting range soil with <i>Ricinus communis</i> L.
Ceriani et al.	Quantifying non-photosynthetic vegetation in a mixed grassland using hyperspectral data: a case study in Kenya
Ciaramella et al.	Tolerance of African fodder cane to the cultivation in heavy metals polluted soil
Cozzolino et al.	Effect of different fertilization strategies on yield of cauliflower grown on three different types of soil
Di Miceli et al.	Seed yield and quality of <i>Medicago intertexta</i> L. in a Mediterranean environment
El Mahdi et al.	Innovative products from Apulian marginal areas: <i>Salvia rosmarinus</i> Schleid. as source of bioactive compound
Maglione et al.	Is the modified biochar through the tannic acid suitable in reclamation of contaminated soils by heavy metals? A mesocosm trial
Moretta et al.	Monitoring the development of meadow grassland in Agrivoltaic system through LiDAR technology
Morra et al.	Pluriennial cardoon (<i>Cynara cardunculus</i> L.) and compost amendment improve soil organic carbon in two hilly areas of Southern Italy
Murgia et al.	Seed production of a valuable old variety of sulla (<i>Sulla coronaria</i> L.) for sardinian pastoral systems
Ruta et al.	Preliminary results on the seed production and quality of <i>Tanacetum cinerarifolium</i> (Trev.) Schultz-Bip. in Southern Italy
Schillaci et al.	Modelling Camelina (<i>Camelina sativa</i> L. Cranz) yield in rotation with barley (<i>Hordeum Vulgare</i> L.) in Mediterranean using the process-based crop model Armosa
Scordia et al.	Crop yield response in the Mediterranean agroforestry: a preliminary metanalysis
Tanda et al.	Impacts of management practices on TIMESAT seasonal parameters in mediterranean grasslands

Sessione 2 - CIRCOLARITÀ - Sviluppo di strategie di economia circolare nel settore agro-alimentare

Calcagno et al.	The effect of sludge from citrus peel on the growth of <i>Lolium multiflorum</i> Lam.
Frassinetti et al.	Evaluation of agronomic performance and health-beneficial properties of <i>Urtica dioica</i> L. cultivated in nitrate vulnerable zones
Lanzanova et al.	Sustainable use of bioactive compounds from <i>Brassicaceae</i> and <i>Solanaceae</i> wastes for cereal crop protection (SUSinCER)
Libutti et al.	Growth and essential oil yield of <i>Salvia officinalis</i> L. cultivated under an agriphotovoltaic system
Patanè et al.	Rooting and shooting in single-node stem cuttings of <i>Saccharum spontaneum</i> ssp. <i>aegyptiacum</i> as affected by explant/transplant time

Pilotto et al.	Nano-hydroxyapatite from wastes: synthesis and P release evaluation through a soil column compared to triple super phosphate
Pilotto et al.	Nano-enabled agriculture and circular economy. Nature-derived materials as smart-delivery systems
Rolando et al.	Land occupation affects nitrogen load on dairy farms in Northern Italy
Sifola et al.	Sustainable agronomic practices for a top quality tobacco
Tavarini et al.	Camelina as opportunity for cropping system diversification and bioeconomy development: on-farm multilocation study in Tuscany
Verdi et al.	Improved digestate for sustainable fertilization: preliminary results of NOMAD project

Sessione 3. BASSO IMPATTO - Riduzione degli sprechi e dell'impatto ambientale

Berzuini et al.	Environment x genotype influence in the nutritional and antinutritional compounds in camelina seeds
Borrelli et al.	Biochar as soil amendment to improve the sustainability of the intensive dairy cattle farming
Bruno et al.	Research application of land parcel identification system data: a systematic literature review
Calia et al.	Effect of legume species rotation on durum wheat production in Mediterranean Climate
Cammarano et al.	Environmental evaluation of nitrogen management using self-driving robots
Campi et al.	Reduction of sorghum crop cycle for water saving
Carucci et al.	Effect of irrigation scheduling on yield-quality and water efficiency indices in processing tomato
Colombatto et al.	Agronomical role of different summer intercropped cover crops on nutrient uptake, weed control and yield performance of bread wheat: a three-year study in the Po plain
Cozzolino et al.	Adaptability of three ancient varieties of durum wheat cultivated in purity and as mixtures to an inland hilly area of Campania Region
Di Mola et al.	Adaptability of three ancient varieties of common wheat cultivated in purity and as mixtures to an inland hilly area of Campania Region
Dinnelli et al.	Natural-based products as possible sustainable alternatives for cover crops termination
Ercolini et al.	Preliminary results on the use of dark green colour index (DGCI) to evaluate the nutritional status of <i>Camelina Sativa</i> (L.) Crantz
Farneselli et al.	Effects of arbuscular mycorrhizal fungi on tomato yield under deficit irrigation in greenhouse
Farruggia et al.	Effects of foliar treatment with various types of biostimulants and different frequency of application on yield and quality of organic oregano
Fellet et al.	<i>Tenebrio molitor</i> Frass as organic fertilizer: results from a germination test on three crops and a pot experiment on sunflower
Fellet et al.	2D-NANO MAD PLANTS: a PRIN project on the effects of 2D-nanomaterials on seed plants reproduction
Ghidoli et al.	Agronomic comparison between spring and winter <i>Camelina sativa</i> cultivation in North Italy
Goglio et al.	Identifying criteria for harmonizing life cycle assessments of crop-livestock systems and interactions

Leogrande et al.	Soil amendment application in an olive grove: effects on plant performance
Mancinelli et al.	Effects of different agronomic conditions on the production of eight bread wheat varieties
Marino et al.	Understanding the spatiotemporal behaviour and the environmental sustainability of crop yield in an organic farming system
Marusig et al.	Allelopathic effect of buckwheat (<i>Fagopyrum esculentum</i> L.) on germination and performance of crops and weeds: a comprehensive methodology
Minoliti et al.	Reduction of N input using foliar fertilisation and biostimulants: impact on yield and quality of common wheat
Pagani et al.	Camelina, an emerging oilseed crop, intercropped with pulses
Pandino et al.	Effects of deficit irrigation on mineral elements content of 'Early' potato
Pellegrino et al.	Adaptability of coloured potato cultivars to the Mediterranean environment
Pesce et al.	A comparative test of rain gun and rainger applied to grain maize in the North-eastern
Quintarelli et al.	Improving tomato production by inoculation of arbuscular mycorrhizal fungi
Quintarelli et al.	Tomato plant growth and production as affected by inoculation with arbuscular mycorrhizal fungi
Riefolo et al.	Use of spectral indices to optimize irrigation management of apricot in Mediterranean environment
Rinaldi et al.	Soil carbon content in long-term experiment under different soil tillage management systems
Rossini et al.	Foliar application of biostimulants enhances sustainability and agronomic performances of wheat: preliminary results from central Italy
Salamone et al.	Agronomic, productive, and qualitative response of sugarcane accessions for Sicily
Scapino et al.	Agronomic management of hybrid barley: effect of tillage, seeding rate and N fertilization
Scavo et al.	'Early' potato – pea intercropping: first evidence on productive traits and insect control
Scordia et al.	Weed pressure in an organic wheat-legume intercropping and relay cropping
Tibaldi et al.	Legume based rotation in low input agricultural systems: sustainability aspects, agronomic traits and nutritional features
Tosti et al.	Yield, pests and weeds in Lentil–Cereal intercropping
Tramacere et al.	Weed competition ability of perennial forage legumes and grass growth in mixture and in pure stands under increasing level of simulated shade in rainfed condition
Tramacere et al.	Oper8 Project, a new European thematic network on non-chemical methods of weed control
Triacca et al.	A two-step approach for the calibration and simulation of wheat-lentil intercropping systems using MONICA
Vaglia et al.	Improving skills on digital agriculture in Europe: lessons learnt from the AgriSmart project
Vitali et al.	Agronomic and environmental effects of alternate wetting and drying in Italian rice cultivation

Zingale et al.	Environmental sustainability of durum wheat cropping systems: a life cycle assessment perspective
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Sessione 4. RESILIENZA - Adattamento delle produzioni ai criteri di sostenibilità e ai cambiamenti climatici

Alberghini et al.	Optimizing camelina sowing date and cultivar choice to maximize vitamin E content
Balingit et al.	Coupling IoT technologies, blockchain and modelling to enhance crop production and farmers' financial resilience under extreme climatic events: the RESTORATION Project
Cantalamessa et al.	Abiotic stress and durum wheat: morpho-physiological aspects in the Mediterranean environment
Carrino et al.	The detection of salt-tolerant genotypes to reduce yield losses and pressure on fresh-water reserves: a quick, simple, and affordable bioassay
Castellini et al.	Temporal changes in saturated hydraulic conductivity under minimum- and no tillage soil management
Cavalli et al.	Evaluating a world mini-collection of domesticated cowpea (<i>Vigna unguiculata</i> [L.] Walp.) for intercropping with cereals
Chiriack et al.	Annual variability of N mineralization from soil organic matter as affected by climate
Corinzia et al.	Leaf gas exchange of lignocellulosic perennial grasses under different soil water availability
Corinzia et al.	Yield of lignocellulosic perennial grasses under different soil water availability
Damatirca et al.	Climate-smart forage systems for climate-smart soils
de Guttery et al.	Assessment of grazing intensity integrating google earth engine (Sentinel-2) and livestock GPS locations
de Otálora et al.	Modelling context-specific mitigation potential of greenhouse gas emissions and nitrogen losses in key European farming systems for dairy production
De Santis et al.	Crop performance of peanut in a South Italy environment: effect of irrigation and plant growth-promoting microorganisms on water productivity
Gabbrielli et al.	Simulating soil heterotrophic respiration with ARMOSA model: calibration with continuous field measures of CO ₂ soil fluxes from the AGRESTIC Project.
Giunta et al.	Working on ancient wheats and old durum wheat cultivars at the dept. of agricultural sciences of Sassari
Marraccini et al.	A network of farms to develop and test innovations for climate-smart cropping systems
Ottaiano et al.	Greenhouse gas emissions and yield of durum wheat under organic and conventional fertilization in three type soil
Panozzo et al.	Yield and quality comparison of hard common wheat varieties in NE Italy in the dry year 2022
Piccoli et al.	What happens to soil organic carbon in Venetian low-lying plain? Insight from a long-term experiment
Piotto et al.	Impact of alley poplar silvoarable systems with soybean on microclimatic variables

Pulvento et al.	Yield and yield components of alternative crops in a climate changing Mediterranean environment
Ribero et al.	Adoption of conservation agriculture in winter wheat (<i>Triticum aestivum</i> L.) with the aim of saving water, protecting the environment, improving soil health and reducing CO ₂ emissions
Testa et al.	Leaf gas exchange of Sicilian wheat landraces under contrasting soil water content
Trocchi et al.	Can the adoption of conservation agriculture actually increase the soil carbon content?

Sessione 5 - TRACCIABILITÀ - Promozione della sicurezza, tracciabilità e tipicità delle filiere

Baiano et al.	Hemp inflorescences traceability by low field NMR relaxometry and biometric evaluation
Bianchi et al.	Plant toxic farm animals: assessment of their chemical compounds and distribution in central Italy
Burato et al.	Digital tools for field phenotyping of processing tomato genotypes
Cangemi et al.	FoodOnLine Project: identification of metabolomic profiles for the certification of agri-food products and their traceability through block chain technology
De Santis et al.	Evaluation of the effects of plant growth promoting microorganisms on wheat growth by spectral phenotyping: preliminary results from Agritech Project
Di Mola et al.	Greenhouse covered by photoluminescent polyethylene improves the agronomical response of eggplant (<i>Solanum melongena</i> L.)
Mzid et al.	Soil salinity estimation from Sentinel-2 satellite data and machine learning algorithms
Pandino et al.	Mineral elements content in globe artichoke as affected by mulching treatment
Pugliese et al.	A multidisciplinary approach to detect stress symptoms in vegetable crops
Reyneri et al.	Towards the production of durum and common wheat for a 0-residues food supply-chain
Servadei	L'Adattamento delle Produzioni Agroalimentari di Qualità ad Indicazione Geografica ai Criteri di Sostenibilità Ambientale: Opportunità e Prospettive.