



Official Journal of
the Animal Science
and Production
Association (ASPA)

Italian Journal of
Animal Science



italian
journal
of
animal
science

ASPA 24th CONGRESS
Padova, September 21-24, 2021
Book of Abstracts

Italian Journal of Animal Science



ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/tjas20>

ASPA 24th Congress Book of Abstract

Roberto Mantovani & Alessio Cecchinato

To cite this article: Roberto Mantovani & Alessio Cecchinato (2021) ASPA 24th Congress Book of Abstract, Italian Journal of Animal Science, 20:sup1, 1-236, DOI: [10.1080/1828051X.2021.1968170](https://doi.org/10.1080/1828051X.2021.1968170)

To link to this article: <https://doi.org/10.1080/1828051X.2021.1968170>



© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 21 Sep 2021.



Submit your article to this journal [↗](#)



Article views: 988



View related articles [↗](#)



View Crossmark data [↗](#)

Italian Journal of Animal Science

Official Journal of the Animal Science
and Production Association

Online ISSN: 1828-051X

Editor-in-Chief

Marcello Mele, University of Pisa (Italy)
Email: marcello.mele@unipi.it

Associate Editors

Umberto Bernabucci, University of Tuscia, Viterbo (Italy)
Email: bernab@unitus.it
Subject area: Production physiology and biology

Alessio Cecchinato, University of Padova (Italy)
Email: alessio.cecchinato@unipd.it
Subject area: Animal genetics and breeding

Federica Cheli, University of Milano (Italy)
Email: federica.cheli@unimi.it
Subject area: Ruminants nutrition and feeding

Jean-François Hocquette, INRA (France)
Email: jean-francois.hocquette@inra.fr
Subject area: Animal food quality and safety

Antonino Nizza, University of Napoli (Italy)
Email: nizza@unina.it
Subject area: Non-ruminants nutrition and feeding

Paolo Trevisi, University of Bologna (Italy)
Email: paolo.trevisi@unibo.it
Subject area: Non-ruminants nutrition and feeding

Eleni Tsiplakou, Agricultural University of Athens (Greece)
Email: eltsiplakou@aua.gr
Subject area: Livestock systems, management and environment

Giuliana Parisi, University of Firenze (Italy)
Email: giuliana.parisi@unifi.it
Subject area: Aquaculture, poultry, companion and wildlife

Section Editors

Alessandro Agazzi, University of Milano (Italy)
Email: alessandro.agazzi@unimi.it

Susana Alves, Universidade Técnica de Lisboa (Portugal)
Email: susanaalves@fmv.ulisboa.pt

Gianni Battaccone, University of Sassari (Italy)
Email: battacon@uniss.it

Luca M. Battaglini, University of Torino (Italy)
Email: luca.battaglini@unito.it

Ali-Reza Bayat, Natural Resources Institute (Finland)
Email: alireza.bayat@luke.fi

Francesca Bertolini, Technical University of Denmark (Denmark)
Email: franb@aqu.dtu.dk



Taylor & Francis
Taylor & Francis Group



Massimo Bionaz, Oregon State University (USA)

Email: massimo.bionaz@oregonstate.edu

Alessio Bonaldo, University of Bologna (Italy)

Email: alessio.bonaldo@unibo.it

Adriana Bonanno, University of Palermo (Italy)

Email: adriana.bonanno@unipa.it

Fulvia Bovera, University of Napoli (Italy)

Email: bovera@unina.it

Salvator Calvet Sanz, Polytechnic University of Valencia (Spain)

Email: salcalsa@upvnet.upv.es

Alessio Cecchinato, University of Padova (Italy)

Email: alessio.cecchinato@unipd.it

Beniamino T. Cenci Goga, University of Perugia (Italy)

Email: beniamino.cencigoga@unipg.it

Alberto Cesarani, University of Sassari (Italy)

Email: acesarani@uniss.it

Stefania Chessa, University of Torino (Italy)

Email: stefania.chessa@unito.it

Alessandro Dal Bosco, University of Perugia (Italy)

Email: alessandro.dalbosco@unipg.it

Juan Vicente Delgado Bermejo, University of Córdoba (Spain)

Email: juanviagr218@gmail.com

Marion Girard, Agroscope (Switzerland)

Email: marion.girard@agroscope.admin.ch

Flaviana Gottardo, University of Padova (Italy)

Email: flaviana.gottardo@unipd.it

Andrea Minuti, "Sacro Cuore" Catholic University, Piacenza (Italy)

Email: andrea.minuti@unicatt.it

Gianluca Neglia, University of Napoli (Italy)

Email: neglia@unina.it

Anna Nudda, University of Sassari (Italy)

Email: anudda@uniss.it

Johan Osorio, South Dakota State University (USA)

Email: johan.osorio@sdstate.edu

Manuela Renna, University of Torino (Italy)

Email: manuela.renna@unito.it

Evangelia Sossidou, Veterinary Research Institute, NAGREF Campus, Thessaloniki (Greece)

Email: sossidou.arig@nagref.gr

Giuseppe Stradaoli, University of Udine (Italy)

Email: giuseppe.stradaoli@uniud.it

Hai-Jun Zhang Feed Research Institute, Chinese Academy of Agricultural Sciences Beijing (China)

Email: fowlfeed@163.com

Italian Journal of Animal Science

The *Italian Journal of Animal Science* is an international peer-reviewed open access journal publishing original scientific papers, reviews and short communications.

The journal serves as essential reading for animal scientists, technicians and all those who research animal production.

The journal encourages submissions of international relevance on the following subjects:

- Animal derived food quality and safety
- Animal genetics and breeding
- Aquaculture, poultry, companion and wild game animals
- Livestock systems, management and environment
- Non-ruminant or ruminant nutrition and feeding
- Production physiology and functional biology of farmed, companions and wild game animals.
- Animal behavior
- Animal welfare
- In vitro studies that have an application to farmed livestock

Manuscripts must address topics based on research at molecular, cellular, organ, whole animal and production system levels. Manuscripts discussing milk or meat analysis and compositions must show a direct link to either livestock production system, product quality, animal feeding/nutrition, animal genetics or breeding. Manuscripts describing laboratory animal models will be considered where the study highlights a potential benefit to farmed livestock.

Submissions discussing epidemiology, parasitology, infective diseases, food-borne diseases do not fit with the aims and scope of the journal.

Meeting reviews, book reviews and conference supplements are also published, as well as news and guidelines from the Animal Science and Production Association (ASPA). We welcome submissions from ASPA members and non-members alike.

Article publishing charge

The standard article publishing charge (APC) for this journal is US\$900 / €795 / £690. Depending on your location, these charges may be subject to local taxes.

For members of the Animal Science and Production Association, the publication fee is US\$450 / €400 / £345. Depending on your location, these charges may be subject to local taxes. There are no submission charges for this journal.

Peer Review Statement

The publication of manuscripts is subject to the approval of referees and in agreement with the Editorial Advisory Board's opinions. All peer review is single blind and submission should be online via ScholarOne Manuscripts. Referees will be selected from among qualified scientists in the international scientific community.

Submitting your paper

This journal uses ScholarOne Manuscripts (previously Manuscript Central) to peer review manuscript submissions. Please read the guide for ScholarOne authors before making a submission. Please submit your paper in the author centre at <https://mc.manuscriptcentral.com/tjas>

Italian Journal of Animal Science

volume 20, supplement 1, 2021

ASPA 24th Congress

Padova, September 21-24, 2021

Guest Editors

Roberto Mantovani (Coordinator), Alessio Cecchinato, Giovanni Bittante, Maurizio Ramanzin, Lucia Bailoni, Mauro Penasa, Flaviana Gottardo, Sara Pegolo, Giorgio Marchesini, Rebecca Ricci, Cristina Sartori, Marco Cullere, Marco Birolo, Severino Segato, Valentina Bonfatti, Marta Brscic, Luigi Gallo, Stefano Schiavon, Franco Tagliapietra

Table of Contents

<hr/> MAIN LECTURES		<hr/> POSTERS	103
Management strategies to improve animal health, welfare and resilience	1	<hr/> INDEX OF AUTHORS	196
Nutritional profile of food	1		
<hr/> ORAL COMMUNICATIONS			
Alternative feeds and waste recycling	16		
Nutritional profile of food	18		

ASPA 24th Congress

Padova, September 21-24, 2021

ORGANIZING COMMITTEE

Lucia Bailoni (President)
Luigi Gallo (Secretary)
Roberto Mantovani (Secretary)
Igino Andrighetto
Paolo Berzaghi
Paolo Carnier
Martino Cassandro
Giulio Cozzi
Antonella Dalle Zotte
Massimo De Marchi
Chiara Rizzi
Angela Trocino
Rina Verdiglione
Gerolamo Xiccato

SCIENTIFIC COMMITTEE

Giovanni Bittante (President)
Marco Cullere (Secretary)
Marco Birolo
Valentina Bonfatti
Marta Brscic
Cecchinato Alessio
Flaviana Gottardo
Giorgio Marchesini
Sara Pegolo
Mauro Penasa
Maurizio Ramanzin
Rebecca Ricci
Cristina Sartori
Severino Segato
Stefano Schiavon
Enrico Sturaro
Franco Tagliapietra

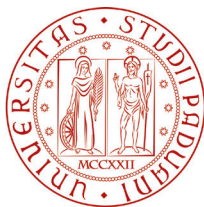


ASPA 24th Congress

Padova, September 21-24, 2021

Sponsors & Partners

1222 • 2022
800
ANNI

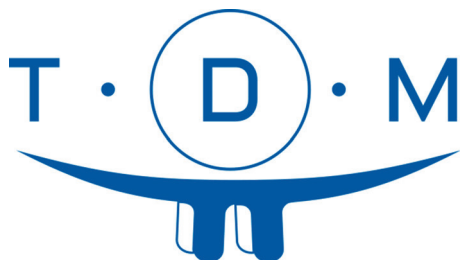


UNIVERSITÀ
DEGLI STUDI
DI PADOVA

DAFNAE

ASPA 2019
SORRENTO

23° CONGRESS OF THE
ANIMAL SCIENCE AND
PRODUCTION ASSOCIATION



Total
Dairy
Management

ASPA 24th Congress

Padova, September 21-24, 2021

Under the Patronage of



UNIVERSITÀ
DEGLI STUDI
DI PADOVA



PATROCINIO
REGIONE DEL VENETO



Ministero delle
politiche agricole
alimentari e forestali



ACCADEMIA DEI GEORGOFILI



ACCADEMIA OLIMPICA
VICENZA





ASPA 24th Congress

Padova, September 21-24, 2021

#ASPA2021

24th

Congress of the Animal Science and production Association

24° Congresso dell' Associazione per la Scienza e le Produzioni Animali

**Padova,
September 21-24, 2021**

Venue

“Fiore di Botta”

University of Padova

Via del Pescarotto, 8-Padova

ASPA 24th Congress

Padova, September 21-24, 2021

LEGEND

ENVIRONMENT (E)
ANIMALS (A)
FOOD (F)
OTHER (O)
to be defined

Tuesday 21 st September 2021	
Fiera di Padova	
12:00	ARRIVAL - REGISTRATION
PLENARY SESSION: Animal Science and Society Concerns	
15:00	Introduction Nicolò Pietro Paolo Macciotta
15:15	
15:15	MAIN LECTURE 1 <i>Animal production and society</i> Massimiano Bucchi
15:45	
15:45	MAIN LECTURE 2 <i>Societal and political demands on farmed animal welfare: an evolving landscape</i> Elena Nalon
16:15	
16:15	Coffee Break
16:45	MAIN LECTURE 3 <i>From Padova 1987 to Padova 2021: evolution of the scientific research</i> Giovanni Bittante
17:15	
17:15	MAIN LECTURE 4 <i>Challenges of Italian livestock systems towards a full environmental sustainability</i> Bruno Ronchi
17:45	
18:00	OPENING CEREMONY Welcome addresses
18:15	
18:45	MAIN LECTURE 5 <i>Eight centuries of the University of Padua (1222-2022): An historical sketch</i> Fabio Zampieri
18:45	
19:15	MAIN LECTURE 6 <i>From Pietro Arduino and Giuseppe Orus to the Agripolis Campus: analogies with present times between historical realities and possible fakes</i> Lucia Bailoni
19:30	Welcome Cocktail Dinner

Wednesday 22 nd September 2021							
Fiore di Bottà							
ROOM GALILEO		ROOM GIOTTO		ROOM PETRARCA		ROOM ELENA CORNARO PISCOPIA	
09:00	SESSION 1 - (E) Alternative feeds and waste recycling - I (6 oral)	08:30	SESSION 2 - (A) Management strategies to improve animal health, welfare and resilience - I (1 main lecture + 5 oral)	09:00	SESSION 3 - (A) Role and characterization of local breeds (6 oral)	09:00	SESSION 4 - (F) Nutritional profile of food - I (1 main lecture + 4 oral)
10:30		10:15		10:30		10:30	
Coffee Break / Poster Session 1							
11:00	SESSION 5 - (E) Alternative feeds and waste recycling - II (4 oral)	11:00	SESSION 6 - (A) Management strategies to improve animal health, welfare and resilience - II (6 oral)	11:00	SESSION 7 - (A) Genomic and phenomic tools to improve livestock animals - I (1 main lecture + 4 oral)	11:00	SESSION 8 - (F) Nutritional profile of food - II (5 oral)
12:30		12:30		12:30		12:30	
Lunch							
14:00	SESSION 9 - (E) Non conventional livestock systems (1 main lecture + 4 oral)	14:00	SESSION 10 - (A) Management strategies to improve animal health, welfare and resilience - III (6 oral)	14:00	SESSION 11 - (A) Genomic and phenomic tools to improve livestock animals - II (1 main lecture + 5 oral)	14:00	SESSION 12 - (F) Food production and processing (6 oral)
15:30		15:30		15:30		15:30	

Thursday 23rd September 2021

Fiore di Botta				
ROOM GALILEO		ROOM GIOTTO	ROOM PETRARCA	ROOM ELENA CORNARO PISCOPIA
09:00 SESSION 13 - (E) Monitoring and mitigating impacts on environment - I (6 oral)		08:30 SESSION 14 - (A) Breeding strategies to improve animal health, welfare and resilience (1 main lecture + 6 oral)	SESSION 15 - (O) Feed efficiency and growth performance - I (5 oral)	09:00 SESSION 16 - (F) Food sensory quality, labelling and valorization (6 oral)
10:30 Coffee Break / Poster Session 2				
11:00 SESSION 17 - (E) Monitoring and mitigating impacts on environment - II (1 main lecture + 4 oral)		11:00 SESSION 18 - (A) Behaviour and welfare (6 oral)	SESSION 19 - (O) Feed efficiency and growth performance - II (6 oral)	11:00 SESSION 20 - (F) Feed effects on nutritional profile of animal products - I (6 oral)
12:30 Lunch				
14:00 SESSION 21 - (A) Precision livestock farming - I (1 main lecture + 4 oral)		14:00 SESSION 22 - (O) Free Communications (6 oral)	SESSION 23 - (A) Genomics of local breeds (1 main lecture + 4 oral)	14:00 SESSION 24 - (F) Feed effects on nutritional profile of animal products - II (6 oral)
15:30 Coffee Break				
16:00 SESSION 25 - (A) Precision livestock farming - II (3 oral)		16:00 SESSION 26 - (A) Omics technologies - I (3 oral)	SESSION 27 - (A) Quantitative approaches, inbreeding and crossbreeding - I (4 oral)	16:00 SESSION 28 to be defined
17:00 Oral presentations & Posters Awards				
17:15 Meeting of ASPA Members				
19:30				
20:00 Transfer by bus from Fiore di Botta to Abano Terme for Social Dinner				

Friday 24th September 2021

Fiore di Botta				
ROOM GALILEO		ROOM GIOTTO	ROOM PETRARCA	ROOM ELENA CORNARO PISCOPIA
09:00 SESSION 29 - (A) Animal efficiency - I (6 oral)		09:00 SESSION 30 - (A) Omics technologies - II (6 oral)	SESSION 31 - (A) Quantitative approaches, inbreeding and crossbreeding - II (6 oral)	09:00 SESSION 32 - (A) Companion animals and society - I (1 main lecture + 4 oral)
10:30 Coffee Break				
11:00 SESSION 33 - (A) Animal efficiency - II (6 oral)		11:00 SESSION 34 - (A) Omics technologies - III (6 oral)	SESSION 35 - (A) Genetic diversity (6 oral)	11:00 SESSION 36 - (A) Companion animals and society - II (5 oral)
12:30 End of the congress				

ASPA 24th Congress

Padova, September 21-24, 2021

Italian Journal of Animal Science 2021; volume 20, supplement S1

Agenda Invited Speakers

September, 21st

Fiera di Padova, PLENARY SESSION "Animal Science and Society Concerns"

Chair:	Nicolò Pietro paolo Macciotta	
15.15-15.45	Massimiano Bucchi	
	<i>Animal production and society</i>	IS001
15.45-16.15	Elena Nalon	
	<i>Societal and political demands on farmed animal welfare: an evolving landscape</i>	IS002
16.45-17.15	Giovanni Bittante	
	<i>From Padova 1987 to Padova 2021: evolution of the scientific research</i>	IS003
17.15-17.45	Bruno Ronchi	
	<i>Challenges of Italian livestock systems towards a full environmental sustainability</i>	IS004

Fiera di Padova - Opening Ceremony

Chair:	Giulio Cozzi	
18.15-18.45	Fabio Zampieri	
	<i>Eight centuries of the University of Padua (1222-2022): An historical sketch</i>	S005
18.45-19.15	Lucia Bailoni	
	<i>From Pietro Arduino and Giuseppe Orus to the Agripolis Campus: analogies with present times between historical realities and possible fakes</i>	IS006

September, 22nd

Fiore di Botta, Room Giotto - Management strategies to improve animal health, welfare and resilience - I

Chairs:	Giulio Cozzi, Giovanna Martelli	
8.30-09.00	Annalisa Scollo	
	<i>Mutilations in pigs: searching for a new state-of-mind of the farmer</i>	IS007

Fiore di Botta, Room Elena Cornaro Piscopia - Nutritional profile of food - I

Chairs:	Massimiliano Petracci, Angela Trocino	
09.00-09.30	Frédéric Leroy	
	<i>Animal source foods in the 21st century - obsolete or essential?</i>	IS008

Fiore di Botta, Room Petrarca - Genomic and phenomic tools to improve livestock animals - I

Chairs:	Alessio Cecchinato, Martina Zappaterra	
11.00-11.30	Joao Reboucas Dorea	
	<i>Harnessing the Power of Computer Vision System to Improve Management Decisions in Livestock Operations</i>	IS009

**Fiore di Botta, Room Galileo - Non-conventional
livestock systems**

Chairs: Maurizio Ramanzin, Luca Maria Battaglini
 14.00-14.30 *Daniel Martin Collado*
*Best practices for targeted policies to enhance ecosystem services in European
 livestock agroecosystems* IS010

**Fiore di Botta, Room Petrarca - Genomic and phenomic
tools to improve livestock - II**

Chairs: Roberto Mantovani, Riccardo Bozzi
 14.00-14.30 *Ignacy Misztal*
Genomic tools to improve livestock IS011

September, 23rd

**Fiore di Botta, Room Giotto - Breeding strategies to improve
animal health, welfare and resilience**

Chairs: Fabio Pilla, Valentina Bonfatti
 08.30-09.00 *Augustin Blasco*
New challenges: Global warming, welfare, resilience. How can genetics help? IS012

**Fiore di Botta, Room Galileo - Monitoring and mitigating
impacts on environment**

Chairs: Mauro Spanghero, Stefano Schiavon
 11.00-11.30 *Maurizio Ramanzin*
Environmental sustainability of livestock systems: going beyond impacts? IS013

Fiore di Botta, Room Galileo - Precision livestock farming - I

Chairs: Giorgio Marchesini, Fabio Abeni
 14.00-14.30 *Fabio Abeni*
PLF applications for Italian animal productions: critical aspects and opportunities IS014

Fiore di Botta, Room Petrarca - Genomics of local breeds

Chairs: Baldassare Portolano, Emiliano Lasagna
 14.00-14.30 *Paolo Ajmone Marsan*
Livestock biodiversity in the genomic era IS015

September, 24th

**Fiore di Botta, Room Elena Cornaro Piscopia - Companion
animals and society**

Chairs: Rebecca Ricci, Paola Crepaldi
 09.00-09.30 *Marianne Diez*
The evolution of proteins in the nutrition of dogs and cats IS016

ASPA 24th Congress

Padova, September 21-24, 2021

Italian Journal of Animal Science 2021; volume 20, supplement S1

Agenda for oral presentations

Wednesday, September 22nd - Room Galileo

SESSION 1 - Alternative feeds and waste recycling - I

Chairs:	Antonella Dalle Zotte, Laura Gasco	
09.00-09.15	Erika Pellattiero, Marco Cullere, Federica Zanetti, Barbara Alberghini, Sara Berzuini, Silvia Tavarini, Incoronata Galasso, <u>Antonella Dalle Zotte</u> <i>Effect of Camelina (Camelina sativa L. Crantz) dietary inclusion on quails growth performance and carcass traits</i>	O001
09.15-09.30	<u>Nicola Francesco Addeo</u> , Alessandra Roncarati, Giovanni Piccolo, Antonino Nizza, Fulvia Bovera <i>Potential use of a queen bee larvae meal (Apis mellifera ligustica Spin.) in animal nutrition: a nutritional and chemical-toxicological evaluation</i>	O002
09.30-09.45	<u>Yazavinder Singh</u> , Eszter Zsedely, Georgina Takacs, Zsolt Herman, Klaudia Szalai, Marco Cullere, Silvia Cappelozza, Antonella Dalle Zotte <i>Effect of silkworm (Bombyx mori) dietary inclusion on chickens' growth performance and carcass traits</i>	O003
09.45-10.00	<u>Giulia Pascon</u> , Maria Messina, Lisa Petit, Luísa Maria Pinheiro Valente, Beatriz Monteiro Oliveira, Cyrille Przybyla, Gilbert Dutto, Francesca Tulli <i>Marine microalgal biomass from fish farming effluents: potential application in aquafeeds</i>	O004
10.00-10.15	<u>Sara Bellezza Oddon</u> , Ilaria Biasato, Laura Gasco <i>Isoenergetic-practical and semi-purified diets for protein requirement determination in Hermetia illucens larvae: consequences on life history traits</i>	O005
10.15-10.30	<u>Francesco Bordignon</u> , Laura Gasco, Marco Birolo, Christian Caimi, Gerolamo Xiccato <i>Effects of the inclusion of Hermetia illucens meal in diets for rainbow trout (Oncorhynchus mykiss) reared in a low-tech aquaponic system</i>	O006

Wednesday, September 22nd - Room Giotto

SESSION 2 - Management strategies to improve animal health, welfare and resilience - I

Chairs:	Giulio Cozzi, Giovanna Martelli	
09.00-09.15	<u>Luciana Bava</u> , Alice Comparelli, Maria Cecilia Bianchi, Alberto Tamburini, Maddalena Zucali <i>Dry period management practices in 130 dairy farms</i>	O007
09.15-09.30	<u>Luca Turini</u> , Alice Cappucci, Fabrizio Bertelloni, Elisa Gasparoni, Francesca Vichi, Marcello Mele <i>Mutual relationship between technological, structural and productive features in dairy sheep farms: a multivariate approach</i>	O008
09.30-09.45	<u>Diana Giannuzzi</u> , Rossella Tessari, Enrico Fiore, Matteo Gianesella, Vittoria Bisutti, Sara Pegolo <i>Association between liver ultrasound measurements and hematochemical indicators for early prediction of metabolic alterations in Holstein cows</i>	O009
09.45-10.00	<u>Luca Cattaneo</u> , Andrea Minuti, Fiorenzo Piccioli Cappelli, Erminio Trevisi <i>Blood biomarkers before dry-off are related to better adaptation to transition period in dairy cows</i>	O010
10.00-10.15	<u>Isabella Lora</u> , Giovanna Ranzato, Luisa Magrin, Giulio Cozzi <i>Comparison between cow milk and a high-energy whey-based milk replacer for the weaning of Holstein dairy heifers</i>	O011

Wednesday, September 22nd - Room Petrarca

SESSION 3 - Role and characterization of local breeds

Chairs:	Luca Fontanesi, Cristina Sartori	
08.30-08.45	<u>Elena Benedetti del Rio</u> , Marta Teston, Edi Defrancesco, Paola Gatto <i>Sustainable use of local sheep breeds in Italian Eastern Alps</i>	O012
08.45-09.00	<u>Enrico Mancin</u> , Cristina Sartori, Nadia Guzzo, Beniamino Tuliozzi, Roberto Mantovani <i>Change of accuracy in EBVs due to genomic information in the small Rendena cattle populations</i>	O013
09.00-09.15	<u>Giulia Foggi</u> , Francesca Ciucci, Laura Casarosa, Elisabetta Giannessi, Carla Lenzi, Maria Conte, Marcello Mele <i>Histochemical muscle fibre features and gene expression in Maremmana and Aubrac steers</i>	O014
09.15-09.30	<u>Mario Barbato</u> , Elia Vajana, Elisa Somenzi, Oliver Selmoni, Marcello Del Corvo, Michèle Tixier-Boichard, Stéphane Joost, Barbara Lazzari, Alessandra Stella, Paolo Ajmone Marsan <i>Deciphering climate-mediated adaptation in European sheep</i>	O015
09.30-09.45	<u>Rosalina Di Gerlando</u> , Ilaria Rizzuto, Marco Tolone, Angelo Moscarelli, Maria Teresa Sardina <i>Prion protein (PRNP) gene polymorphisms in Valle del Belice sheep breed</i>	O016
09.45-10.00	<u>Piero Franceschi</u> , Paolo Formaggioni, Francesca Vighi, Elena Bortolazzo, Massimo Malacarne <i>Physico-chemical characteristics of milk from autochthonous cattle breeds of the Emilia Romagna region</i>	O017

Wednesday, September 22nd - Room Elena Cornaro Piscopia

SESSION 4 - Nutritional profile of food - I

Chairs:	Massimiliano Petracci, Angela Trocino	
09.30-09.45	<u>Alice Cartoni Mancinelli</u> , Alessandro Dal Bosco, Elisa Angelucci, Claudia Ciarelli, Castellini Cesare <i>Lipid metabolism in different Italian poultry breed and crossbreed</i>	O018
09.45-10.00	<u>Nicolo' Amalfitano</u> , Mohamed-Laid Haddi, Hamida Benabid, Franco Tagliapietra <i>Detailed mineral profile of milk from cows, buffaloes, goats, sheep, dromedary camels, and donkeys and minerals recovery in cheese</i>	O019
10.00-10.15	<u>Elena Mariani</u> , Anna Lante, Claudio Cipolat-Gotet, Giovanna Lomolino, Federica Tinello, Massimo Malacarne, Andrea Summer <i>Animal and environmental effects on protease and lipase activity of bovine milk</i>	O020
10.15-10.30	<u>Vittoria Bisutti</u> , Alice Vanzin, Alessandro Toscano, Lucio Flavio Macedo Mota <i>Associations among somatic cell count, differential somatic cell count and milk protein profile in Holstein cattle</i>	O021

Wednesday, September 22nd - Room Galileo

SESSION 5 - Alternative feeds and waste recycling - II

Chairs:	G. Matteo Crovetto, Biagina Chiofalo	
11.00-11.15	<u>Francesco Serrapica</u> , Felicia Masucci, Maura Sannino, Salvatore Faugno, Claudia Lambiase, Antonio Di Francia <i>Peanut (<i>Arachis hypogaea</i>) crop within a circular economy perspective: potential use of biomass as forage</i>	O022
11.15-11.30	<u>Sheyla Arango</u> , Elisabetta Bacchin, Federico Fontana, Massimo Montanari, Lucia Bailoni <i>Agronomical traits and chemical characterization of whole plant and botanical fractions of six varieties of hemp cultivated in the Veneto region</i>	O023
11.30-11.45	<u>Andrea Rota Graziosi</u> , Stefania Colombini, Gianni Matteo Crovetto, Gianluca Galassi, Maria Chiaravalli, Marco Battelli, Luca Rapetti <i>Partial replacement of soybean meal with self-produced whole-plant soybean silage in lactating dairy cows diet</i>	O024
11.45-12.00	<u>Doriana E.A. Tedesco</u> , Sveva Scarioni, Aldo Tava <i>Biorefinery approach to valorise vegetable waste from the wholesale market</i>	O025

Wednesday, September 22nd - Room Giotto

SESSION 6 - Management strategies to improve animal health, welfare and resilience - II

Chairs: Flaviana Gottardo, Martina Tarantola

- 11.00-11.15 Sara Pegolo, Rossella Tessari, Enrico Fiore, Matteo Gianesella, Diana Giannuzzi, Riccardo Negrini, Alessio Cecchinato
Quarter-level analysis of mastitis infection and relationships with milk traits in Holstein cattle **O026**
- 11.15-11.30 Basilio Randazzo, Matteo Zarantoniello, Roberto Cerri, Giorgia Gioacchini, Maria Messina, Alessia Belloni, Enrico Daniso, Emilio Tibaldi, Ike Olivotto
*Effects of microalgae and insect meal supplementation to diets high in soybean meal, deprived of fish meal, on gut health of seabass (*D. labrax*) and sea bream (*S. aurata*)* **O027**
- 11.30-11.45 Aristide Maggolino, Nicola Bartolomeo, Umberto Bernabucci, Attilio Rossoni, Vincenzo Landi, Pasquale De Palo
Heat waves effects on Italian Brown Swiss milk production **O028**
- 11.45-12.00 Francesca Rita Dinardo, Elisabetta Casalino, Grazia Maria Liuzzi, Giovanna Calzaretto, Pasquale De Palo
Dietary supplementation with nucleotides in calves: effects on oxidative balance and immune response **O029**
- 12.00-12.15 Silvia Carta, Eleni Tsiplakou, Christina Mitsiopolou, Giuseppe Pulina
The effect of cocoa husks supplementation on fatty acids profile and blood and milk antioxidant status of dairy ewes **O030**
- 12.15-12.30 Paolo Trevisi, Diana Luise, Federico Correa, Marika Vitali, Elisa Spinelli, Roberta Ruggeri, Kristian Juul Volshøj, Jørn Munch Madsen, Mai Anh Ton Nu, Paolo Bosi
Effect of two different ways for milk replacer administration on the growth performance and welfare of piglets **O031**

Wednesday, September 22nd - Room Petrarca

SESSION 7 - Genomic and phenomic tools to improve livestock animals - I

Chairs: Alessio Cecchinato, Martina Zappaterra

- 11.30-11.45 Giacomo Rovelli, Maria Gracia Luigi Sierra, Simone Ceccobelli, Dailu Guan, Francesco Perini, Fiorella Sbarra, Andrea Quaglia, Marcel Amills Eras, Emiliano Lasagna
A genome wide association study for beef production traits in five Italian cattle breeds **O032**
- 11.45-12.00 Vincenzo Landi, Gabriele Senczuk, Marco Ragni, Simona Taricone, Francesco Giannico, Francesca Maria Sarti, Emiliano Lasagna, Luigina Rillo, Giuseppe Marsico, Christian Persichilli, Samira Giovannini, Domato Matassino, Elena Ciani, Fabio Pilla
Complex genetic pattern supported by genome wide SNPs data in Mediterranean goat breeds **O033**
- 12.00-12.15 Marco Milanese, Cinzia Marchitelli, Michela Contò, Simona Rinaldi, Danilo Pignotti, Giovanni Chillemi, Alessandra Crisà
Preliminary results of Genome Wide Association Study with milk functional molecules in different cow breeds **O034**
- 12.15-12.30 Daniele Bigi, Nicola Rambaldi Migliore, Riccardo Negrini, Andrea Verini-Supplizi, Luigi Liotta, Antonio Torrioni, Alessandro Achilli, Licia Colli
Donkey worldwide diversity based on control-region data and entire mitogenomes **O035**

Wednesday, September 22nd - Room Elena Cornaro Piscopia

SESSION 8 - Nutritional profile of food - II

Chairs: Andrea Formigoni, Gianluca Neglia

- 11.00-11.15 Chiara Ceccotti, Simona Rimoldi, Federica Iannini, Genciana Terova
*Evaluation of oil from *Camelina sativa* in feeds for gilthead sea bream (*Sparus aurata*): effects on fish growth, fillet fatty acid profile, and gut microbiota composition* **O036**
- 11.15-11.30 Cinzia Marchitelli, Daniele Pietrucci, Marco Milanese, Luca Casadei, Fernando Porcelli, Giovanni Chillemi, Alessandra Crisà
Evaluation of milk quality in different cow breeds by biological markers **O037**

11.30-11.45	<u>Amalia Simonetti</u> , Giulia Grassi, Emilio Gambacorta, Annamaria Perna <i>Antioxidant capacity and polyphenol content of goat milk: comparison among autochthonous breeds</i>	O038
11.45-12.00	<u>Martina Di Corcia</u> , Marzia Albenzio, Antonella della Malva, Mariangela Caroprese, Maria Giovanna Ciliberti, Antonella Santillo, Agostino Sevi, Rosaria Marino <i>Fatty acid profile and endogenous bioactive compounds of beef as affect by duration of linseed supplementation</i>	O039
12.00-12.15	<u>Maria Francesca Guiso</u> , Giorgia Serra, Antonio Fenu, Anna Nudda <i>Colostrum composition of Sarda Dairy Ewes</i>	O040

Wednesday, September 22nd - Room Galileo

SESSION 9 – Non-conventional livestock systems

Chairs:	Maurizio Ramanzin, Luca Maria Battaglini	
14.30-14.45	<u>Ginevra Nota</u> , Roberta Berretti, Marco Pittarello, Davide Barberis, Davide Ascoli, Simone Ravetto Enri, Dino Genovese, Paolo Cornale, Giampiero Lombardi, Michele Lonati, Renzo Motta, Luca Maria Battaglini <i>Food For Forest: an integrative silvi-pastoral system with semi-free-ranging pigs</i>	O041
14.45-15.00	<u>Amanda McPherson</u> , Enrico Sturaro, Maurizio Ramanzin, Andrea Squartini, Salvatore Raniolo, Dorcas H. Franklin, Giuseppe Concheri <i>Investigating dairy grazing patterns and soil microbial trends in the nitrogen cycle across traditional mountain landscapes</i>	O042
15.00-15.15	<u>Salvatore Raniolo</u> , Maurizio Ramanzin <i>Human choices, slope, and vegetation productivity determine pattern of traditional Alpine summer grazing</i>	O043
15.15-15.30	<u>Andrea Confessore</u> , Chiara Aquilani, Lapo Nannucci, Edoardo Bellini, Camilla Dibari, Giovanni Argenti, Nicolina Stagliano, Marco Moriondo, Paola Semenzato, Sandro Nicoloso, Carolina Pugliese <i>Application of Virtual Fencing for the management of Limousine cows at pasture during spring-summer season: preliminary results</i>	O044

Wednesday, September 22nd - Room Giotto

SESSION 10 - Management strategies to improve animal health, welfare and resilience - III

Chairs:	Leonardo Nanni Costa, Silvana Mattiello	
14.00-14.15	<u>Alessio Cotticelli</u> , Angela Salzano, Anna Balestrieri, Pasquale Scala, Giacomo Bertolini, Oscar Tamburis, Gianluca Neglia <i>Relationship among production traits, milk conductivity, somatic cell score and THI in the Italian Mediterranean Buffalo</i>	O045
14.15-14.30	<u>Alessandra Nicolao</u> , Claire Mosnier, Bruno Martin, Dominique Pomies, Enrico Sturaro <i>Suckling of dairy calves by their dams: trade-off between ethical and economic sustainability</i>	O046
14.30-14.45	<u>Giovanna Ranzato</u> , Maria Costanza Galli, Giulio Cozzi <i>Modeling of milk fatty acids profiles in Holstein dairy cows during early and mid lactation</i>	O047
14.45-15.00	Patrizia Di Marco, Donatella Volpatti, Valeria Donadelli, Alberta Mandich, Alessandro Longobardi, Tommaso Petochi, Maria Grazia Fioia, Gloriana Cardinaletti, <u>Giovanna Marino</u> <i>Growth performance and welfare status of gilthead sea bream (<i>Sparus aurata</i>) fed low fish meal diets</i>	O048
15.00-15.15	<u>Diana Luise</u> , Paolo Trevisi, Tristan Chalvon-Demersay, Paolo Bosi <i>Description of the effects of reducing protein content diet on piglets post-weaning intestinal health: a meta-analysis</i>	O049
15.15-15.30	<u>Mayra Gómez Carpio</u> , Dario Rossi, Gianluigi Zullo, Damiano Altieri, Roberta Cimmino <i>Preliminary investigations on functional longevity in Italian Mediterranean Buffaloes (<i>Bubalus bubalis</i>)</i>	O050

Wednesday, September 22nd - Room Petrarca

SESSION 11 - Genomic and phenomic tools to improve livestock animals - II

Chairs:	Roberto Mantovani, Riccardo Bozzi	
14.30-14.45	<u>Samuele Fontanesi</u> , Giuseppina Schiavo, Mohamad Ballan, Matteo Bolner, Luca Fontanesi <i>Mining livestock genomes for a One Health perspective in the management of animal genetic resources</i>	O051
14.45-15.00	<u>Lucio Flavio Macedo Mota</u> , Gota Morota, Francisco Peñagaricano, Alessio Cecchinato <i>Machine learning and variable selection methods for Fourier transform infrared prediction in Holstein cattle</i>	O052
15.00-15.15	<u>Fabio Correddu</u> , Giustino Gaspa, Nicolò P.P. Macciotta <i>Non coagulating sheep milk characterization through Fourier-Transform IR spectroscopy</i>	O053
15.15-15.30	<u>Sara Faggion</u> , Massimiliano Babbucci, Giulia Dalla Rovere, Rafaella Franch, Matteo Freguglia, Luca Bargelloni, Daniela Bertotto <i>Genomic prediction of VNN resistance, body weight, cortisol concentration and antibody titer in European sea bass (<i>Dicentrarchus labrax L.</i>)</i>	O054
15.30-15.45	<u>Valentina Bonfatti</u> , Elena Boschi, Paolo Carnier <i>Genomic prediction of dry-cured ham weight loss in Italian heavy pigs</i>	O055

Wednesday, September 22nd - Room Elena Cornaro Piscopia

SESSION 12 - Food production and processing

Chairs:	Marcello Mele, Andrea Summer	
14.00-14.15	<u>Giulia Baldi</u> , Fabio D'Elia, Urszula Tylewicz, Massimiliano Petracci <i>Innovative approach for the tenderization of Wooden Breast meat in broilers</i>	O056
14.15-14.30	<u>Simone Mancini</u> , Simona Mattioli, Alice Cartoni Mancinelli, Roberta Nuvoloni, Gisella Paci <i>Effects of rosemary powder and salt additions in goose meat burgers</i>	O057
14.30-14.45	<u>Roxana Elena Amarie</u> , Sara Tinagli, Laura Casarosa, Giulia Foggi, Monica Tognocchi, Andrea Serra <i>Effects of cooking with Superheated Steam on organic Maremmana breed beef</i>	O058
14.45-15.00	<u>Isaac Hyeladi Malgwi</u> , Paolo Carnier, Celio Paolo Sasso, Veronika Halas, Stefano Schiavon <i>Innovative feeding strategies for the heavy pig: effects on technological and quality traits of dry-cured hams</i>	O059
15.00-15.15	<u>Giorgia Stocco</u> , Michele Pazzola, Maria Luisa Dettori, Andrea Summer, Giuseppe Massimo Vacca <i>Goat milk-based predictive formulas for different measures of cheese yield</i>	O060
15.15-15.30	<u>Giulia Grassi</u> , Amalia Simonetti, Emilio Gambacorta, Annamaria Perna <i>Effect of species on oxidative stability of ozone treated milk cream</i>	O061

Thursday, September 23rd - Room Galileo

SESSION 13 - Monitoring and mitigating impacts on environment - I

Chairs:	Umberto Bernabucci, Anna Sandrucci	
09.00-09.15	<u>Sara Carè</u> , Giacomo Pirlo, Luciano Migliorati <i>Environmental impact of Italian beef suckler to finish system</i>	O062
09.15-09.30	<u>Marco Berton</u> , Stefano Schiavon, Luigi Gallo <i>Polluting compounds in Po Valley dairy system: amount, variation and some determinants in Veneto region farms</i>	O063
09.30-09.45	<u>Gustavo Javier Martínez Marín</u> , Giovanni Bittante, Hugo Toledo-Alvarado <i>Effect of breed, farm intensiveness and cow productivity on predicted enteric methane emissions predicted at the population level</i>	O064
09.45-10.00	<u>Andrea Vitali</u> , Giampiero Grossi, Nicola Lacetera <i>Effect of summer cooling of dairy cows on carbon and water footprint intensity of milk</i>	O065

- 10.00-10.15 Giulia Gislon, Ernesto Tabacco, Maria Teresa Pacchioli, Alberto Tamburini, Anna Sandrucci
Farm level mitigation strategies to improve sustainability of milk production: effects on GHG emissions..... **O066**
- 10.15-10.30 Valentina Ferrari, Maurizio Marusi, Martino Cassandro
A tool to efficiently replace dairy heifers using genomic information **O067**

Thursday, September 23rd - Room Giotto

SESSION 14 - Breeding strategies to improve animal health, welfare and resilience

- Chairs: Fabio Pilla, Valentina Bonfatti
- 09.00-09.15 Giustino Gaspa, Roberto Steri, Lorenzo Degano, Daniele Vicario
Lifetime profitability assessed through multivariate health index measured on primiparous Italian Simmental cows **O068**
- 09.15-09.30 Angela Costa, Marco Franzoi, Arianna Goi, Giulio Visentin, Massimo De Marchi
Genetic aspects of immunoglobulins G concentration measured with gold standard and predicted from infrared spectra in bovine colostrum..... **O069**
- 09.30-09.45 Raffaella Finocchiaro, Jan-Thijs van Kaam, Valentina Ferrari
Genetic Modelling of Heat Stress in Italian Holstein cows **O070**
- 09.45-10.00 Anna Fabris, Mauro Penasa, Tania Bobbo
Implementation of SCC breeding values in Italian Jersey breed..... **O071**
- 10.00-10.15 Giulio Visentin, Giovanni Buonaiuto, Angela Costa, Yari Vecchio, Ferdinando Galluzzo, Maurizio Marusi
Development of a selection index for resistance to subclinical ketosis in Holstein Friesian dairy cows **O072**
- 10.15-10.30 Matilde Maria Passamonti, Mario Barbato, Johanna Ramirez-Diaz, Michele Premi, Alessandra Stella, John Lewis Williams, Paolo Ajmone-Marsan
Can SNPs associated to the variation of stress biomarkers be used for the selection of stress resilient dairy cows? **O073**

Thursday, September 23rd - Room Petrarca

SESSION 15 - Feed efficiency and growth performance - I

- Chairs: Erminio Trevisi, Severino Segato
- 08.30-08.45 Vincenzo Lopreiato, Giulia Ferronato, Giorgia Lovotti, Erminio Trevisi
Residual feed intake and its association with growth performance and blood metabolic profile in preweaning Simmental calves..... **O074**
- 08.45-09.00 Alberto Romanzin, Lorenzo Degano, Daniele Vicario, Mauro Spanghero
Residual feed intake of Italian Simmental bulls in performance test..... **O075**
- 09.00-09.15 Ilaria Biasato, Giulia Chemello, Ilario Ferrocino, Christian Caimi, Aman Paul, Monika Dalim, Michel van Spankeren, Maria Teresa Capucchio, Elena Colombino, Luca Cocolin, Francesco Gai, Achille Schiavone, Laura Gasco
Growth performance and gut health of rainbow trout fed commercial diets containing black soldier fly larva meal..... **O076**
- 09.15-09.30 Matteo Daghigho, Francesca Ciucci, Carlo Viti, Breanne M. McAmmond, Jonathan D. Van Hamme, Federica Mannelli, Federica Scicutella, Arianna Buccioni
Rumen microbiota and growth performance in Aubrac and Maremmana steers reared in pasture and in feedlot..... **O077**
- 09.30-09.45 Alice Luciano, Marco Tretola, Michele Manoni, Nicoletta Rovere, Sharon Mazzoleni, Francesca Fumagalli, Luciano Pinotti
Effect of salty or sweet food leftover-based diets on growth performance and digestibility in piglets **O078**

Thursday, September 23rd - Room Elena Cornaro Piscopia

SESSION 16 - Food sensory quality, labelling and valorization

- Chairs: Massimo Malacarne, Adriana Bonanno
- 09.00-09.15 Ambra Rita Di Rosa, Marianna Oteri, Vittorio Lo Presti, Chiofalo Biagina
Feed Insects For Aquaculture. Use of Hermetia illucens L. meal for Sparus aurata L.: Emerging trends of advanced sensor-based instruments (E-eye, E-nose, E-tongue) for fish quality..... **O079**
- 09.15-09.30 Federico Nassivera, Emilio Tibaldi, Rodolfo Ballestrazzi, Luca Iseppi
To eat or not to eat: consumer behavior towards sustainable fish..... **O080**
- 09.30-09.45 Pier Paolo Danieli, Lorenzo Romagnoli, Andrea Amici, Bruno Ronchi, Giuseppe Russo, Riccardo Primi, Marco Lauteri
Effects of diets with different protein sources on carbon and nitrogen isotopic signatures in Hermetia illucens: potential zootechnical implications and traceability of insect meals..... **O081**
- 09.45-10.00 Aristide Maggiolino, Giovanna Calzaretto, Maria Federica Sgarro, Gerardo Centoducati, Francesco Giannico, Andrea Bragaglio
Dry vs Vacuum aging in horse meat: oxidative stability and volatolomic profile..... **O082**
- 10.00-10.15 Silvia Parrini, Francesco Sirtori, Alessandro Crovetto, Maria Chiara Fabbri, Riccardo Bozzi
Potential use of near infrared spectra from meat and fat samples for the identification of autochthonous pig breeds..... **O083**
- 10.15-10.30 Ilaria Lanza, Andrea Massaro, Alessandra Tata, Alessandro Negro, Marco Bragolusi, Roberto Piro, Lorenzo Serva, Barbara Contiero, Severino Segato
High-alpine forage milk characterization by DART-HRMS signatures..... **O084**

Thursday, September 23rd - Room Galileo

SESSION 17 - Monitoring and mitigating impacts on environment - II

- Chairs: Mauro Spanghero, Stefano Schiavon
- 11.30-11.45 Anna Simonetto, Davide Gibin, Barbara Zanini, Valentina Caprarulo, Gianni Gilioli
A general framework for the assessment of environmental impact of food: an application to six healthy dietary patterns..... **O085**
- 11.45-12.00 Franco Tagliapietra, Sara Pontini
Comparison of different models to predict methane emission from milk fatty acids in dairy cows..... **O086**
- 12.00-12.15 Matteo Braidot, Alessandro Lotto, Nicola Martinelli, Chiara Sarnataro, Carla Fabro, Mauro Spanghero
Kinetics of rumen methane production in in vitro system..... **O087**
- 12.15-12.30 Mondina Francesca Lunesu, Paola Sau, Fabio Correddu
Carbon footprint of fully and partially indoor dairy goat farming systems in Sardinia: a comparison between IPCC 2006 and IPCC 2019 prediction methods..... **O088**

Thursday, September 23rd - Room Giotto

SESSION 18 - Behaviour and welfare

- Chairs: Marta Brscic, Fabio Napolitano
- 11.00-11.15 Laura Menchetti, Martina Zappaterra, Dabide Monaco, Leonardo Nanni Costa, Barbara Padalino
An innovative tool for assessing welfare of camels..... **O089**
- 11.15-11.30 Alberto Cesarani, Giuseppe Pulina
Farm animals are long away from natural behavior: genetic and technical perspectives to improve welfare..... **O090**
- 11.30-11.45 Stefania Celozzi, Monica Battini, Federica Manila Soli, Silvana Mattiello
Measuring feeding synchronization for welfare assessment in dairy farms..... **O091**
- 11.45-12.00 Mauro Giammarino, Silvana Mattiello, Monica Battini, Piero Quatto, Luca Maria Battaglini, Ana Lopes Vieira, George Stilwell, Manuela Renna
Evaluation of inter-observer reliability of animal welfare indicators: which is the best index to use?..... **O092**

- 12.00-12.15 Maria Costanza Galli, Annalisa Scollo, Barbara Contiero, Isabella Lora, Flaviana Gottardo
Alternative farrowing systems for sows can affect litters performance? **O093**
- 12.15-12.30 Fabrizio Pirrone, Cristina Zomeño, Francesco Bordignon, Angela Trocino
Hopping displacements of rabbit does kept in a collective housing system **O094**

Thursday, September 23rd - Room Petrarca

SESSION 19 - Feed efficiency and growth performance - II

- Chairs: Paolo Boni, Antonello Cannas
- 11.00-11.15 Matteo Dell'Anno, Carlotta Giromini, Serena Reggi, Tamil Selvi Sundaram, Simona Coranelli, Ambra Spalletta, Luciana Rossi
Evaluation of Lactobacillus plantarum and Lactobacillus reuteri as feed additives for swine **O095**
- 11.15-11.30 Marco Zampiga, Giorgio Brugaletta, Stefano Pignata, Federico Sirri
Effects of dietary metabolizable energy content on productive performance of turkeys **O096**
- 11.30-11.45 Marco Birolo, Anton Pascual Guzman, Giulio Pillan, Fabrizio Pirrone, Andrea Zuffellato, Gerolamo Xiccato
Effect of genotype and feeding plan on growth performance, slaughter results and meat quality of growing rabbits **O097**
- 11.45-12.00 Damiano Cavallini, Alessandro Concolino, Emanuela Valle, Luca Campidonico, Isa Fusaro, Ludovica Mammi, Andrea Formigoni
Effects of different lipid sources and tannins on performances of high producing dairy cows **O098**
- 12.00-12.15 Federico Moroni, Simona Rimoldi, Fabio Brambilla, Genciana Terova
Evaluation of lactic acid bacteria as probiotics for gilthead sea bream (Sparus aurata): effects on growth and intestinal morphology, transcriptional response, and microbiota **O099**
- 12.15-12.30 Paolo Bani, Andrea Fiorini, Fiorenzo Piccioli-Cappelli, Olga Gachiuta
Effects of ensiling treatments on the fermentation profile of pulp and stem fractions after green biorefining of alfalfa **O100**

Thursday, September 23rd - Room Elena Cornaro Piscopia

SESSION 20 - Feed effects on nutritional profile animal products - I

- Chairs: Serena Calabrò, Marco Cullere
- 11.00-11.15 Camilla Pomente, Ruggiero Menci, Bernardo Valenti, Gianluca Veneziani, Mariano Pauselli, Luciano Morbidini
Dietary olive pomace: effects on meat and back-fat quality traits in heavy pigs **O101**
- 11.15-11.30 Giuseppe Conte, Eleonora Longo, Sara Tinagli, Roxana Elena Amarie, Monica Tognocchi
Linseed supplementation in the diet of fattening pigs: effect on the fatty acid profile of different meat cuts **O102**
- 11.30-11.45 Lina Fernanda Pulido Rodriguez, Giulia Secci, Francesco Gai, Giulia Maricchiolo, Giuliana Parisi
Effect of dietary Hermetia illucens larvae meal on triglyceride composition of sea bream fillets **O103**
- 11.45-12.00 Giulia Secci, Lina Fernanda Pulido Rodriguez, Adja Cristina Lira de Medeiros, Giuliana Parisi
Alternative protein sources in aquafeeds for rainbow trout: overview on fillet quality modifications.. **O104**
- 12.00-12.15 Nadia Piscopo, Domenico Rufrano, Roberta Matera, Carmelina Lovallo, Salvatore Claps, Lucia Sepe, Angela Salzano
Productive performance and meat characteristics of kids fed anthocyanes **O105**
- 12.15-12.30 Simona Mattioli, Elisa Angelucci, Claudia Ciarelli, Alessandro Dal Bosco, Cesare Castellini
Effect of dietary alpha-linolenic acid on meat quality of Italian poultry breed and crossbreed **O106**

Thursday, September 23rd - Room Galileo

SESSION 21 - Precision livestock farming - I

- Chairs: Giorgio Marchesini, Fabio Abeni
- 14.30-14.45 Maddalena Zucali, Giulia Gislou, Milena Brasca, Serena Bonizzi, Luciana Bava, Stefano Morandi, Anna Sandrucci
Pre-weaned dairy calf housing: preliminary results on microbial air contamination **O107**

14.45-15.00	<u>Giorgio Marchesini</u> , Paolo Balasso, Nicola Ughelini <i>The left side flank as source of information for animal behaviour and welfare in dairy cow</i> O108
15.00-15.15	<u>Colomba Sermoneta</u> , Andrea Serra, Gianluca Brunori <i>The livestock sector digitalization: indicators on livestock's farming digital performance</i> O109
15.15-15.30	<u>Giulia Ferronato</u> , Michele Premi, Andrea Minuti, Olga Gachiuta, Paolo Bani <i>Near-Infrared Spectroscopy for the prediction of plasma parameters for Liver Functionality Index in dairy cows</i> O110

Thursday, September 23rd - Room Giotto

SESSION 22 - Free Communications

Chairs:	Massimo De Marchi, Gianni Battacone
14.00-14.15	<u>Carmine Versace</u> , Jiang-Hua Shang, Ling-Yu Li, Angela Perucatti, Liliana Di Stasio, Alfredo Pauciuolo <i>Aneuploidy detection in Murrah buffalo MII oocytes by tri-colour FISH</i> O111
14.15-14.30	<u>Luca Ferrari</u> , Matteo Ottoboni, Francesco Defilippo, Paolo Bonilauri, Robin Ørnsrud, Luciano Pinotti <i>Hermetia illucens reared on selenium enriched substrates for designing fortified insect meal</i> O112
14.30-14.45	Matteo Santinello, <u>Alessia Diana</u> , Federico Scali, Giovanni Loris Alborali, Luigi Bertocchi, Valentina Lorenzi, Massimo De Marchi <i>Management strategies reduce antimicrobial use in Italian beef farms</i> O113
14.45-15.00	<u>Matteo Santinello</u> , Alessia Diana, Federico Scali, Giovanni Loris Alborali, Luigi Bertocchi, Mauro Penasa <i>Effect of mixing animals in France on the use of antimicrobials in Italian beef fattening farms</i> O114
15.00-15.15	<u>Maria Rita Mellino</u> , Federico Correa, Catherine Ollagnier, Giuseppe Bee, Gianni Battacone <i>Response of weaned piglet's gut microbiota to the dietary inclusion of different doses of extracted olive oil wastewater</i> O115
15.15-15.30	<u>Riccardo Negrini</u> <i>LEO project: developing a national open data repository to support livestock biodiversity, health, sustainability, and welfare</i> O116

Thursday, September 23rd - Room Petrarca

SESSION 23 - Genomics of local breeds

Chairs:	Baldassare Portolano, Emiliano Lasagna
14.30-14.45	<u>Gabriele Senczuk</u> , Slim Ben-Jemaa, Fabio Pilla, Johannes A. Lenstra, Meng-Hua Li, Elena Ciani <i>Genome-wide diversity of African and Eurasian fat-tailed sheep</i> O117
14.45-15.00	<u>Beniamino Tuliozi</u> , Enrico Mancin, Roberto Mantovani, Alessandro Bagnato, Maria Giuseppina Strillacci, Mario Vevey, Cristina Sartori <i>GWAS of fitness and productive traits in the local Valdostana breeds</i> O118
15.00-15.15	Slim Ben-Jemaa, Roberta Ciampolini, Gennaro Catillo, Mekki Boussaha, <u>Salvatore Mastrangelo</u> <i>Genome-wide search of distinctiveness selection signatures in Maremmana cattle compared to Italian Podolian-derived breeds</i> O119
15.15-15.30	<u>Marco Tolone</u> , Domenico Giosa, Rosalia Di Gerlando, Anna Maria Sutera, Angelo Moscarelli, Ilaria Rizzuto, Baldassare Portolano, Salvatore Mastrangelo <i>Whole-genome resequencing reveals specific genomic variants in Italian insular sheep breeds</i> O120

Thursday, September 23rd - Room Elena Cornaro Piscopia

SESSION 24 - Feed effects on nutritional profile of animal products - II

Chairs:	Antonella Baldi, Ludovica Mammi
14.00-14.15	<u>Federica Mannelli</u> , Matteo Daghigh, Roberta Pastorelli, Carlo Viti, Maria Alexandra Cucu, Luca Turini, Federica Scicutella, Arianna Buccioni <i>Milk nutritional quality and rumen microbial community of Holstein-Friesian cows fed a diet supplemented with olive oil pomace</i> O121

- 14.15-14.30 Giorgia Secchi, Nicolò Amalfitano, Iliara Carafa, Kieran Michael Tuohy, Elena Franciosi, Giovanni Bittante
Metagenomics of milk before, during and after summer transhumance to highland pasture in relation to human health and cheese making properties..... **O122**
- 14.30-14.45 Antonino Di Grigoli, Marialetizia Ponte, Riccardo Gannuscio, Margherita Addis, Marco Alabiso, Giuseppe Maniaci, Monica Bacchi, Massimo Todaro, Adriana Bonanno
Dehydrated sulla forage in dairy ewes feeding: effects on cheese properties **O123**
- 14.45-15.00 Elisabetta Bacchin, Nadia Guzzo, Lucia Bailoni
Use of different levels of hemp meal supplementation in diets of veal calves: effects on in vivo performances and metabolic profile..... **O124**
- 15.00-15.15 Mengjun Wu, Siria Tavaniello, Sanije Zejnelhoxha, Antonella Fatica, Marisa Palazzo, Elisabetta Salimei, Giuseppe Maiorano
Effect of genotype and diet on carcass and meat quality traits of broiler chickens..... **O125**
- 15.15-15.30 Silvia Carta, Eleni Tsiplakou, Anna Nudda
Novel by-products in goat nutrition: effect on milk yield and composition..... **O126**

Thursday, September 23rd - Room Galileo

SESSION 25 - Precision livestock farming - II

- Chairs: Paolo Berzaghi, Pasquale De Palo
- 16.00-16.15 Lorenzo Serva, Giacomo Bison, Mattia Zago, Giorgio Marchesini, Iginò Andrighetto
Use of a portable NIR instrument as a rapid tool for cattle feeding control **O127**
- 16.15-16.30 David Meo Zilio, Miriam Iacurto, Francesco Cenci, Roberto Steri
Precision Buffalo Farming: preliminary results from the AGRIDIGIT project **O128**
- 16.30-16.45 Pier Paolo Danieli, Giuseppe Bianchi, Marco Maerini, Gabriele Locci, Filippo Lazzari, Gianluca Piovesan
Precision livestock farming and beekeeping: development and testing of a prototypal smart hive..... **O129**

Thursday, September 23rd - Room Giotto

SESSION 26 - Omics technologies - I

- Chairs: Giuseppe Conte, Sara Pegolo
- 16.00-16.15 Barbara Lazzari, Gianluigi Paolillo, Maria Grazia De Iorio, Rita Rizzi, Gustavo Gandini, Giulietta Minozzi
An alternative method to identify Csd alleles of the honey bees based on NGS data **O130**
- 16.15-16.30 Martina Zappaterra, Paolo Zambonelli, Anna Maria Belmonte, Giovanna Minelli, Domenico Pietro Lo Fiego
Investigating the effects of diets enriched in PUFA and antioxidants on the gene expression networks and intramuscular fatty acid composition in porcine Longissimus thoracis et lumborum muscle..... **O131**
- 16.30-16.45 Martina Bordini, Francesca Soglia, Adele Meluzzi, Roberta Davoli
Weighted Gene Co-Expression Network Analysis identifies the main gene networks and biological pathways associated to chicken Pectoralis major myopathies..... **O132**

Thursday, September 23rd - Room Petrarca

SESSION 27 - Quantitative approaches, inbreeding and crossbreeding - I

- Chairs: Mauro Penasa, Giustino Gaspa
- 16.00-16.15 Ferdinando Galluzzo, Raffaella Finocchiaro
Variance components estimation for milkability in Italian Holstein breed..... **O133**
- 16.15-16.30 Roberta Cimmino, Dario Rossi, Gianluigi Zullo, Damiano Altieri, Yuri Gombia, Rossella Di Palo, Mayra Gomez Carpio
The relationship between somatic cell score and udder type traits in Italian Mediterranean Buffaloes (Bubalus bubalis) **O134**

- 16.30-16.45 Martina Piazza, Luigi Gallo
Carcass value of purebred Holstein and crossbred cull cows from a 3 breed rotational scheme involving Viking Red, Montbéliarde, and Holstein bulls **O135**
- 16.45-17.00 Francesca Soglia, Martina Bordini, Mattia Di Nunzio, Giulia Lattanzio, Adele Meluzzi, Maurizio Mazzoni, Massimiliano Petracchi
Implication of collagen type IV in the onset of breast muscle disorders in broilers..... **O136**

Thursday, September 23rd - Room Elena Cornaro Piscopia

SESSION 28 –

This is a free session dedicated to short meetings of the ASPA councils, study commissions' encounters, and free meetings left for ASPA members.

Friday, September 24th - Room Galileo

SESSION 29 - Animal efficiency - I

- Chairs: Franco Tagliapietra, Antonio Gallo
- 09.00-09.15 Luisa Magrin, Flaviana Gottardo, Chiara Mondin, Paola Prevedello, Samuele Trestini
Technical-economic analysis of ventilation systems used to mitigate heat stress in dairy cows..... **O137**
- 09.15-09.30 Marica Simoni, Rosario Pitimo, Elisa Battaglia, Annamaria Paolino, Afro Quarantelli, Federico Righi
Assessment of ruminal and fecal microbial biomass and protein content and their relationship with the digestion indicators..... **O138**
- 09.30-09.45 Dimitrios Sioutas, Antonio Mazza, Beatrice Pileri, Alessandra Marzano, Antonello Ledda, Antonello Cannas
Growth curve characteristics of dairy ewe-lambs of the Sarda breed from birth until start of mating age **O139**
- 09.45-10.00 Valentina Caprarulo, Monika Hejna, Serena Reggi, Lauretta Turin, Antonella Baldi, Luciana Rossi
Evaluation of phytochemical dietary supplements on O138 E. coli challenged piglets **O140**
- 10.00-10.15 Chiara Aquilani, Lapo Nannucci, Martina Benedetti, Andrea Confessore, Silvia Parrini, Francesco Sirtori, Oreste Franci, Rosamaria Smaldone, Ilaria Paladini, Carolina Pugliese
Use of zeolite as zinc oxide replacement to control diarrhea in weaned pigs (from 8 to 20 kg): preliminary results on growth and microbiological profile of feces..... **O141**
- 10.15-10.30 Alessia Tondo, Israel Flamenbaum, Mauro Fioretti, Lorenzo Pascarella
Summer-Winter index: a visual tool to monitor dairy cow response to heat stress at farm level..... **O142**

Friday, September 24th - Room Giotto

SESSION 30 - Omics technologies - II

- Chairs: Alessia Cecchinato, Francesca Ciotola
- 09.00-09.15 Katia Cappelli, Gianpiero Marconi, Samanta Mecocci, Giorgia Mazza, Andrea Giontella, Emidio Albertini, Stefano Capomaccio
Epigenetic modifications in sports horses during training: analysis of genome-wide methylation as an adaptation phenomenon..... **O143**
- 09.15-09.30 Samanta Mecocci, Stefano Capomaccio, Daniele Pietrucci, Katia Cappelli
OMIC characterization of cow, donkey and goat milk extracellular vesicles reveals their anti-inflammatory and immune-modulatory potential..... **O144**
- 09.30-09.45 Paolo Zambonelli, Silvia Gioiosa, Marco Milanese, Tiziana Castrignanò, Roberta Davoli
SNPs and genes identification from muscle and backfat transcriptome of Italian Large White pigs with extreme and divergent fat deposition **O145**
- 09.45-10.00 Daniele Pietrucci, Daniele Alberoni, Loredana Baffoni, Diana Di Gioia, Giovanni Chillemi
Genomic and functional diversity of honey bee gut microbiota, after exposure to veterinary drugs or natural feed additives..... **O146**

- 10.00-10.15 Fabio Omodei Zorini, Matteo Dell'Anno, Georgia Pennarossa, Paola Cremonesi, Bianca Castiglioni, Filippo Biscarini, Guido Invernizzi
Rumen and hindgut microbiomes of dairy Italian Holstein Friesian heifers fed with camelina sativa cake **O147**
- 10.15-10.30 Valentino Palombo, Abdulrahman S. Alharthi, Fernanda Batistel, Mariasilvia D'Andrea, Claudia Parys, Jessie Guyader, Juan J. Loor
Adaptations in neonatal calf hepatic transcriptome in response to enhanced post-ruminal maternal supply of methionine..... **O148**

Friday, September 24th - Room Petrarca

SESSION 31 - Quantitative approaches, inbreeding and crossbreeding - II

- Chairs: Paolo Carnier, Giuseppe Campanile
- 09.00-09.15 Simone Ceccobelli, Francesco Perini, Lorenzo Rosa, Maria Federica Trombetta, Marina Pasquini
Myostatin gene affects carcass and meat quality in Marchigiana beef cattle **O149**
- 09.15-09.30 Nicolaia Iaffaldano, Giusy Rusco, Roberta Iampietro, Pier Paolo Gibertoni, Alessandra Roncarati, Michele Di Iorio
How post-collection storage time can affect the semen freezability of Mediterranean trout? **O150**
- 09.30-09.45 Hugo Toledo-Alvarado, Gustavo Javier Martínez Marín
Genetic parameters of predicted enteric methane emissions of Brown Swiss cattle at the population level in Italy..... **O151**
- 09.45-10.00 Stefano Biffani, Giulietta Minozzi, Maria Grazia Di Iorio, Giulio Pagnacco
Genetic Evaluation and Variance component estimation in an Italian honey bee population **O152**
- 10.00-10.15 Maria Chiara Fabbri, Francesco Tiezzi, Alessandro Crovetto, Riccardo Bozzi
Genetic parameters for carcass weight at different age-classes in Italian Limousine beef cattle **O153**
- 10.15-10.30 Francesca Maria Sarti, Samira Giovannini, Camillo Pieramati, Pancrazio Fresi, Silverio Grande
Merinizzata Italiana sheep breed: genetic gain after 20 years of Performance test..... **O154**

Friday, September 24th - Room Elena Cornaro Piscopia

SESSION 32 - Companion animals and society - I

- Chairs: Rebecca Ricci, Paola Crepaldi
- 09.30-09.45 Carla Giuditta Vecchiato, Carlo Pinna, Alba Gasparido, Monica Grandi, Costanza Delsante, Paola Parazza, Pietra Marco, Giacomo Biagi
Dietary supplementation with coconut oil in dogs with chronic enteropathies..... **O155**
- 09.45-10.00 Gerardo Siani, Giada Morelli, Davide Stefanutti, Rebecca Ricci
Evaluation of body weight and body condition score in 64 European Shorthair adult cats **O156**
- 10.00-10.15 Giada Morelli, Roberta Di Maggio, Rebecca Ricci
Copper-associated liver disease in a Bergamasco Sheepdog: a case report..... **O157**
- 10.15-10.30 Sara Albarella, Emanuele D'Anza, Giacomo Galdiero, Alessandra Iannuzzi, Pietro Parma, Vincenzo Peretti, Francesca Ciotola
Disorders of sexual development in 9 dogs: clinical, cytogenetics and molecular findings..... **O158**

Friday, September 24th - Room Galileo

SESSION 33 - Animal efficiency - II

- Chairs: Gerolamo Xiccato, Rodolfo Ballestrazzi
- 11.00-11.15 Giulio Pillan, Anton Pascual, Luca Carraro, Anna Concollato, Angela Trocino
Production and egg quality in brown hens kept in a cage-free system: effects of hen age and nest lighting..... **O159**

11.15-11.30	<u>Roberto Cerri</u> , Fabio Mina, Rodolfo Ballestrazzi, Antonio Jesus Vizcaino Torres, Francesca Tulli <i>In vitro protein degradability in fish: a tool to evaluate novel protein sources</i>	O160
11.30-11.45	<u>Alberto Stanislao Atzori</u> , Antonio Gallo <i>System dynamics applications in animal science and dairy farm management</i>	O161
11.45-12.00	<u>Antonio Gallo</u> , Claudio Valsecchi, Elisabetta Manca, Francesco Masoero, Alberto Stanislao Atzori <i>A Survey on feeding economics in intensive dairy farms</i>	O162
12.00-12.15	<u>Castro Ndong Ncogo Nchama</u> , Mario Baldini, Carla Fabro, Elena Saccà, Vinicius Foletto, Silvia Pianezze, Mirco Corazzin, Edi Piasentier <i>Performance of cull cows fed diets supplemented with hempseed cake</i>	O163
12.15-12.30	<u>Marica Simoni</u> , Claudia De Lorenzi, Marta Pozza, Daniele Giaccone, Andrea Revello Chion, Luciano Comino, Federico Righi <i>Bovine milk quality and apparent digestibility of diets as affected by diet characteristics and milking system</i>	O164

Friday, September 24th - Room Giotto

SESSION 34 - Omics technologies - III

Chairs:	Roberto Antoveni, Maria Silvia D'Andrea	
11.00-11.15	<u>Giovanna Salvatore</u> , Valentino Palombo, Mario Vailati Riboni, Mariasilvia D'Andrea, Adam J. Geiger, Michael R. Akers, Juan J. Loor <i>Estrogen levels effect on mammary parenchyma explants from Holstein heifer calves fed an enhanced preweaning diet evaluated via RNA-sequencing</i>	O165
11.15-11.30	<u>Isaac Hyeladi Malgwi</u> , Perta Grünvald, Ildikó Jócsák, Veronika Halas <i>Genes related to fat metabolism in pigs and intramuscular fat content of pork</i>	O166
11.30-11.45	<u>Antonella della Malva</u> , Marzia Albenzio, Mariangela Caroprese, Maria Giovanna Ciliberti, Lucia Figliola, Antonella Santillo, Agostino Sevi, Rosaria Marino <i>Proteomics to investigate tenderness biomarkers in Martina Franca donkey meat</i>	O167
11.45-12.00	<u>Alberto Palmonari</u> , Damiano Cavallini, Silvia Turrone, Francesca Ghiaccio, Giovanni Buonaiuto, Giorgia Canestrari, Ludovica Mammi <i>Impact of acidogenic diets on rumen microbial community</i>	O168
12.00-12.15	<u>Bruno Stefanon</u> , Michela Cintio, Sandy Sgorlon, Alfonso Zecconi, Monica Colitti, Elisa Scarsella <i>MiRNAs cargo of milk exosomes are related to somatic cell count in dairy cows</i>	O169
12.15-12.30	<u>Edo D'Agaro</u> , Andrea Favaro, Stefano Mattiussi <i>First assembled reference genome of white-clawed crayfish (<i>Austropotamobius pallipes italicus</i>)</i>	O170

Friday, September 24th - Room Petrarca

SESSION 35 - Genetic diversity

Chairs:	Alfredo Pauciuolo, Stefano Capomaccio	
11.00-11.15	<u>Alberto Cesarani</u> , Andre Garcia, Giacomo Bertolini, Daniela Lourenco, Nicolò Macciotta <i>Using runs of homozygosity within single-step genomic BLUP</i>	O171
11.15-11.30	<u>Christos Dadousis</u> , Michela Ablondi, Jan-Thijs van Kaam, Alberto Sabbioni <i>Genomic inbreeding estimates with imputed genotypes in Italian Holstein dairy cattle</i>	O172
11.30-11.45	<u>Matteo Cortellari</u> , Alessio Negro, Arianna Bionda, Stefano Frattini, Silverio Grande, Paola Crepaldi <i>Inbreeding depression in small ruminants: from pedigree to genomic estimation</i>	O173
11.45-12.00	Elisa Somenzi, Ettore Randi, Gwenola Tosser-Klop, Roberta Ciampolini, <u>Licia Colli</u> <i>SNP-based characterization of Montecristo feral goats in a Mediterranean perspective</i>	O174
12.00-12.15	<u>Giuseppina Schiavo</u> , Samuele Bovo, Silvia Tinarelli, Manolo Cappelloni, Maurizio Gallo, Luca Fontanesi <i>A comparative analysis of pedigree- and genomic-derived inbreeding parameters in Italian heavy pig breeds over the last decades</i>	O175
12.15-12.30	<u>Michela Ablondi</u> , Claudio Cipolat-Gotet, Christos Dadousis, Giorgia Stocco, Anna, Alberto Sabbioni <i>The impact of inbreeding in the Italian Holstein breed</i>	O176



Friday, September 24th - Room Elena Cornaro Piscopia

SESSION 36 - Companion animals and society - II

Chairs:	Luigi Liotta, Monica Cutrignelli	
11.00-11.15	<u>Arianna Bionda</u> , Matteo Cortellari, Alessio Negro, Stefano Frattini, Andrea Talenti, Luigi Liotta, Paola Crepaldi <i>Genomic evaluation of the Italian shepherd dogs</i>	O177
11.15-11.30	<u>Marco Isidori</u> , Fabrizio Rueca, Francesca Romana Massacci, Manuela Diaferia, Andrea Giontella, Marco Caldin, Tommaso Furlanello, Ronald J. Corbee, Gabriele Mannucci, Giovanni Pezzotti, Massimo Trabalza-Marinucci <i>Dietary <i>Ascophyllum nodosum</i> and <i>Bacillus subtilis</i> C-3102 influence faecal fermentation patterns in dogs with chronic enteropathies</i>	O178
11.30-11.45	Alessandro Vastolo, Serena Calabrò, <u>Monica Isabella Cutrignelli</u> <i>Effect of different diets on metabolic profile of healthy adult dogs</i>	O179
11.45-12.00	<u>Elisa Scarsella</u> , Aashish Jha, Bruno Stefanon <i>Network-based gut microbiome analysis in dogs</i>	O180
12.00-12.15	<u>Eleonora Fusi</u> , Annalaura, Laura Rua, Raffaella Rossi <i>Renal petfood for dogs and cats: fatty acids profile</i>	O181

ASPA 24th Congress

Padova, September 21-24, 2021

Italian Journal of Animal Science 2021; volume 20, supplement S1

Agenda for poster presentations

ANIMAL WELFARE AND RESILIENCE

- Fiorella Sbarra, Andrea Quaglia, Giovanni Bittante, Roberto Mantovani
Genetic parameters of temperament traits in Marchigiana, Chianina and Romagnola young bulls **P001**
- Silvana Mattiello, Renata Piccinini, Stefano Biffani, Giovanni Bailo, Monica Battini, Giulietta Minozzi
Does the presence of weeping teats affect behaviour, health and productivity of dairy goats?..... **P002**
- Michele Premi, Giulia Ferronato, Matteo Mezzetti, Mario Barbato, Fiorenzo Piccioli-Cappelli, Andrea Minuti, Erminio Trevisi
Reference intervals for plasma parameters in high-welfare multiparous dairy cows in different physiological phases..... **P003**
- Alice Vanzin, Alessandro Toscano, Vittoria Bisutti, Sara Pegolo, Diana Giannuzzi, Alessio Cecchinato
Associations between udder health traits and milk mineral profile in Holstein Friesian cattle..... **P004**
- Andrea Minuti, Luca Cattaneo, Vincenzo Lopreiato, Silvia Zini, Fiorenzo Piccioli Cappelli, Erminio Trevisi
Effects of a selective dry-cow therapy approach on milk, inflammation, and metabolic profile during the dry-period..... **P005**
- Francesco Ciampi, Lorraine Sordillo, Jeffrey Gandy, Marzia Albenzio, Mariangela Caroprese, Maria Giovanna Ciliberti, Antonella della Malva, Martina Di Corcia, Rosaria Marino, Agostino Sevi, Antonella Santillo
Use of pomegranate extracts in bovine oxidative stress mitigation **P006**
- Giorgia Riuzzi, Iliara Lanza, Barbara Contiero, Severino Segato, Flaviana Gottardo
Influence of the main dietary roughage sources on the health status of Italian Friesian lactating dairy cows..... **P007**
- Vincenzo Landi, Alessio Cecchinato, Aristide Maggiolino, Umberto Bernabucci, Pasquale De Palo
Heat stress in Italian Brown Swiss: effect of the interaction of genotype by environment using reaction norm analysis..... **P008**
- Matteo Braidot, Chiara Sarnataro, Carla Fabro, Alberto Romanzin, Francesco Fancello, Severino Zara, Mauro Spanghero
Effect of lactic acid bacteria addition or protozoa modulation on the in vitro rumen aflatoxin B1 decontamination..... **P009**
- Riccardo Moretti, Stefania Chessa, Stefano Sartore, Dominga Soglia, Daniele Giaccone, Francesca Tiziana Canizzo, Paola Sacchi
Application of a genomic tool for heifers selection in Italian Holstein cattle **P010**
- Maria Costanza Galli, Claudio Mazzoni, Federica Mereghetti, Barbara Contiero, Flaviana Gottardo
How the stage of gestation for moving at the group housing can affect sow's reproductive performance?..... **P011**
- Mariangela Caroprese, Maria Giovanna Ciliberti, Rosaria Marino, Fabio Napolitano, Ada Braghieri, Agostino Sevi, Antonella Santillo, Martina di Corcia, Antonella della Malva, Marzia Albenzio
What consumers perceive from geographical information and welfare of lambs?..... **P012**
- Maria Francesca Sgadari, Alessio Cotticelli, Brunella Restucci, Angela Salzano, Rossella Di Palo, Gianluca Neglia
Differential somatic cell count in buffalo species: preliminary results..... **P013**

Damiano Cavallini, Alberto Palmonari, Emanuela Valle, Francesca Ghiaccio, Ludovica Mammi, Andrea Formigoni <i>Health and immunological parameters of susceptible and resistant cows exposed to a rich grain diet.....</i>	P014
Filippo Lazzari, Tiziana Vetturini, Pierpaolo Danieli <i>Preliminary laboratory trials on the efficacy of hop alpha iso-acids on the control of the honey bee (Apis mellifera L.) ectoparasite Varroa destructor.....</i>	P015
Pier Paolo Danieli, Davide Bassignana, Francesco Barbarese, Remigio Ercolani, Filippo Lazzari <i>Practical perspectives of using the Bee Varroa Scanner (BeeVS), as an automated tool for the Varroa destructor parasite load monitoring in honey bee (Apis mellifera) colonies.....</i>	P016
Carlotta Ceniti, Anna Antonella Spina, Nicola Costanzo <i>Application of Fourier Transform Infrared spectroscopy for determination of immunoglobulins in sheep colostrum.....</i>	P017
Alessandra Marzano, Roberta Cresci, Roberto Abis, Claudio Ledda, Alberto Stanislao Atzori <i>Effects of spirulina platensis supplementation on performances and metabolic status of post-weaning calves.....</i>	P018
Alberto Palmonari, Francesca Ghiaccio, Giovanni Buonaiuto, Giorgia Canestrari, Attilio Mordenti <i>Effect of experimental covering texture on forage preservation and quality</i>	P019

ROLE AND CHARACTERIZATION OF LOCAL BREEDS

Enrico Mancin, Cristina Sartori, Beniamino Tuliozzi, Roberto Mantovani <i>Optimal economic weight by restricted selection index for dual-purpose cattle breed</i>	P020
Roberto Mantovani, Enrico Mancin, Beniamino Tuliozzi, Nadia Guzzo, Cristina Sartori <i>Genetic parameters for new phenotypes measured in alpine local breeds</i>	P021
Nicolaia Iaffaldano, Michele Di Iorio, Giusy Rusco, Emanuele Antenucci, Luisa Zaniboni, Silvia Cerolini <i>Implementation of the first Italian semen cryobank of autochthonous turkey breeds: preliminary results</i>	P022
Michela Ablondi, Christos Dadousis, Ernesto Mario Zambini, Valentino Beretti, Alberto Sabbioni <i>The use of Principal Component and Linear Discriminant analyses to assess differences among four alpine goat breeds.....</i>	P023
Manuela Madeddu, Luisa Zaniboni, Stefano Paolo Marelli, Michele Di Iorio Di Iorio, Giusy Rusco, Nicolaia Iaffaldano, Silvia Cerolini <i>Semen cryopreservation for ex situ management of genetic diversity in chicken: creation of the Italian Avian Cryobank</i>	P024
Maria Teresa Sardina, Rosalia Di Gerlando, Salvatore Mastrangelo, Marco Tolone, Angelo Moscarelli, Anna Maria Sutura, Baldassare Portolano <i>Parentage reconstruction using microsatellite markers in Valle del Belice sheep breed.....</i>	P025
Antonio Granero, Antonio Molina, Gabriel Anaya, Chiraz Ziadi, María Jesús Alcalde <i>Morphometric differences based on quantitative traits between different genetic lines in the Merino Español sheep breed.....</i>	P026
Alessio Negro, Matteo Cortellari, Arianna Bionda, Stefano Biffani, Silverio Grande, Paola Crepaldi <i>Exploring pedigrees: an overall picture of biodiversity in Italian small ruminants</i>	P027
Elisa Somenzi, Niccolò Franceschi, Mario Barbato, Licia Colli, Erika Partel, Matteo Komjanc, Alessandro Achilli, Heidi Christine Haufler, Paolo Ajmone Marsan <i>Genetic diversity and runs of homozygosity in Rendena Cattle</i>	P028
Elena Ciani <i>Role and characterization of dromedary breeding systems in northern Sahara: the PRIMA "Camel-Shield" project ...</i>	P029
Francesco Perini, Irene Cardinali, Simone Ceccobelli, Anthony Gruppeta, Carlos San José Marqués, Amparo Martínez Martínez, Asmaa Mohammed Aly Abushady, Luis Monteagudo ⁽⁸⁾ , Luigi Liotta ⁽⁹⁾ , George Attard ⁽¹⁰⁾ , Emiliano Lasagna, Hovirag Lancioni <i>Ancient mitotypes in the houndlike dog breeds native of the Mediterranean Basin.....</i>	P030

SUSTAINABLE INTENSIFICATION

- Francesco Serrapica, Maria Eleonora Pelosi, Alessandro Vastolo, Maura Sannino, Salvatore Faugno, Antonio Di Francia
Hemp cakes composition and ruminal degradability as influenced by the cold-pressing parameters **P031**
- Marianna Oteri, Ambra Rita Di Rosa, Filippo Giarratana, Giuseppa Di Bella, Vittorio Lo Presti, Biagina Chiofalo
*Feed Insects For Aquaculture: Use of *Hermetia illucens* L. meal for *Sparus aurata* L.:*
Chemical and microbiological characterization of the diets **P032**

NON-CONVENTIONAL LIVESTOCK SYSTEMS

- Chiara Secci, Gisella Paci, Simone Mancini
*Mealworm (*Tenebrio molitor*) as alternative feed ingredient for poultry production* **P033**

NUTRITIONAL PROFILE

- Marco Cullere, Zsolt Szendrő, Zsolt Gerencsér, Zsolt Matics, Antonella Dalle Zotte
The role of heat stress and feed restriction on the physical traits and proximate composition of rabbit meat..... **P034**
- Simone Mancini, Simona Mattioli, Alessandro Dal Bosco, Chiara Secci, Gisella Paci
*Effect of cooking techniques on the protein digestibility and fatty acids profile of mealworms (*Tenebrio molitor*)* **P035**
- Maria Federica Trombetta, Simone Ceccobelli, David Ranucci, Paride D'Ottavio, Marina Pasquini
TBARs and ORAC: oxidative stability of lamb meat in three Italian sheep breeds..... **P036**
- Silvia Parrini, Francesco Sirtori, Alessandro Crovetto, Maria Chiara Fabbri, Chiara Aquilani,
 Andrea Confessore, Riccardo Bozzi
Fatty acid profile of Massese lambs' muscles in different rearing systems **P037**
- Chiara Ceccotti, Laura Gasco, Simona Rimoldi, Marco Saroglia, Genciana Terova
*The dietary influence of partially defatted *Hermetia illucens* meal on the hepatic methionine metabolism in rainbow trout* **P038**
- Micaela Antonini, Federico Moroni, Marco Saroglia, Genciana Terova
*Histological evaluation of probiotic (lactic acid bacteria) effects on gilthead sea bream (*Sparus aurata*) gut*..... **P039**
- Carmela Lovallo, Salvatore Claps, Francesco Napolitano, Alessandra Crisà
Sialyloligosaccharides content in milk of different cow breeds..... **P040**
- Claudia Lambiase, Francesco Serrapica, Antonio Di Francia, Maria Luisa Varricchio, Fernando Grasso,
 Carmela M. A. Barone, Felicia Masucci
Management, total mixed ration composition, and milk fatty profile in buffalo farming **P041**
- Adja Cristina Lira de Medeiros, Lina Fernanda Pulido Rodriguez, Giuliana Parisi
Sea bream fillet quality as affected by alternative protein sources in diet **P042**
- Giulia Secci, Giovanni Piccolo, Maria Concetta Messina, Giuliana Parisi
Does honey bee pollen as dietary supplement effectively preserve sea bream fillets during frozen storage?..... **P043**
- Riccardo Primi, Sebastiana Failla, Michela Contò, Bruno Ronchi, Pier Paolo Danieli
Fatty acid profile of Sarda suckling lamb meat with different fat content..... **P044**
- Salvatore Claps, Margherita Addis, Marisabel Mecca, Carmela Lovallo, Adriana Di Trana
The incidence of fresh forage in sheep diet on Pecorino di Filiano DOP cheese quality..... **P045**
- Giulia Gislon, Alberto Tamburini, Anna Sandrucci, Maddalena Zucali, Milena Brasca, Luciana Bava
Bovine beta casein polymorphism and environmental sustainability of cheese production **P046**
- Matteo Daghighio, Federica Mannelli, Fabio Omodei Zorini, Silvia Sandrini, Carlotta Giromini, Arianna Buccioni,
 Carlo Viti, Giovanni Savoini, Guido Invernizzi
*Impact on goat milk composition and rumen microbiome of *Camelina sativa* cake and *Cynara cardunculus* supplements*..... **P047**

Marco Acciario, Valeria Giovanetti, Corrado Dimauro, Elisabetta Murru, Claudia Manca, Andrea Cabiddu, Gianfranca Carta <i>Use of a partial least-squares regression model to estimate intramuscular fatty acid profile in beef from blood analysis</i>	P048
Paolo Bani, Giulia Ferronato, Paolo Ajmone Marsan, Luca Cattaneo, Andrea Minuti, Olga Gachiuta <i>Variability of milk fatty acids profile between and within dairy farms producing milk for Grana Padano PDO cheese</i>	P049
Giulia Grassi, Amalia Simonetti, Mariateresa Passannante, Emilio Gambacorta, Annamaria Perna <i>Oxidative stability and antioxidant activity of Italian Holstein and Buffalo yogurt contaminated with Pb</i>	P050
Amalia Simonetti, Giulia Grassi, Carmen Pipolo, Emilio Gambacorta, Annamaria Perna <i>Effect of breed on milk fat quality: comparison between Altamura and Leccese</i>	P051
Margherita Addis, Adriana Di Trana, Ambra Rita Di Rosa, Salvatore Claps, Guido Mangione, Alessio Silvio Dedola, Giuseppe Licitra <i>Fatty acid profile, liposoluble vitamins and antioxidant capacity in three historic cheeses of southern Italy: Piacentinu ennese DOP, Maiorchino e Canestrato di Moliterno IGP</i>	P052
Genciana Terova, Simona Rimoldi, Biagina Chiofalo, Micaela Antonini, Fabio Brambilla, Marco Saroglia <i>Poultry meal in feed for Gilthead seabream (<i>Sparus aurata</i>): results from an “on farm” feeding trial</i>	P053
Sihem Dabbou, Lina Fernanda Pulido Rodríguez, Giulia Secci, Giuseppe Moniello, Giuliana Parisi <i>Quails meat quality as affected by <i>Tenebrio molitor</i> larva meals in feeds</i>	P054

FOOD PRODUCTION AND PROCESSING

Paolo Polidori, Giuseppe Santini, Natalina Cammertoni, Yulia Klimanova, Silvia Vincenzetti <i>The effects of donkey meat cooking processes on vitamins and minerals content</i>	P055
Giulia Secci, Damiano Tanini, Antonella Capperucci, Giuliana Parisi <i>Use of L-ascorbic acid diesters to preserve rabbit meatballs</i>	P056
Michela Contò, Simona Rinaldi, Sebastiana Failla, Gianluca Renzi, Alessandra Crisà <i>Effect of heat treatment on bovine milk in three genetic groups</i>	P057
Marika Di Paolo, Angela Salzano, Raffaele Marrone, Nunzia D’Onofrio, Maria Luisa Balestrieri, Giuseppe Campanile <i>Breeding techniques and post maturation systems on biomolecules content in buffalo meat</i>	P058
Paolo Bani, Giorgia Lovotti, Valentina Ficuciello, Olga Gachiuta <i>Comparison of two lab scale techniques for ensiling whole plant corn</i>	P059

OTHER

Maria Sitzia, Margherita Addis, Marco Cuboni, Carla Manca, Giovanni Molle, Antonio Pullina, Pier Paolo Roggero, Lorenzo Salis <i>The influence of access time to pasture grazing on dairy sheep performance in an organic feeding system</i>	P060
Michele Manoni, Francesca Fumagalli, Alice Luciano, Matteo Ottoboni, Luca Ferrari, Marco Tretola, Luciano Pinotti <i>Effect of salty or sweet food leftover based diets on serum metabolites in piglets</i>	P061
Riccardo Diciotti, Giovanna Chessa, Jacopo Culurgioni, Silvana Manca, Cinzia Podda, Francesco Palmas, Nicola Fois, Andrea Sabatini <i>Farming wild-caught glass eels for habitat restocking in Sardinia</i>	P062
Elias Zgheib, Maria Francesca Guiso, Roberto Rubattu, Anna Nudda, Georges Hassoun <i>Awassi sheep and Baladi goat milk composition in extensive production systems in Lebanon</i>	P063
Rita Rizzi, Silvana Mattiello, Matteo Cattaneo, Piera Anna Martino, Michele Mortarino <i>Effect of queen cell size on acceptance rate and morphometric characteristics of queen honey bees (<i>Apis mellifera</i>)</i>	P064

Maria Longeri, Luisa Zaniboni, Maria Cristina Cozzi, Raffaella Milanese, Alessandro Bagnato <i>Animal Bio Arkivi: establishment of a phenotype and tissue repository for farm animal and pet at the University of Milan</i>	P065
Riccardo Primi, Pier Paolo Danieli, Marco Berni, Veronica Brachino, Paolo Viola, Andrea Amici, Bruno Ronchi <i>Non-invasive acoustic detection of wolf's attack to livestock. Preliminary results of a prototype in two sheep farms</i>	P066
Luisa Zaniboni, Manuela Renna, Achille Schiavone, Silvia Cerolini, Federica Bellagamba, Valentina Bongiorno, Maria Teresa Capucchio, Elio Dinuccio, Ilario Ferrocino, Vittorio Moretti, Daniele Michele Nucera, Sara Bellezza Oddon, Gabriella Tedeschi, Ilaria Biasato, Laura Gasco <i>Circular Economy: Live Larvae recycling Organic Waste for rural Poultry (CELLOW-FeeP)</i>	P067
Maria Rita Mellino, Giuseppe Bee, Pierluigi Caboni, Gianni Battacone <i>Effect of dietary supplementation of olive oil wastewater on gut health and growth performance</i>	P068
Elena Ciani, Maria Favia, Elisabetta Notario, Andrea Gerbino, Ciro Leonardo Pierri, Lorenzo Guerra <i>ATP12A expression in ruminant spermatozoa</i>	P069
Fabio Abeni, Rosanna Marino, Francesca Petrerà, Giulia Segati, Andrea Galli, Domenico Carminati <i>Farm silage facilities and their management for spore former prevention</i>	P070
Alessandra Marzano, Grazia Galleri, Silvia Carta, Alberto Alvarez-Barrientos, Anna Nudda <i>Flow cytometry study of blood and milk parameters in dairy ewes supplemented by cocoa husks</i>	P071

ANIMAL EFFICIENCY

Raffaella Rebucci, Valeria Staurenghi, Silvia Giorgi, Alessandro Agazzi, Federica Cheli, Antonella Baldi, Valentino Bontempo <i>Long-term administration of calcium laurate to sows and piglets: effects on growth performance, fecal calprotectin and intestinal status of weaning piglets</i>	P072
Serena Tumino, Antonino Di Grigoli, Marcella Avondo, Salvatore Bordonaro, Marialetizia Ponte, Marco Alabiso, Massimo Todaro, Adriana Bonanno <i>Interaction between stearyl-coenzyme. A desaturase polymorphism and feeding system in affecting the fatty acid profile of sheep cheese</i>	P073
Christian Caimi, Giulia Chemello, Sara Bellezza Oddon, Manuela Renna, Marino Prearo, Ronald Hardy, Marco Saroglia, Genciana Terova, Ilaria Biasato, Laura Gasco <i>Comparison of growth performance and whole body composition of two strains of Rainbow trout (Oncorhynchus mykiss) juveniles fed different diets</i>	P074
Fabio Mina, Gloriana Cardinaletti, Jelka Pleadin, Tanja Segvic, Emilio Tibaldi <i>Growth and fillet composition of gilthead sea bream (S. aurata) after long term feeding fish meal-free diets including poultry by-product meal singly or combined with insect meal</i>	P075
Antonello Ledda, Roberto Rubattu, Alessandra Marzano, Antonio Mazza, Antonello Cannas <i>Utilization of solvent extracted cardoon meal in the diet of lactating Sarda dairy ewes</i>	P076
Raffaella Rebucci, Carlotta Giromini, Simone Fasana, Antonella Baldi, Federica Cheli, Valentino Bontempo <i>Effects of calcium laurate on broiler growth performance and antioxidant intestinal activity</i>	P077
Gianluigi Zullo, Mayra Gómez Carpio, Roberta Cimmino, Dario Rossi, Damiano Altieri, Yuri Gombia, Mariela Castrillo, Stefano Biffani <i>A snapshot of functional and reproductive traits of Italian Mediterranean Buffaloes (Bubalus bubalis)</i>	P078
Matteo Dell'Anno, Valentina Caprarulo, Serena Reggi, Maria Luisa Callegari, Monika Hejna, Luciana Rossi <i>Tributyrin as feed supplement for young animals</i>	P079
Simone Callegaro, Giovanni Niero, Mauro Penasa, Raffaella Finocchiaro, Guido Invernizzi, Giovanni Savoini, Maurizio Marusi, Martino Cassandro <i>Characterization of feed efficiency in young Holstein bulls</i>	P080
Elena Boschi, Sara Faggion, Valentina Bonfatti <i>Effects of boar taint compound concentrations on sexual behavior of young boars</i>	P081

Matteo Cortellari, Matteo Pampuri, Rolando Pasquariello, Paola Crepaldi <i>The effect of an extender inducing sperm capacitation on fertility of Italian dairy cattle: a field experience</i>	P082
Federico Correa, Paolo Trevisi, Diana Luise, Hiroyuki Ohara, Aude Simongiovanni, Tristan Chalvon-Demersay, Paolo Bosi <i>Effect of sow's diet enriched with Arg and/or BCAA on health and performance of sows and newborn</i>	P083
Paolo Bosi, Diana Luise, Federico Correa, Paolo Trevisi <i>Evaluation of sow colostrum composition and somatic cell count as indicators of litter characteristics</i>	P084
Roberto Steri, Alessandra Crisà, Cinzia Marchitelli <i>Genome-Wide Analysis of twinning rate using canonical discriminant analysis</i>	P085
Roberto Steri, Alberto Cesarani, Manolo Cappelloni, Emanuele Sfrisi, Gianni Battacone, Nicolò Pietro Paolo Macciotta <i>Modelling pig growth curves using daily weight recorded in automatic weighing systems</i>	P086
Angela Salzano, Angela Costa, Francesco Iannaccone, Roberta Cimmino, Massimo De Marchi, Gianluca Neglia <i>Impact of the age at first calving on milk-related performances in Italian Mediterranean Buffaloes</i>	P087
Manolo Cappelloni, Roberto Steri, Alberto Cesarani, Gianni Battacone, Nicolò Pietro Paolo Macciotta, Maurizio Gallo <i>Relationship between temperature-humidity index and growth in pigs</i>	P088
David O. Edache, Maria Angela Porcu, Antonello Ledda, Matteo Sini, Antonio Gallo, Antonello Cannas, Alberto Stanislao Atzori <i>Effects of corn grain of different particle size on sheep feeding behavior and fecal pH</i>	P089

GENETIC VARIABILITY, INBREEDING AND CROSSBREEDING

Giacomo Rovelli, Maria Gracia Luigi Sierra, Simone Ceccobelli, Dailu Guan, Francesco Perini, Fiorella Sbarra, Andrea Quaglia, Francesca Maria Sarti, Marcel Amills Eras, Emiliano Lasagna <i>Signature of selection in specialized and rustic Italian native beef cattle breeds</i>	P090
Giacomo Rovelli, Maria Gracia Luigi Sierra, Simone Ceccobelli, Dailu Guan, Francesco Perini, Fiorella Sbarra, Andrea Quaglia, Francesca Maria Sarti, Lakamy Sylla, Marcel Amills Eras, Emiliano Lasagna <i>A genome wide association analysis for male fertility traits in three Italian beef cattle breeds</i>	P091
Nicolaia Iaffaldano, Giusy Rusco, Stefano Esposito, Emanuele Antenucci, Bruno Testa, Michele Di Iorio <i>Cryobanking of native Mediterranean brown trout semen as a tool for the safeguard of genetic resources</i>	P092
Ahmed Abdelmaged Sabah Mohammed, Carmine Versace, Daniela Gallo, Giustino Gaspa, Gianfranco Cosenza, Alfredo Pauciullo <i>Interspersed repeated elements analysis in Camelus dromedarius CSNIS2 gene</i>	P093
Gianfranco Cosenza, Daniela Gallo, Barbara Auzino, Sara Martorello, Luigi Ramunno, Alfredo Pauciullo <i>Artidactyla retroposons detection at the Mediterranean river buffalo CSNIS2 gene</i>	P094
Nora Laseca, Julia Poyato, Pedro J. Azor, Gabriel Anaya, Mercedes Valera, Antonio Molina, Sebastian Demyda-Peyrás <i>Characterization of the Pura Raza Español Carthusian horse strain after 500 years of close matings using genomic data</i>	P095
Maria Grazia De Iorio, Giulietta Minozzi, Gustavo Gandini, Stefano Biffani, Alessandra Stella, Giulio Pagnacco <i>A conservation strategy for Italian honey bees</i>	P096
Neyrouz Letaief, Sonia Bedhiaf-Romdhani, Wiem Ben Salem, Ahmed Abdelmaged Sabah Mohammed, Alfredo Pauciullo <i>Frequency assessment of casein genes variants in Tunisian dromedary (Camelus dromedarius) population</i>	P097
Pasquale Marmo, Cinzia Marchitelli, Francesco Napolitano, Alessandra Crisà <i>Study of candidate genes for the biosynthesis of prebiotic molecules</i>	P098
Corrado Dimauro, Elisabetta Manca, Alberto Cesarani, Alberto S. Atzori, Attilio Rossoni, Giustino Gaspa, Nicolò P.P. Macciotta <i>Genome-wide association study for residual concentrate intake Italian Brown Swiss calves</i>	P099
Stefano Biffani, Alberto Cesarani, Alessio Negro, Matteo Cortellari, Silverio Grande, Paola Crepaldi, Nicolò Macciotta <i>Application of single-step GBLUP in Italian Comisana sheep</i>	P100
Emanuele D'Anza, Barbara Auzino, Mariagiulia Pugliano, Sara Albarella, Francesca Ciotola, Tiziana Galli, Giorgio Saralli, Remo Rosati, Gianfranco Cosenza, Vincenzo Peretti <i>Genetic structure at CSNIS1, CSN2 and CSNIS2 loci of four autochthonous goat breed reared in Lazio and Campania regions</i>	P101

Stefano Paolo Marelli, Manuela Madeddu, Luisa Zaniboni, Maria Giuseppina Strillacci, Silvia Cerolini <i>Breeders' management in a heritage breeds' rabbitry</i>	P102
Giovanna Salvatore, Valentino Palombo, Elena De Zio, Lucia Maiuro, Giusy Rusco, Michele Di Iorio, Stefano Esposito, Nicolaia Iaffaldano, Mariasilvia D'Andrea <i>A machine learning approach for the identification of population-informative markers from trout genotyping data</i>	P103
Valentino Palombo, Giovanna Salvatore, Gianluca Albanese, Massimo Iorizzo, Giusy Rusco, Michele Di Iorio, Stefano Esposito, Nicolaia Iaffaldano, Mariasilvia D'Andrea <i>Genetic biodiversity study in Mediterranean trout population using SNP array: a case study in Molise region</i>	P104
Chiraz Ziadi, Alberto Menéndez-Buxadera, Manuel Sánchez, Eva Muñoz-Mejías, Rocío Jiménez-Granado, María Dolores López, Antonio Molina <i>Relationship between somatic cell score and milk production in Spanish Florida goats</i>	P105
Stefano Paolo Marelli, Rita Rizzi, Maria Giuseppina Strillacci, Alessandra Paganelli, Mara Bagardi, Paola Giuseppina Brambilla, Michele Polli <i>Genotypic and allelic frequency of CEA (Collie Eye Anomaly) gene in dogs in Italy</i>	P106
Antonio Granero, Gabriel Anaya, Sebastián Demyda, Nora Laseca, María Jesús Alcalde, Molina Alcalá <i>Genomic characterization of the Spanish Merino Sheep and situation of the mains historical genetics lines</i>	P107
Alessio Negro, Matteo Cortellari, Arianna Bionda, Stefano Frattini, Stefano Biffani, Silverio Grande, Paola Crepaldi <i>Genomic tools to support breed assignment in small ruminants</i>	P108
Giuseppina Schiavo, Samuele Bovo, Anisa Ribani, Valerio Joe Utzeri, Enrico Mancin, Roberto Mantovani, Stefania Dall'Olio, Luca Fontanesi <i>Genomic inbreeding parameters in the autochthonous Reggiana and Modenese cattle breeds</i>	P109
Andrea Giontella, Samira Giovannini, Maurizio Silvestrelli, Camillo Pieramati, Francesca Maria Sarti <i>Linear evaluation in Maremmano horse breeding value estimation</i>	P110
Samuele Bovo, Giuseppina Schiavo, Hamed Kazemi, Giulia Moscatelli, Anisa Ribani, Mohamad Ballan, Stefania Dall'Olio, Luca Fontanesi <i>Genome wide association studies for several morphological traits and defects in the Reggiana cattle breed</i>	P111
Stefania Dall'Olio, Giuseppina Schiavo, Samuele Bovo, Luca Fontanesi <i>Milk protein gene variability in Reggiana and Modenese cattle breeds</i>	P112
Giulia Moscatelli, Giuseppina Schiavo, Samuele Bovo, Anisa Ribani, Stefania Dall'Olio, Francesca Bertolini, Luca Fontanesi <i>Comparing signatures of selection in Reggiana and Modenese cattle breed</i>	P113
Mohamad Ballan, Samuele Bovo, Giuseppina Schiavo, Michele Schiavitto, Riccardo Negrini, Luca Fontanesi <i>Analysis of genetic diversity and signature of selection in commercial and fancy rabbit breeds</i>	P114
Anisa Fontanesi, Valerio Utzeri, Valeria Taurisano, Despoina Karatosidi, Luca Fontanesi <i>Variability in genes affecting morphological traits in the Greek black pig breed and conservation of this genetic resource</i>	P115
Valerio Joe Utzeri, Anisa Ribani, Valeria Taurisano, Carles Hernández i Banqué, Luca Fontanesi <i>A map of the distribution of Apis mellifera mitochondrial DNA lineages in Italy</i>	P116
Samuele Bovo, Anisa Ribani, Valerio Utzeri, Luca Fontanesi <i>Mining shotgun sequencing of honey DNA to identify Apis mellifera genome variability</i>	P117
Samuele Bovo, Giuseppina Schiavo, Luca Fontanesi <i>PigPhenomics: metabolomics merged with genomics to develop novel breeding and selection approaches in pigs</i>	P118
Valeria Taurisano, Valerio Joe Utzeri, Anisa Ribani, Giovanni Formato, Luca Fontanesi <i>Comparing morphometric data and mitotype information for the identification of Apis mellifera subspecies</i>	P119
Francesca Bertolini, Anisa Ribani, Fabrizio Capoccioni, Luca Buttazzoni, Valerio Joe Utzeri, Samuele Bovo, Giuseppina Schiavo, Massimo Caggiano, Max F. Rothschild, Luca Fontanesi <i>Whole genome sequencing analyses identified genomic regions affecting genetic defects in cultivated gilthead seabream (Sparus aurata)</i>	P120

- Maria Giuseppina Strillacci, Cristina Tognoli, Chiara Punturiero, Simone Mazzola, Francesca Bernini, Marica Tonial, Raffaella Milanese, Stefano Paolo Marelli, Alessandro Bagnato
A genomic approach for herd management – the GENORIP project **P121**
- Roberta Ciampolini, Laurence Flori, Gabriele Senczuk, Salvatore Mastrangelo, Martino Cassandro, Fabio Pilla
Genomic analyses for adaptation of Italian cattle breeds: preliminary results. The BOVITA project..... **P122**
- Damiano Altieri, Yuri Gombia, Tommaso Lanna, Donato Musone, Laura Onnis, Mariela Castrillo, Roberta Cimmino, Massimo Neri, Pasquale Rossi, Rossella Di Palo
Type trait evolution of the Italian Mediterranean Buffalo: preliminary results of the last 15 year selection..... **P123**

PRECISION LIVESTOCK FARMING

- Valentina Baronti, Laura Menchetti, Davide Montagnini, Martina Zappaterra, Leonardo Nanni Costa, Barbara Padalino
Evaluation of a collar monitoring activity and rumination for detecting estrus and health issues in an organic dairy farm..... **P124**
- Federico Tomasello, Marta Pollesel, Elisabetta Mondo, Federica Giacometti, Andrea Serraino, Silvia Piva
Effects of precision diagnostics on mastitis control..... **P125**
- Gianluigi Paolillo, Elena Casiraghi, Alessandro Petrini, Maria Grazia De Iorio, Stefano Biffani, Giulietta Minozzi, Alessandra Stella, Giorgio Valentini
A bioinformatic pipeline for image analysis of Varroa related traits in honeybees comb images..... **P126**
- Cristina Bergamin, Sara Carè, Luciano Migliorati, Giacomo Pirlo
LATTE DIGITALE (digital milk) and environmental sustainability..... **P127**
- Stefano Cossa, Aldo Calcante, Roberto Oberti, Anna Sandrucci
Monitoring calf body temperature by infrared thermography: preliminary assessment of environmental effects **P128**
- Rosanna Marino, Mariantonietta Richichi, Giuliano Borriello, Francesca Petrera, Fabio Abeni
A bibliometric analysis in Precision Livestock Farming..... **P129**
- Fabrizio Chessa, Laura Mara, Paolo Casula, Marlia Gallus, Francesco Palmas, Cinzia Podda, Andrea Sabattini, Maria Dattena
Freezing semen of wild trout with the use of commercial medium. Preliminary study..... **P130**
- Anna Antonella Spina, Nicola Pelle, Mario Dipasquale, Anselmo Poerio, Marcello Marotta, Valeria Maria Morittu
Particle size distribution of total mixed rations and feed sorting in Calabrian dairy herds..... **P131**
- Giovanni Buonaiuto, Francesca Ghiaccio, Damiano Cavallini, Alberto Palmonari, Ludovica Mammi, Luca Campidonico, Giorgia Canestrari, Giulio Visentin, Andrea Formigoni
NIRs calibration model for chemical composition and digestibility of total mixed rations for Parmigiano Reggiano ration..... **P132**
- Alberto Cesarani, Roberto Steri, Manolo Cappelloni, Emanuele Sfrisi, Nicolo' Pietro Paolo Macciotta, Gianni Battacone
Analysis of feeding behaviour in pigs fed ad libitum in an automatic management system..... **P133**
- Francesca Petrera, Francesca Capasso, Fabio Luzi, Alfonso Zecconi, Rosanna Marino, Fabio Abeni, Veronica Redaelli
Relationship between udder termography and milking features in dairy cows..... **P134**

OMICS TECHNOLOGIES

- Paola Cremonesi, Filippo Biscarini, Vincenzo Lopreaiato, Luca Nunziata, Giulia Gislon, Stefano Morandi, Giuseppina Avvantaggiato, Donato Greco, Vito D'Ascanio, Federica Turri, Giovanna Battelli, Erminio Trevisi, Milena Brasca, Bianca Castiglioni
Influence of mycotoxin detoxifying agents in animal feed on rumen and hindgut microbiomes of dairy cows..... **P135**
- Paola Cremonesi, Filippo Biscarini, Fiorenzo Piccioli-Cappelli, Erminio Trevisi, Giorgia Lovotti, Stefano Morandi, Bianca Castiglioni, Simona Tringali, Giovanna Battelli, Milena Brasca
Effect of Aloe arborescens supplementation in dry cows on rumen and hindgut microbiomes..... **P136**
- Diana Luise, Alice Checcucci, Federico Correa, Paolo Bosi, Paola Mattarelli, Paolo Trevisi
Insights into the faecal microbial phenotyping of pig using a Biolog EcoplateTM method..... **P137**

Leonardo Bruni, Vesna Milanović, Lucia Aquilanti, Giuliana Parisi <i>Effect of diets containing Hermetia illucens on rainbow trout microbiota: DGGE and NGS approaches</i>	P138
Maria Federica Sgarro, Pasquale De Palo, Aristide Maggiolino, Francesca Rita Dinardo, Massimo Ferrara, Giuseppina Mulè <i>Anthocyanins dietary supplementation in lambs: effects on gut microbiome</i>	P139
Giorgio Brugaletta, Luca Laghi, Marco Zampiga, Basharat Syed, Luis Valenzuela, Federico Sirri <i>Multi-Omics Approach to Assess the Effects of a Dual Mode Synbiotic Supplementation on Gut Health and Performance of Broiler Chickens</i>	P140
Marco Milanesi, Danilo Pignotti, Daniele Pietrucci, Sandy Sgorlon, Mariasilvia D'Andrea, Bruno Stefanon, Paolo Ajmone Marsan, Alessio Valentini, Stelios Arhondakis, Giovanni Chillemi <i>Assessment of transcriptional activity within isochores in healthy and subclinical cattle</i>	P141
Johanna Ramirez Diaz, Marco Milanessi, Matilde Passamonti, Mario Barbato, Valeria Bornaghi, Graziella Bongioni, Silvia Cenadelli, Marina Montedoro, Alessandro Achilli, Cristian Capelli, Paolo Ajmone Marsan <i>Genome-wide association for semen quality traits in Italian Holstein Bulls</i>	P142
Katia Cappelli, Samanta Mecocci, Flavia Ferlisi, Massimo Trabalza-Marinucci, Margherita Maranesi, Massimo Zerani, Alessandro Dal Bosco, Gabriele Acuti <i>Dietary supplementation with a polyphenolic extract from olive mill wastewater: evaluation of the potential effects on hepatic metabolism in rabbits through a RTqPCR approach</i>	P143
Alessia Staropoli, Anastasia Vasseti, Anna Balestrieri, Luigi Esposito, Gianluigi Zullo, Dario Rossi, Francesco Vinale <i>Influence of green forage on metabolomic characteristics of buffalo milk</i>	P144
Giulia Gaudio, Giulia Marzorati, Filippo Faccenda, Tobias Weil, Fernando Lunelli, Gloriana Cardinaletti, Giovanna Marino, Ike Olivotto, Giuliana Parisi, Emilio Tibaldi, Kieran Michael Tuohy, Francesca Fava <i>Insect meal and Poultry by-products as innovative ingredients for rainbow trout feed: impact on intestinal microbiota and gut health</i>	P145
Alessia Luciani, Paolo Emidio Crisi, Paraskevi Prasinou, Chryssostomos Chatgialloglu, Beatrice Di Palma, Marco Spagnolo, Alessandro Gramenzi, Isa Fusaro, Andrea Boari <i>Erythrocyte membrane lipidome profile of heifers during the transition period: a preliminary study</i>	P146
Giovanni Cosso, Luisa Pulinas, Sebastiano Luridiana, Vincenzo Carcangiu, Maria Consuelo Mura <i>Effects of the MTNRIA gene polymorphism and month of ram introduction on reproductive recovery in Sarda sheep</i>	P147

COMPANION ANIMALS AND SOCIETY

Gerardo Siani, Giada Morelli, Davide Stefanutti, Rebecca Ricci <i>Nutritional management with a soy byproduct of multiple acquired extrahepatic portosystemic shunts with hepatic encephalopathy in a dog</i>	P148
Valeria Gabriele, Vittorio Saettone, Elisa Scarsella, Misa Sandri, Bruno Stefanon, Giorgia Meineri <i>Effects of Saccharomyces boulardii supplementation in breeding adult dogs</i>	P149
Matteo Cortellari, Arianna Bionda, Stefano Frattini, Andrea Talenti, Alessio Negro, Luigi Liotta, Paola Crepaldi <i>Runs of Homozygosity in 21 Italian dog populations</i>	P150
Arianna Bionda, Matteo Cortellari, Alessio Negro, Stefano Frattini, Andrea Talenti, Sara Sechi, Marco Zedda, Luigi Liotta, Raffaella Cocco, Paola Crepaldi <i>Fonni's dog: genetic variability and relationship with other breeds</i>	P151
Marco Isidori, Massimo Trabalza-Marinucci, Fabrizio Rueca, Katia Cappelli, Elvio Lepri, Samanta Mecocci, Gabriele Scattini, Luisa Pascucci <i>Ascophyllum nodosum-derived fucoidan modulates the intestinal expression of immune-inflammatory genes in a biopsy model of canine chronic enteropathy</i>	P152
Biagina Chiofalo, Marianna Oteri, Salvatore Cucinotta, Pietro Lombardi, Ambra Rita Di Rosa <i>Biochemical parameters, oxidative stress and inflammatory status in English Pointers fed a citrus molasses-supplemented diet</i>	P153

BEYOND FOOD: NON-MARKET BENEFITS OF LIVESTOCK SYSTEMS

- Davide Pasut, Giuliano Menegazzi, Letizia Filippini, Luca Battaglini
Entrepreneurial horizons and sustainability of mountain livestock farming: the case of Lessinia (NE Italian Pre-Alps)..... **P154**
- Riccardo Primi, Carlo Maria Rossi, Bruno Ronchi, Pier Paolo Danieli
Soil erosion patterns in Alpine and Apennine extensive farming system **P155**

MONITORING IMPACTS ON ENVIRONMENT

- Paola Sau, Alberto Stanislao Atzori, Mondina Francesca Lunesu, Antonello Ledda, Francesco Lai, Roberto Rubattu, Antonio Fenu, Antonio Mazza, Fabio Correddu, Antonello Cannas
Life Cycle Impact Assessment of different forage production system..... **P156**
- Pierpaolo Danieli, Maria Stella Ranieri, Francesco Barbarese, Roberto Bedini, Filippo Lazzari
Precision beekeeping systems as promising tools for the agro-environmental monitoring..... **P157**
- Alessandro Vastolo, Monica Isabella Cutrignelli, Serena Calabrò
Nutritive value, in vitro fermentation kinetics, and methane production of hay produced in the internal area of Southern Italy..... **P158**
- Elio Romano, Rocco Roma, Flavio Tidona, Giorgio Giraffa, Andrea Bragaglio
Life Cycle Assessment (LCA) and dairy cattle. A new perspective of allocation criterion..... **P159**
- Emilio Simonetti, Emanuele Bianco, Cristiana Guerranti, Monia Renzi, Antonio Terlizzi, Simona Rainis
Experimental activities for the drafting of guidelines aimed at a sustainable exploitation of Chamelea Gallina resource (L., 1758)..... **P160**
- Simona Rainis, Michele Fabro, Renato Danielis, Rosario Raso, Gaia Dorigo, Alessandra Carnio, Maurizia Sigura, Francesco Lami, Marco Vuerich, Francesco Boscutti
Effectiveness of cover crops for supporting biodiversity and agronomic and ecosystem services in agricultural and rural landscapes..... **P161**
- Andrea Bragaglio, Josep Subirana i Jové, Jose Leonardo Montúfar Cárdenas, Danilo Rodríguez Rodas, Corrado Pacelli, Ada Braghieri, Pasquale De Palo, Fabio Napolitano
The environmental impact of draught horses in Guatemala as assessed through Life Cycle Assessment **P162**
- Lorenzo Degano, Daniele Vicario, Alberto Romanzin, Alberto Cesarani, Roberto Mantovani
Heritability of Residual Feed Intake measured on young performance tested bulls belonging to Italian dual-purpose breeds..... **P163**

STRATEGIES FOR IMPACTS MITIGATION

- Giuseppa Di Bella, Federica Litrenta, Antonio Macrì, Laura Messina, Vincenzo Nava, Arianna Bionda, Luigi Liotta
Residual biomass from the oil sector as animal feed: preliminary data on chemical and microbiological contamination..... **P164**
- Alice Cappucci, Alberto Mantino, Simona Bosco, Iride Volpi, Eleonora Longo, Giorgio Ragaglini, Enrico Bonari, Giuseppe Conte
Introduction of innovative strategies in dairy sheep feeding on milk production and climate change **P165**
- Davide Biagini, Carla Lazzaroni
Vermicompost from animal manure: characteristics and environmental impact **P166**
- Francesca Fumagalli, Michele Manoni, Nicoletta Rovere, Sharon Mazzoleni, Federica Cheli, Cristian Edoardo Maria Bernardi, Luciano Pinotti
Salad crops leftover as feed ingredient for ruminant diets: nutrients content and microbiological quality **P167**

SENSORY AND INSTRUMENTAL ORGANOLEPTIC PROPERTIES

- Alberto Brugiapaglia, Alfredo Pauciullo, Giustino Gaspa, Sara Bellezza Oddon
Mechanical strength of myofibrillar and connective tissue of Italian Mediterranean Buffalo meat **P168**
- Domitilla Pulcini, Fabrizio Capoccioni, Simone Franceschini, Marco Martinoli, Giulia Secci, Andrea Perugini, Filippo Faccenda, Emilio Tibaldi, Giuliana Parisi
Muscle pigmentation in rainbow trout fed novel protein sources from microalgae and crustaceans: the image analysis approach **P169**

FOOD LABELLING AND VALORIZATION

- Giuliano Grasso, Gerardo Gabriele Volpone, Giovanna Martelli, Luca Sardi, Eleonora Nannoni
Using Blockchain for animal welfare labelling: a case-study on dairy products **P170**
- Pier Paolo Danieli, Riccardo Primi, Andrea Palomba, Bruno Ronchi
A labelling scheme to communicate the health values and environmental sustainability of meat and milk from extensive farming **P171**
- Annalaura Lopez, Federica Bellagamba, Giovanni Savoini, Vittorio Maria Moretti, Donata Maria Iolanda Renata Cattaneo
Characterization of mountain cheese from cows fed Alpine pasture grass by fatty acids composition and multivariate analysis **P172**
- Vincenzo Chiofalo, Ambra Di Rosa, Margherita Addis, Adriana Di Trana, Antonino Di Grigoli, Salvatore Claps, Giovanni Quaranta, Valeria Maria Morittu ⁽⁸⁾, Antonio Pirisi, Massimo Todaro, Giuseppe Licitra
Nutritional profile of Ager cheese selection **P173**
- Andrea Zandrini, Valentina Carta, Virginia Flippello, Laura Ragni, Elena Cosciani-Cunico, Barbara Bertasi, Niccolò Franceschi, Paolo Ajmone-Marsan, Dario De Medici, Marina Nadia Losio
Evaluation of LAMP amplification and short enrichment time for the detection of pathogens in food **P174**

were housed in pens and they were fed four different diets designed to have different levels of fresh forage (F), hay and mixed grains (HG): 100% F (F); 70% F and 30% HG (7F3HG); 30% F and 70% HG (3F7HG); 100% HG (HG). The experiment lasted 7d for adaptation and 8d for cheese making and sample collection. The raw bulk milk of groups was processed into PFC according to the product specification. Cheeses after 30 days of ripening were analyzed for fatty acid profile, α -tocopherol, cholesterol, polyphenols and antioxidant capacity; cheese indexes DAP (α -tocopherol/cholesterol), HPI ($\omega 3 + \omega 6 + \text{MUFA}$)/C12:0 + (4 \times C14:0) + C16:0 and GHIC (Σ polyphenols, CLA isomers, PUFA, $\omega 3$ and total antioxidant capacity scores) were calculated. Statistical analysis was performed by GLM procedure. The model included feeding treatment as fixed factor, comparisons between means were tested with the Tukey test.

The DAP index was able to discriminate PFC when the percentage of F changed. DAP index decreased from 9.7 (F), 8.6 (7F3HG), 7.8 (3F7HG), to 6.5 (HG) ($p < .01$). No significant differences were found among groups for HPI, values were 0.44, 0.46, 0.47 and 0.45 in F, 7F3HG, 3F7HG and HG groups, respectively. A significant effect of the feeding treatment was detected for GHIC. The higher GHIC was observed in F group (31) compared to HG (14) group ($p < .01$), intermediate values were found in 7F3HG and 3F7HG (20 and 18, respectively). This study has highlighted a relationship between level of F in the diet and DAP and GHIC in PFC. Both indexes are able to discriminate different feeding groups whereas HPI cannot do the same for feeding groups.

Acknowledgements

Research supported by AGER 2 Project, grant n° 2017–1144

P046

Bovine beta casein polymorphism and environmental sustainability of cheese production

Giulia Gislón^a, Alberto Tamburini^a, Anna Sandrucci^a, Maddalena Zucali^a, Milena Brasca^b, Luciana Bava^a

^aDISAA, University of Milan, Milano, Italy

^bCNR, ISPA, Milano, Italy

Contact giulia.gislon@unimi.it

Beta casein constitutes up to 45% of bovine milk total casein and presents several genetic variants. Bovine beta casein variants may play an important role on milk production and composition; besides their possible influence on milk digestibility and human diseases, beta casein variants can influence cheese yield and quality and, in turn, environmental sustainability of cheese production.

The aim of the study is to investigate a possible effect on the environmental impact of cheese production, related to beta casein polymorphism. A Life Cycle Assessment was performed,

considering Grana Padano PDO (GP) and mozzarella cheese (MOZ) and three different genotypes of beta casein, A1A1, A2A2, A1A2.

Three groups of 10 lactating cows were reared under the same conditions; each group belonged to the three different beta casein genotypes. Separated cheesemaking procedures were performed for the three genotypes' milk. The evaluation of environmental impact of 1 kg of packaged cheese was performed using primary data as much as possible, together with secondary and tertiary data. Following classification, characterization was conducted through Recipe Midpoint (H) V1.10 method. With this approach, normalization was also performed, for identifying the impact categories which are important for this specific sector. Normalized results represent the fractional contribution of GP and MOZ production, to an average European Union citizen's cumulative annual environmental impact.

The results pointed out that cheese produced with A2A2 milk seems to be the most environmentally sustainable, both for GP and MOZ. This is probably due to the higher cheese yield (8.00%) of A2A2 milk, compared with the others, mainly related to the protein content. Carbon footprint (CF) of A2A2 was 16.6 kg CO₂ eq/kg packaged cheese and 10.7 kg CO₂ eq/kg packaged cheese for GP and MOZ, respectively. The main contribution to CF was given by raw milk production at the barn, for all the three genotypes and both for GP and MOZ. Normalization highlights that the first largest impact category was natural land transformation, followed by marine eutrophication and terrestrial acidification. In conclusion, cheese produced from A2A2 milk seems to favour environmental sustainability, mainly because of milk composition, which favours cheese yield.

Acknowledgements

This research was funded by the AGER 2 'FARM-INN' grant 2017–1130 project.

P047

Impact on goat milk composition and rumen microbiome of *Camelina sativa* cake and *Cynara cardunculus* supplements

Matteo Daghio^a, Federica Mannelli^a, Fabio Omodei Zorini^b, Silvia Sandrini^b, Carlotta Giromini^b, Arianna Buccioni^a, Carlo Viti^a, Giovanni Savoini^b, Guido Invernizzi^b

^aDipartimento di Scienze Agrarie, Alimentari, Ambientali e Forestali, University of Florence, (UNIFI), Florence, Italy

^bDipartimento di Scienze Veterinarie per la Salute, la Produzione Animale e la Sicurezza Alimentare, University of Milan (UNIMI), Lodi, Italy

Contact guido.invernizzi@unimi.it