



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

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ISSN 1594-4077

eISSN 1828-051X

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**Italian Journal of
Animal Science**

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volume 16

supplement 1

2017

italian journal of animal science

ASPA 22nd CONGRESS

Perugia, June 13-16, 2017

Book of Abstracts

**Guest Editors: Massimo Trabalza-Marinucci (Coordinator),
Cesare Castellini, Emiliano Lasagna, Stefano Capomaccio,
Katia Cappelli, Simone Ceccobelli, Andrea Giontella**



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Italian Journal of Animal Science

Official Journal of the Animal Science
and Production Association

ISSN 1594-4077

eISSN 1828-051X

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- Animal derived food quality and safety
- Animal genetics and breeding
- Aquaculture, poultry, companion and wildlife
- Livestock systems, management and environment
- Non-ruminants nutrition and feeding
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- Ruminants nutrition and feeding

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Italian Journal of Animal Science

volume 16, supplement 1, 2017

ASPA 22nd Congress

Perugia, June 13-16, 2017

Guest Editors

**Massimo Trabalza-Marinucci (Coordinator), Cesare Castellini,
Emiliano Lasagna, Stefano Capomaccio, Katia Cappelli,
Simone Ceccobelli, Andrea Giontella**

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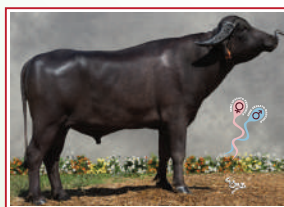
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22nd

Congress of the Animal Science
and Production Association

*22° Congresso dell'Associazione per
la Scienza e le Produzioni Animali*

Perugia (Italy)

June 13th - 16th, 2017

Venue

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Via R. d' Andreotto, 19



ASPA 22nd Congress

Perugia, June 13-16, 2017

22nd ASPA CONGRESS PROGRAMME AT A GLANCE



Tuesday, June 13 th					
09.30 12.30	IJAS EDITORIAL BOARD MEETING				
13.00 15.00	ARRIVAL - REGISTRATION				
	ROOM AU		ROOM T1		ROOM T2
15.00 16.15	ORAL PRESENTATIONS AB "Horse genetics" (5)	15.00 16.30	ORAL PRESENTATIONS NF "Ruminal metabolism" (6)	15.00 16.00	ORAL PRESENTATIONS FQ "Meat quality" (4)
17.30 19.30	OPENING CEREMONY <i>(Plenary Room - Dept. of Agricultural, Food and Environmental Sciences, University of Perugia)</i> INVITED LECTURE Livestock welfare issues in Europe or what is needed to maintain livestock production in the future? <i>Matthias Gauly, EAAP, Italy</i>				
19.30 20.00	Concert of "Perugia University Choir" and Welcome Cocktail				

LEGEND

AB: Animal Breeding and Genetics
 AE: Animal Husbandry and Environmental Impact
 APR: Aquaculture, Poultry and Rabbit Production
 AW: Animal Welfare, Health and Behaviour
 NF: Nutrition and Feeding
 FQ: Animal Food Quality and Safety

22nd ASPA CONGRESS PROGRAMME AT A GLANCE



Wednesday, June 14 th							
	ROOM AU		ROOM T1		ROOM T2		ROOM H
8.45 9.45	MAIN LECTURE - AB Genetic adaptation of livestock to the challenges of climatic changes Olivier Hanotte, UK	8.45 9.45	ORAL PRESENTATIONS NF "Monogastric nutrition" (4)	8.45 10.15	ORAL PRESENTATIONS APR "Poultry and rabbit nutrition" (6)	8.45 10.30	ORAL PRESENTATIONS AW "Husbandry, welfare and behaviour" (7)
09.45 10.45	ORAL PRESENTATIONS AB "Adaptation strategies" (4)	9.45 10.30	INVITED LECTURE - NF Precision feeding Luigi Calamari, Italy				
10.45 11.15	Coffee break and POSTER SESSION						
	ROOM AU						
11.15 13.00	PLENARY SESSION WORKSHOP Foods of animal origin and consumer attitudes Chairman: Luca Buttazzoni, Italy Politics of risk: questioning the naturalization of danger in meat production and consumption. <i>Cristina Papa, Italy</i> Food fact versus food fiction - The never-ending struggle between unbiased information and preconceived ideologies. <i>Luigi Scordamaglia, Italy</i> Foods of animal origin – how do we help the consumer understand sustainability implications of diet choice? <i>Judith L. Capper, UK</i>						
13.00 14.00	Lunch and POSTER SESSION						
	ROOM AU		ROOM T1		ROOM T2		ROOM H
14.00 15.00	MAIN LECTURE - NF Gastrointestinal tract functionality and its relationships with eubiotics Pietro Celi, USA	14.00 16.00	ORAL PRESENTATIONS AW "Cattle health and metabolism" (8)	14.00 16.15	ORAL PRESENTATIONS AB "Beef cattle genetics" (9)	14.00 16.30	ROUND TABLE Adaptation to hot climate and strategies to alleviate heat stress in dairy cows ASPA Commission "Adattabilità dei sistemi zootecnici ai cambiamenti climatici"
15.00 16.00	ORAL PRESENTATIONS NF "Monogastric nutrition" (4)	16.00 16.45	INVITED LECTURE – AW Nutritional impact on lameness in dairy cows Hugh Galbraith, UK				
16.45 17.15	Coffee break and POSTER SESSION						
17.15 19.30	AGROTEAM ROUND TABLE (ROOM AU) Innovative strategies to improve livestock production efficiency						
20.00	Dinner at Convention Center						

ASPA 22nd Congress

Perugia, June 13-16, 2017

22nd ASPA CONGRESS PROGRAMME AT A GLANCE



Thursday, June 15 th						
	ROOM AU		ROOM T1		ROOM T2	ROOM H
8.30 9.15	INVITED LECTURE - AB A brief history of statistical developments in animal breeding <i>Daniel Gianola, USA</i>			8.30 9.30	ORAL PRESENTATIONS APR "Husbandry, health and welfare" (4)	
9.15 10.30	ORAL PRESENTATIONS AB "Genome-wide studies" (5)	8.30 10.30	ORAL PRESENTATIONS NF "Feed evaluation" (8)	9.30 10.30	MAIN LECTURE - APR Insects as sustainable feed ingredients <i>Laura Gasco, Italy</i>	08.30 10.15 ORAL PRESENTATIONS FQ "Milk and cheese quality" (7)
10.30 11.00	Coffee break and POSTER SESSION					
	ROOM AU		ROOM T1		ROOM T2	ROOM H
11.00 12.00	MAIN LECTURE - FQ Feeding strategies to reduce the use of antibiotics in pig production <i>Joris Michiels, Belgium</i>					11.00 12.15 ORAL PRESENTATIONS APR "Husbandry, health and welfare" (5)
12.00 13.00	ORAL PRESENTATIONS FQ "Meat quality" (4)	11.00 12.45	Joint Session NF+FQ+APR "Insects in animal nutrition" (7)	11.00 12.45	ORAL PRESENTATIONS AB "Dairy cattle genetics" (7)	12.15 13.00 INVITED LECTURE – APR Welfare in poultry <i>Martina Gerken, Germany</i>
13.00 14.00	Lunch and POSTER SESSION					
	ROOM AU		ROOM T1		ROOM T2	ROOM H
14.00 15.00	MAIN LECTURE - AW The role of mother-offspring behaviour in lamb survival <i>Cathy Dwyer, UK</i>					
15.00 15.45	INVITED LECTURE – AW Animal welfare and food security: role and tasks of the Italian farmers <i>Franco Valfré, Italy</i>	14.00 15.30	ORAL PRESENTATIONS Joint Session NF+FQ "Dietary strategies and quality of foods" (6)	14.00 15.30	ORAL PRESENTATIONS AB "Small ruminant genetics" (6)	14.00 15.30 ORAL PRESENTATIONS AE "Husbandry systems and socio-economic analysis" (6)
	ROOM AU		ROOM T1		ROOM T2	ROOM H
15.45 16.30	INVITED LECTURE – AE Constraints and solutions to reduce environmental impact for developed livestock farming <i>Andrea Rosati, EAAP, Italy</i>	15.45 16.45	ORAL PRESENTATIONS AW "Pig health and behaviour" (4)	15.45 16.45	ORAL PRESENTATIONS AB "Dairy cattle genetics" (4)	15.45 16.45 ORAL PRESENTATIONS APR "Genetics" (4)
16.45 17.00	Coffee break and POSTER SESSION					
17.00 18.30	MEETING OF ASPA MEMBERS (ROOM AU)					
20.00	Social Dinner - Palazzo Bernabei, University of Perugia (Assisi)					

ASPA 22nd Congress

Perugia, June 13-16, 2017

22nd ASPA CONGRESS PROGRAMME AT A GLANCE



#ASPA2017
20th meeting of the Animal Production and Food Quality Association
June 13-16, 2017 - Perugia

Friday, June 16 th								
	ROOM AU		ROOM T1		ROOM T2		ROOM H	
9.00 10.00	MAIN LECTURE - AE How to solve the (un)sustainability dilemma <i>Simone Bastianoni, Italy</i> Environmental impact of animal production <i>Matteo Crovetto, Italy</i>	9.00 10.00	ORAL PRESENTATIONS FQ "Food safety" (4)	9.00 10.45	ORAL PRESENTATIONS NF "Ruminant nutrition" (7)	9.00 11.00	ORAL PRESENTATIONS APR "Aquaculture" (8)	
		10.00 10.45	INVITED LECTURE - FQ Foodborne pathogen: the case of <i>Campylobacter</i> in poultry <i>Lisa K. Williams, UK</i>					
11.00 11.30	Coffee break and POSTER SESSION							
	ROOM AU		ROOM T1		ROOM T2		ROOM H	ROOM C
11.30 13.30	SIB ROUND TABLE Dairy cow welfare and ethology	11.30 13.00	ORAL PRESENTATIONS Joint Session NF+FQ "Dietary strategies and quality of foods" (6)	11.30 13.15	ORAL PRESENTATIONS AB "Other species" (7)	11.30 13.00	ORAL PRESENTATIONS AW "Small ruminant health and behaviour" (6)	ORAL PRESENTATIONS AE "Husbandry systems and environmental impact" (8)

ASPA 22nd Congress

Perugia, June 13th–16th, 2017

Italian Journal of Animal Science 2017; volume 16: supplement 1

Agenda Invited Speakers

June 13th

Plenary Room - Dept. of Agricultural, Food and Environmental Sciences, University of Perugia

17.30-19.30 Matthias Gauly
Livestock welfare issues in Europe or what is needed to maintain livestock production in the future?..... IS001

June 14th

Room AU - Animal Breeding and Genetics - Adaptation strategies

Chairmen: Paolo Ajmone-Marsan, Stefano Capomaccio
08.45-09.45 Olivier Hanotte
Genetic adaptation of livestock to the challenges of climatic changes IS002

Room T1 - Nutrition and Feeding

Chairmen: Antonella Baldi, Luigi Gallo
09.45-10.30 Luigi Calamari
Precision Feeding IS003

Room AU - PLENARY SESSION WORKSHOP

Foods of animal origin and consumers attitudes

Chairman: Luca Buttazzoni
11.15-13.00 Cristina Papa
Politics of risk: questioning the naturalization of danger in meat production and consumption IS004
Luigi P. Scordamaglia
Food fact versus food fiction - The never-ending struggle between unbiased information and preconceived ideologies IS005
Judith L. Capper
Foods of animal origin – how do we help the consumer understand sustainability implications of diet choice? IS006

Room AU - Nutrition and Feeding

Chairmen: Paolo Bosi, Domenico P. Lo Fiego
14.00-15.00 Pietro Celi
Gastrointestinal tract functionality and its relationships with eubiotics IS007

Room T1 - Animal Welfare, Health and Behaviour - Cattle health and metabolism

Chairmen: Cinzia Marchitelli, Erminio Trevisi
16.00-16.45 Hugh Galbraith
Nutritional impact on lameness in dairy cattle IS008

June 15th

Room AU - Animal Breeding and Genetics

- Chairmen: Nicolò P. P. Macciotta, Alfredo Pauciullo
08.30-09.15 Daniel Gianola
A brief history of statistical developments in animal breeding IS009

Room T2 - Aquaculture, Poultry and Rabbit Production

- Chairmen: Federico Sirri, Alessandro Dal Bosco
09.30-10.30 Laura Gasco
Insects as sustainable feed ingredients IS010

Room AU - Animal Food Quality and Safety

- Chairmen: Andrea Serra, Paolo Polidori
11.00-12.00 Joris Michiels
Feeding strategies to reduce the use of antibiotics in pig production IS011

Room H - Aquaculture, Poultry and Rabbit Production - Husbandry and welfare

- Chairmen: Cecilia Mugnai, Massimiliano Petracci
12.15-13.00 Martina Gerken
Welfare in Poultry IS012

Room AU - Animal Welfare, Health and Behaviour

- Chairmen: Silvana Mattiello, Massimo Tralbalza-Marinucci
14.00-15.00 Cathy M. Dwyer
The role of mother-offspring behaviour in lamb survival IS013
15.00-15.45 Franco Valfré
Animal welfare and food security: role and tasks of the Italian farmers IS014

Room AU - Animal Husbandry and Environmental Impact

- Chairmen: Luca M. Battaglini, Maurizio Silvestrelli
15.00-15.45 Andrea Rosati
Constraints and solutions to reduce environmental impact for developed livestock farming IS015

June 16th

Animal Husbandry and Environmental Impact

- Chairmen: Bruno Stefanon, Mariano Pauselli
09.00-10.00 Simone Bastianoni
How to solve the (un)sustainability dilemma IS016
Gian Matteo Crovetto
Environmental impact of animal production IS017

Animal Food Quality and Safety - Food safety

- Chairmen: Luisa A. Volpelli, Vincenzo Chiofalo
10.00-10.45 Lisa K. Williams
Foodborne pathogen: the case of Campylobacter in poultry IS018

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Italian Journal of Animal Science 2017; volume 16: supplement 1

Agenda for oral presentations

Tuesday June 13th - room AU

Animal breeding and genetics - Horse genetics

Chairmen:	Donata Marletta, Roberto Mantovani	
15.00-15.15	Andrea Giontella, Francesca M. Sarti, Giovanni P. Biggio, Andrea Taras, Raffaele Cherchi, Maurizio Silvestrelli, Camillo Pieramati <i>Sardinian Anglo-Arab horses: genetic parameters of conformation and performances</i>	O001
15.15-15.30	Stefano Capomaccio, Andrea Giontella, Ted Kalbfleisch, Scotty DePriest, Andrea Verini-Supplizi, Silvia Sorbolini, Raffaele Cherchi, Maurizio Silvestrelli, Katia Cappelli <i>Transcriptome analysis of racehorses PBMCs: insights on transcribed introns and repeats</i>	O002
15.30-15.45	Andrea Verini-Supplizi, Stefano Capomaccio, Luisa Pascucci, Cinzia Bazzucchi, Marco Pepe, Mauro Coletti, Rodolfo Gialletti, Stefano Petrini, Fabrizio Passamonti, Franco Moriconi, Maurizio Silvestrelli, Katia Cappelli <i>RNA-cargo characterization of equine Ad-MSCs vesicles: first step towards cell-free therapeutic procedures</i>	O003
15.45-16.00	Katia Cappelli, Elisabetta Chiaradia, Andrea Viglino, Maurizio Silvestrelli, Francesca Beccati, Livia Moscati, Stefano Capomaccio <i>Circulating miRNAs as biomarkers of stress and training in endurance horses</i>	O004
16.00-16.15	Andrea Giontella, Hovirag Lancioni, Irene Cardinali, Marco R. Capodiferro, Stefano Capomaccio, Katia Cappelli, Camillo Pieramati, Alessandro Achilli, Maurizio Silvestrelli <i>Mitochondrial DNA haplotypes unveil mistakes in Maremmano horse pedigree records</i>	O005

Tuesday June 13th - room T1

Nutrition and feeding - Ruminant metabolism

Chairmen:	Lucia Bailoni, Andrea Formigoni	
15.00-15.15	Giuseppe Conte, Corrado Dimauro, Alice Cappucci, Eleonora Bulleri, Francesca Ciucci, Andrea Serra, Marcello Mele <i>Relationship between ruminal biohydrogenation products and milk fat depression</i>	O006
15.15-15.30	Alberto Palmonari, Giorgia Canestrari, Elena Bonfante, Ludovica Mammi, Andrea Formigoni <i>Effect of replacing soybean meal with rapeseed meal on productive performance and ruminal conditions of lactating dairy cows</i>	O007
15.30-15.45	Marica Simoni, Federico Righi, Francesca Martuzzi, Massimo Malacarne, Marco Renzi, Afro Quarantelli <i>Study of the in vivo and in vitro variations of the enzymatic activity of bovine rumen fluid inocula</i>	O008
15.45-16.00	Fabio Correddu, Alberto S. Atzori, Gianni Battacone, Giuseppe Pulina, Anna Nudda <i>Effect of exhausted berries of myrtle on ruminal metabolism in dairy sheep</i>	O009
16.00-16.15	Fiorentina Palazzo, Filippo Biscarini, Federica Castellani, Andrea Vitali, Giulia Masetti, Lisa Grotta, Giuseppe Martino <i>Characterization of the rumen microbiota in dairy calves receiving copper or grape-pomace feed supplementation</i>	O010
16.15-16.30	Federica Mannelli, Mariano Pauselli, Francesco Pini, Alice Cappucci, Andrea Serra, Giuseppe Conte, Marcello Mele, Sara Minieri, Stefano Rapaccini, Luciana Giovannetti, Carlo Viti, Arianna Buccioni <i>Effect of olive oil pomace dietary supplementation on rumen microbial community profile: a metagenomics approach</i>	O011

Tuesday June 13th - room T2
Animal food quality and safety - Meat quality

Chairmen:	Edi Piasentier, Luciano Morbidini	
15.00-15.15	Francesco Sirtori, Riccardo Bozzi, Alessandro Croveti, Chiara Aquilani, Antonio Pezzati, Antonio Bonelli, Carolina Pugliese <i>Effects of salting time on seasoned meat in two pigs genotypes</i>	0012
15.15-15.30	Michela Contò, Maria Miarelli, Sabrina Di Giovanni, Paola Lavermicocca, Francesca Valerio, Sebastiana Failla <i>Effect of the broking down of cold chain on beef meat oxidation</i>	0013
15.30-15.45	Amalia Simonetti, Roberto Giudice, Annamaria Perna, Emilio Gambacorta <i>Comparison of oxidative status and antioxidant compounds of pig meat from Italian autochthonous pig Suino Nero Lucano and a modern crossbred pig before and after cooking</i>	0014
15.45-16.00	Alessandro Croveti, Francesco Sirtori, Doria Benvenuti, Antonio Bonelli, Andrea Lombardo, Giovanni Brajon, Riccardo Bozzi <i>Wet aging effect on beef meat physical traits</i>	0015

Wednesday June 14th - Room AU
Animal breeding and genetics - Adaptation strategies

Chairmen:	Paolo Ajmone-Marsan, Stefano Capomaccio	
09.45-10.00	Miranda Bryan, Christian Maltecca, Kent Gray, Clint Schwab, Yijian Huang, Francesco Tiezzi <i>Genetic variance for sow tolerance to heat stress</i>	0016
10.00-10.15	Elia Vajana, Mario Barbato, Licia Colli, Marco Milanese, Estelle Rochat, Enrico Fabrizi, Christopher Mukasa, Marcello Del Corvo, Charles Masembe, Vincent Muwanika, Fredrick Kabi, Riccardo Negrini, Stéphane Joost, Paolo Ajmone-Marsan, the NEXTGEN Consortium <i>Combining landscape genomics and ecological modelling to investigate local adaptation of indigenous Ugandan cattle to East Coast Fever</i>	0017
10.15-10.30	Tri Satya Mastuti Widi, Nuzul Widyas <i>Variation of Madura Cattle in Madura Island, Indonesia</i>	0018
10.30-10.45	Salvatore Mastrangelo, Paolo Ajmone-Marsan, Alessandro Bagnato, Luca M. Battaglini, Riccardo Bozzi, Antonello Carta, Gennaro Catillo, Martino Cassandro, Sara Casu, Roberta Ciampolini, Elena Ciani, Paola Crepaldi, Mariasilvia D'Andrea, Rosalia Di Gerlando, Luca Fontanesi, Maria Longeri, Nicolò P. P. Macciotta, Roberto Mantovani, Donata Marletta, Donato Matassino, Marcello Mele, Giulio Pagnacco, Camillo Pieramati, Baldassare Portolano, Francesca M. Sarti, Fabio Pilla <i>BOVITA: a first overview on genome-wide genetic diversity of Italian autochthonous cattle breeds</i>	0019

Wednesday June 14th - Room T2
Animal breeding and genetics - Beef cattle genetics

Chairmen:	Liliana Di Stasio, Camillo Pieramati	
14.00-14.15	Francesca M. Sarti, Simone Ceccobelli, Andrea Giontella, Piera Di Lorenzo, Emiliano Lasagna, Andrea Quaglia, Fiorella Sbarra, Roberta Guarcini, Camillo Pieramati, Francesco Panella <i>Effects of Single Nucleotide Polymorphisms (SNPs) in candidate genes for growth traits in Italian beef cattle breeds</i>	0020
14.15-14.30	Fiorella Sbarra, Andrea Quaglia, Giovanni Bittante, Roberto Mantovani <i>Heritability of reproduction traits and type latent factors and their genetic correlations in Marchigiana, Chianina and Romagnola beef breeds</i>	0021
14.30-14.45	Domenico Aiello, Laura Salvadori, Sara Chiappalupi, Simone Ceccobelli, Emidio Albertini, Guglielmo Sorci, Emiliano Lasagna <i>Histological muscle characterization in hypertrophied Marchigiana cattle breed</i>	0022
14.45-15.00	Simone Savoia, Alberto Brugiapaglia, Liliana Di Stasio, Alessandro Ferragina, Alessio Cecchinato, Giovanni Bittante, Andrea Albera <i>"QualiPiem" - Innovative tools for selection of meat quality in Piemontese breed</i>	0023
15.00-15.15	Cinzia Marchitelli, Bianca Moioli, Roberto Steri, Gennaro Catillo <i>Twinning project: increasing of twin births in Maremmana breed</i>	0024
15.15-15.30	Mauro Fioretti, Stefano Biffani, Riccardo Negrini, Riccardo Bozzi <i>Genetic improvement and population structure of Italian Limousine</i>	0025

15.30-15.45	Hovirag Lancioni, Piera Di Lorenzo, Simone Ceccobelli, Licia Colli, Irene Cardinali, Taki Karsli, Marco R. Capodiferro, Luca Ferretti, Paolo Ajmone-Marsan, Francesca M. Sarti, Emiliano Lasagna, Alessandro Achilli	
	<i>Ancient distinctive migration routes suggested by the current mitochondrial gene pool of Podolic cattle breeds in Italy</i>	O026
15.45-16.00	Filippo Biscarini, Salvatore Mastrangelo, Gennaro Catillo, Bianca Moioli, Roberta Ciampolini	
	<i>Genome-wide homozygosity in Maremmana cattle</i>	O027
16.00-16.15	Rosalia Di Gerlando, Maria T. Sardina, Marco Tolone, Anna M. Suter, Salvatore Mastrangelo, Baldassare Portolano	
	<i>Genome wide Copy Number Variation (CNV) detection in Cinisara cattle breed</i>	O028

Wednesday June 14th - Room T2

Aquaculture, poultry and rabbit production - Poultry and rabbit nutrition

Chairmen:	Antonella Dalle Zotte, Cesare Castellini	
08.45-09.00	Nieves Núñez-Sánchez, Gabriele Acuti, Domenico Brusco, Simona Mattioli, Oliviero Olivieri, Massimo Tralza-Marinucci	
	<i>Prediction of nutrient digestibility and chemical composition of rabbit diets using faecal near infrared spectroscopy (FNIRS)</i>	O029
09.00-09.15	Marco Birolo, Angela Trocino, Francesco Gratta, Gerolamo Xiccato	
	<i>Performance and feeding behaviour of group-housed rabbits with free or time-limited access to feed</i>	O030
09.15-09.30	Paula A. Toalombo-Vargas, Nelson A. Duchi-Duchi, Luis R. Fiallos-Ortega, José V. Trujillo-Villacís, Luis E. Hidalgo-Almeida, Rafael Buenaño-Núñez	
	<i>Effect of chamomile (Matricaria chamomilla) on health in chickens</i>	O031
09.30-09.45	Paula A. Toalombo-Vargas, Nelson A. Duchi-Duchi, Luis R. Fiallos-Ortega, Antonio J. Morales- delaNuez, Luis E. Hidalgo-Almeida, Matiza L. Vaca-Cárdenas, Noé F. Rodríguez-G	
	<i>Effect of chamomile (Matricaria chamomilla) on productive performance in chickens</i>	O032
09.45-10.00	Angela Trocino, Francesco Gratta, Marco Birolo, Alessandra Piccirillo, Massimiliano Petracci, Luc Maertens, Gerolamo Xiccato	
	<i>Effects of the feeding system on performance and myopathy occurrence in two broiler chicken genotypes</i>	O033
10.00-10.15	Siria Tavaniello, Rossella Mucci, Acaye Ongwech, Marek Bednarczyk, Giuseppe Maiorano	
	<i>Probiotic and prebiotic supplementation in broiler chickens: growth performance, carcass traits and meat quality</i>	O034

Wednesday June 14th - Room H

Animal welfare, health and behaviour - Husbandry, welfare and behaviour

Chairmen:	Flaviana Gottardo, Andrea Verini-Supplizi	
08.45-09.00	Giulio Cozzi, Luisa Magrin, Isabella Lora, Thomas Beorchia, Barbara Contiero	
	<i>Milk yield, culling rate and reasons of pure Holsteins and second generation crossbred cows from Montbéliard × (Swedish Red × Holstein)</i>	O035
09.00-09.15	Riccardo Moretti, Stefano Biffani, Stefania Chessa, Riccardo Bozzi	
	<i>Predictive models for locomotion issues in Italian Holstein dairy cows</i>	O036
09.15-09.30	Vincenzo Lopreiato, Andrea Minuti, Elisabetta Fratto, Marcello Marotta, Giovanni Loprete, Domenico Britti, Erminio Trevisi, Valeria M. Morittu	
	<i>Use of an electronic rumination-monitoring system in pre-weaned calves</i>	O037
09.30-09.45	Giorgio Marchesini, Davide Mottaran, Matteo Gazziero, Massimo Mirisola, Severino Segato, Igino Andrighetto	
	<i>Effect of different ventilation systems on beef cattle during the early fattening period</i>	O038
09.45-10.00	Veronica Redaelli, Marta De Santis, Silvia Gozzo, Laura Contalbrigo, Annalisa Stefani, Marta Toson, Luca Farina, Marta Borgi, Francesca Cirulli, Emanuela Valle, Fabio Luzi	
	<i>Use of Infrared Thermography (IRT) in equine assisted interventions: physiological aspects</i>	O039
10.00-10.15	Aristide Maggolino, Alessandra Tateo, Pasquale De Palo, Giovanna Calzaretto, Pasquale Centoducati	
	<i>Evaluation of different habituation protocols for training dairy donkey jennies to the milking parlor: effect on milk yield, behavior and heart rate</i>	O040
10.15-10.30	Monica Battini, Sara Barbieri, Elisabetta Canali, Francesca Dai, Emanuela Dalla Costa, Valentina Ferrante, Lorenzo Ferrari, Silvana Mattiello, Michela Minero	
	<i>Outcomes of a web-survey for collecting stakeholders' opinion on welfare requirements for sheep, goats, turkeys, donkeys, and horses</i>	O041

Wednesday June 14th - Room T1

Animal welfare, health and behaviour - Cattle health and metabolism

Chairmen: Cinzia Marchitelli, Erminio Trevisi

- 14.00-14.15 Andrea Minuti, Nusrat Jahan, Matteo Mezzetti, Fiorenzo Piccioli-Cappelli, Lorenzo Bomba, Stefano Capomaccio, Juan J. Looor, Paolo Ajmone-Marsan, Erminio Trevisi
Relationship between blood energetic markers and circulating leukocytes transcriptome in transition dairy cows 0042
- 14.15-14.30 Erminio Trevisi, Andrea Minuti, Matteo Mezzetti, Annarita Ferrari, Fiorenzo Piccioli-Cappelli
Supplements of Aloe arborescens improve health and inflammo-metabolic status of transition dairy cows 0043
- 14.30-14.45 Paola Cremonesi, Federica Riva, Maria F. Addis, Camilla Ceccarani, Marco Severgnini, Erminio Trevisi, Massimo Amadori, Claudia Pollera, Joel Filipe, Giulio Curone, Lauretta Turin, Vittorio Tedde, Alessandra Pagnoni, Daniele Vigo, Paolo Moroni, Andrea Minuti, Valerio Bronzo, Bianca Castiglioni
A multidisciplinary study investigating the bovine milk microbiome and its association with mastitis resistance traits in Holstein Friesian and Rendena dairy cows 0044
- 14.45-15.00 Daniele Dipasquale, Loredana Basiricò, Patrizia Morera, Umberto Bernabucci
Anti-inflammatory effects of conjugated linoleic acid isomers and essential fatty acids in bovine mammary epithelial cells 0045
- 15.00-15.15 Sandy Sgorlon, Danilo Licastro, Bruno Stefanon, Monica Colitti
Cows relocation affects exosomes and their cargos in bovine milk 0046
- 15.15-15.30 Luisa Magrin, Marta Brscic, Leonardo Armato, Giulio Cozzi, Flaviana Gottardo
Lameness in finishing beef cattle: distribution of claw disorders in 2716 hind feet 0047
- 15.30-15.45 Edyta Bauer, Justyna Żychlińska-Buczek
Using mineral-vitamin boluses to improve somatic cell count prevention value in Polish dairy farms 0048
- 15.45-16.00 Juan J. García Bustos
Treatment of bovine diseases with agroforestry resources in farms of the Colombian Amazon piedmont 0049

Wednesday June 14th - Room T1

Nutrition and feeding - Monogastric nutrition

Chairmen: Antonella Baldi, Luigi Gallo

- 08.45-09.00 Elena Mariani, Nicoletta Rizzi, Guido Invernizzi, Alessandro Agazzi, Adriana Maggi, Giovanni Savoini
Spatio-temporal analysis of the Nrf 2 activation in transgenic reporter mouse fed with high dosage of saturated or unsaturated fatty acids using in vivo bioluminescent imaging 0050
- 09.00-09.15 Maria G. Cappai, Maurizio Picciau, Maria G. A. Lunesu, Corrado Dimauro, Raffaele Cherchi, Walter Pinna
Circulating levels of nutrient-related metabolites in healthy Anglo-Arabian foals from weaning to 18 months of age 0051
- 09.15-09.30 Mirco Dalla Bona, Giuseppe Carcò, Enrico Fiore, Stefano Schiavon, Luca Carraro, Massimo Morgante, Luigi Gallo
Effects of dietary protein and lysine content on growth performances, carcass traits and estimated nitrogen input-output flow of growing pigs 0052
- 09.30-09.45 Micol Bertocchi, Paolo Trevisi, Diana Luise, Vincenzo Motta, Chiara Salvarani, Anisa Ribani, Aude Simongiovanni, Etienne Corrent, Luca Fontanesi, Paolo Bosi
Dose-response for different levels of leucine to lysine ratio on the growth performance of weaning pigs with different genotypes at the α -amino adipate d-semialdehyde synthase gene 0053

Wednesday June 14th - Room AU

Nutrition and feeding - Monogastric nutrition

Chairmen: Paolo Bosi, Domenico P. Lo Fiego

- 15.00-15.15 Vincenzo Motta, Michele Pesciaroli, Paolo Trevisi, Diana Luise, Ludovica Curcio, Lucilla Cucco, Francesca R. Massacci, Chiara F. Magistrali
Dietary calcium-butyrate promotes a shift of gut microbiota of weaned pigs 0054
- 15.15-15.30 Chiara Aquilani, Francesco Sirtori, Oreste Franci, Alessandro Crovetto, Carolina Pugliese
Effects of protein restricted diet on in vivo performances and slaughtering traits of Cinta Senese pigs 0055

15.30-15.45	Matteo Ottoboni, Carlotta Giromini, Marco Tretola, Davide Gottardo, Daniela Marchis, Valentina Caprarulo, Federica Cheli, Antonella Baldi, Luciano Pinotti <i>Nutrients content and in vitro digestibility of ex-food as feed ingredient for pig diets</i>	O056
15.45-16.00	Eleonora Seoni, Gianni Battacone, Paolo Silacci, Frigga Dohme-Meier, Giuseppe Bee <i>Impact of increasing levels of condensed tannins from sainfoin in grower-finisher diets of entire male pigs on growth performance and carcass characteristics</i>	O057

Thursday June 15th - Room AU

Animal breeding and genetics - Genome-wide studies

Chairmen: Nicolò P. P. Macciotta, Alfredo Pauciullo		
09.15-09.30	Mariasilvia D'Andrea, Valentino Palombo, Marco Milanese, Sandy Sgorlon, Stefano Capomaccio, Giuseppe Conte, Paolo Ajmone-Marsan <i>Genome-wide association study of milk fatty acid composition in Italian Simmental and Italian Holstein cows</i>	O058
09.30-09.45	Alessio Cecchinato, Sara Pegolo, Christos Dadousis, Núria Mach, Yuliaxis Ramayo-Caldas, Marcello Mele, Stefano Schiavon, Giovanni Bittante <i>Genome-wide association and pathway-based analysis for milk fatty acids profile in dairy cattle</i>	O059
09.45-10.00	Alberto Cesarani, Antonio Puledda, Maria G. Manca, Fabio Correddu, Jessica Serdino, Silvia Sorbolini, Nicolò P. P. Macciotta <i>Genome-wide association study of cheese-making properties in sheep milk</i>	O060
10.00-10.15	Anna M. Suter, Salvatore Mastrangelo, Maria T. Sardina, Rosalia Di Gerlando, Marco Tolone, Baldassare Portolano <i>Genome-wide association study for milk production traits in Valle del Belice sheep</i>	O061
10.15-10.30	Salvatore Mastrangelo, Marco Tolone, Maria T. Sardina, Anna M. Suter, Rosalia Di Gerlando, Baldassare Portolano <i>Genome-wide scan for runs of homozygosity in Valle del Belice sheep</i>	O062

Thursday June 15th - Room T2

Animal breeding and genetics - Dairy cattle genetics

Chairmen: Giulio Pagnacco, Mauro Penasa		
11.00-11.15	Marco R. Capodiferro, Shaoqiang Wang, Ningbo Chen, Tao Zhang, Hovirag Lancioni, Irene Cardinali, Hucai Zhang, Yongwang Miao, Vongpasith Chanthakhoun, Metha Wanapat, Marnoch Yindee, Yi Zhang, Hongzhao Lu, Ruihua Dang, Yongzhen Huang, Xianyong Lan, Martin Plath, Hong Chen, Johannes A. Lenstra, Chuzhao Lei, Alessandro Achilli <i>Looking into the Swamp Buffalo genetic history through the whole mitogenome analysis</i>	O063
11.15-11.30	Chiara Roveglia, Giulio Visentin, Mauro Penasa, Raffaella Finocchiaro, Maurizio Marusi, Martino Cassandro <i>Genetics of alternative somatic cell count traits in Italian Holsteins</i>	O064
11.30-11.45	Hugo Toledo-Alvarado, Gustavo de los Campos, Ana Vazquez, Rob Tempelman, Giovanni Bittante, Alessio Cecchinato <i>Predictive ability of Fourier transform infrared spectroscopy and milk components to assess the pregnancy status of dairy cows</i>	O065
11.45-12.00	Cristina Sartori, Francesco Tiezzi, Nadia Guzzo, Roberto Mantovani <i>Causal relationships between milk yield, somatic cells, fertility, longevity and fighting ability in Aosta Chestnut-Black Pied Cattle</i>	O066
12.00-12.15	Corrado Dimauro, Elisabetta Manca, Alberto S. Atzori, Massimo Cellesi, Giustino Gaspa, Nicolò P. P. Macciotta <i>Use of discriminant analysis to early detect lactation persistency in dairy cows</i>	O067
12.15-12.30	Marco Milanese, Mario Di Guardo, Stefano Capomaccio, Katia Cappelli, Valentino Palombo, Mariasilvia D'Andrea, Marcello Del Corvo, Sandy Sgorlon, Andrea Minuti, Yuri Tani Utsunomiya, José Fernando Garcia, Erminio Trevisi, Riccardo Negrini, Bruno Stefanon, Paolo Ajmone-Marsan <i>Identification of genomic variants associated with metabolic stress in Italian Simmental and Holstein cows</i>	O069
12.30-12.45	Elisabetta Viale, Francesco Tiezzi, Fabio Maretto, Massimo De Marchi, Mauro Penasa, Martino Cassandro <i>Candidate gene association analysis for milk yield and composition traits, coagulation properties and somatic cell count in Italian Holstein Friesian bulls</i>	O078

Thursday June 15th - Room T2

Animal breeding and genetics - Small ruminants genetics

- Chairmen: Elena Ciani, Emiliano Lasagna
- 14.00-14.15 Beatriz López, Vincenzo Landi, Mayra M. Gómez Carpio, Beatriz Agudo, Amparo Martínez Martínez
Preliminary results on the genetic variation and the population structure within a Spanish Merino breed commercial population 0070
- 14.15-14.30 Mokhethi M. Selepe, Simone Ceccobelli, Emiliano Lasagna, Nokuthula W. Kunene
An overview on the genetic diversity in South African Nguni (Zulu) sheep 0071
- 14.30-14.45 Silvia Sorbolini, Giustino Gaspa, Donata Marletta, Paola Crepaldi, Bianca Moioli, Antonello Carta, Baldassare Portolano, Emiliano Lasagna, Elena Ciani, Mariasilvia D'Andrea, Fabio Pilla, Nicolò P. P. Macciotta, Italian Sheep Consortium (BIOVITA)
Detection of signatures of selection in Italian sheep breeds 0072
- 14.45-15.00 Sara Casu, Tiziana Sechi, Mario G. Usai, Stefania Sechi, Mario Barbato, Paolo Ajmone-Marsan, Antonello Carta
Toward the identification of causal mutations and LD markers associated to disease resistance in sheep 0073
- 15.00-15.15 Licia Colli, Marco Milanese, Marcello Del Corvo, Andrea Talenti, Francesca Bertolini, Minhui Chen, Alessandra Crisà, Kevin Daly, Bernt Guldbrandsen, Stéphane Joost, Johannes A. Lenstra, Ezequiel L. Nicolazzi, Estelle Rochat, Benjamin D. Rosen, Max F. Rothschild, Bertrand Servin, Tad S. Sonstegard, Roberto Steri, Elia Vajana, Curtis P. Van Tassell, Paolo Ajmone-Marsan, Paola Crepaldi, Alessandra Stella, the ADAPTmap Consortium
Drawing up worldwide goat diversity and post-domestication history: update from ADAPTmap project 0074
- 15.15-15.30 Andrea Talenti, Stefano Frattini, Salvatore Mastrangelo, Baldassarre Portolano, Emiliano Lasagna, Francesca M. Sarti, Simone Ceccobelli, Marco Milanese, Licia Colli, Elena Ciani, Dominga Soglia, Stefano Sartore, Roberta Ciampolini, Alessandra Crisà, Roberto Steri, Gennaro Catillo, Donata Marletta, Salvatore Bordonaro, Mariasilvia D'Andrea, Stefania Chessa, Bianca Castiglioni, Pasqualino Loi, Tiziana Sechi, Antonello Carta, Riccardo Negrini, Alessandra Stella, Alessio Valentini, Francesco Panella, Giulio Pagnacco, Fabio Pilla, Paolo Ajmone-Marsan, Paola Crepaldi, the Italian Goat Consortium
Italian Goat Consortium: a collaborative project to study the Italian caprine biodiversity 0075

Thursday June 15th - Room T2

Animal breeding and genetics - Dairy cattle genetics

- Chairmen: Paola Crepaldi, Giovanni Bittante
- 15.45-16.00 Nadia Guzzo, Cristina Sartori, Alessandro Ferragina, Giovanni Bittante, Roberto Mantovani
Genetic parameters of new FTIR milk phenotypes in Rendena breed 0076
- 16.00-16.15 Valentino Palombo, Marco Milanese, Stefano Capomaccio, Sandy Sgorlon, Mariasilvia D'Andrea
Pathways interaction analysis for identification of novel candidate genes 0077
- 16.15-16.30 Marco Iannaccone, Marina Papaiani, Flora Ianniello, Andrea Fulgione, Daniela Gallo, Gianfranco Cosenza, Rosanna Capparelli
Identification of a novel polymorphism in the 3'untranslated region of the interferon gamma gene as potential marker associate with bovine tuberculosis in water buffalo (Bubalus bubalis). 0079
- 16.30-16.45 Sara Pegolo, Christos Dadousis, Núria Mach, Yulixais Ramayo-Caldas, Marcello Mele, Stefano Schiavon, Giovanni Bittante, Alessio Cecchinato
SNP co-association and network analyses for bovine milk fatty acid profile 0080

Thursday June 15th - Room T2

Aquaculture, poultry and rabbit production - Husbandry, health and welfare

- Chairmen: Federico Sirri, Alessandro Dal Bosco
- 08.30-08.45 Cristina Zomeño, Marco Birolo, Francesco Gratta, Andrea Zuffellato, Gerolamo Xiccato, Angela Trocino
Influence of group housing, lactation system and floor type on performance and injuries in rabbit does 0081
- 08.45-09.00 Marta Brscic, Michele Gazzo, Barbara Contiero, Flaviana Gottardo
Main welfare problems in intensive broiler chicken production systems: is there any way to differentiate farms? 0082
- 09.00-09.15 Kunlayaphat Wuthijaree, Christian Lambertz, Matthias Gauly
Prevalence and burden of helminths in free-range laying hens in Northern Italy 0083
- 09.15-09.30 Sabine Mueller, Lorena Taddei, Ruth E. Messikommer, Michael Kreuzer, Isabelle D. M. Gangnat
Growth and slaughter performance of two dual-purpose poultry types compared with extensive broiler and layer types fattened for 67 and 84 days 0084

Thursday June 15th - Room H

Aquaculture, poultry and rabbit production - Husbandry and welfare

- Chairmen: Cecilia Mugnai, Massimiliano Petracci
- 11.00-11.15 Massimiliano Petracci, Giulia Baldi, Francesca Soglia, Maurizio Mazzoni, Federico Sirri, Luca Canonico, Elena Babini, Claudio Cavani
Effect of spaghetti-meat abnormality on quality and histological traits of broiler breast fillets O085
- 11.15-11.30 Francesca Soglia, Massimiliano Petracci, Claudio Cavani, Per Ertbjerg
Changes in structural properties and desmin degradation of broiler wooden breast fillets during refrigerated storage O086
- 11.30-11.45 Achille Schiavone, Alberto Brugiapaglia, Michele De Marco, Stefano Sartore, Dominga Soglia, Sandra Maione, Roberto Rasero, Paola Sacchi, Alessandra Dalmasso, Maria T. Bottero, Daniele Pattono, Martina Tarantola, Mario Giacobini, Luigi Bertolotti, Ivo Zoccarato, Laura Gasco, Cecilia Mugnai
Market chain of "Consortium for safeguard of Bianca e Bionda breeds" in Piedmont: 1. demography, housing and slaughtering conditions O087
- 11.45-12.00 Cecilia Mugnai, Achille Schiavone, Michele De Marco, Stefano Sartore, Dominga Soglia, Sandra Maione, Roberto Rasero, Paola Sacchi, Alessandra Dalmasso, Maria T. Bottero, Daniele Pattono, Martina Tarantola, Mario Giacobini, Luigi Bertolotti, Ivo Zoccarato, Laura Gasco, Alberto Brugiapaglia
Market chain of "Consortium for safeguard of Bianca e Bionda breeds" in Piedmont: 2. Meat quality O088
- 12.00-12.15 Andrea Amici, Riccardo Primi, Pier Paolo Danieli, Paolo Viola
*Captive morphological changes and growth parameters in Apennine rock partridges (*Alectoris graeca graeca*)* O089

Thursday June 15th - Room H

Aquaculture, poultry and rabbit production - Genetics

- Chairmen: Silvia Cerolini, Claudio Cavani
- 15.45-16.00 Marco Zampiga, Micol Bertocchi, Paolo Bosi, Paolo Trevisi, Adele Meluzzi, Federico Sirri
Comparison of productive performance and intestinal transcriptomic profile of two fast-growing chicken hybrids O090
- 16.00-16.15 Raffaella Rebucci, Carlotta Giromini, Davide Gottardo, Marcello Comi, Xian-Ren Jiang, Federica Cheli, Antonella Baldi, Valentino Bontempo
Influence of a synthetic emulsifier supplementation on lipid metabolism and apolipoprotein gene expression in liver of broiler chicks O091
- 16.15-16.30 Katia Parati, Silvia Cenadelli, Graziella Bongioni, Andrea Galli, Hervé Chavanne
Parentage assignment for genetic improvement of farmed sea bream by new single nucleotide polymorphisms and single tandem repeats panels O092
- 16.30-16.45 Genciana Terova, Simona Rimoldi, Chiara Ascione, Emi Gliozheni, Fabio Brambilla
*Intestinal microbiota characterization by next generation sequencing in rainbow trout (*Oncorhynchus mykiss*) fed animal by-product meals as an alternative to fishmeal protein sources* O093

Thursday June 15th - Room H

Animal husbandry and environmental impact - Husbandry systems and socio-economic analysis

- Chairmen: Maurizio Ramanzin, Giuseppe Pulina
- 14.00-14.15 Christian Lambertz, Matthias Gauly
Potential of pure- and crossbred Les Bleues broiler for meat production for small-scale farmers O094
- 14.15-14.30 Georgia Faccioni, Alberto Bernués Jal, Maurizio Ramanzin, Enrico Sturaro
Ecosystem services and mountain livestock farming: a socio economic valuation O095
- 14.30-14.45 Ioanna Pouloupoulou, Martin C. Nock, Silvia Steinmayer, Christian Lambertz, Matthias Gauly
How can working time analysis contribute to the production efficiency of mountain dairy farms? O096
- 14.45-15.00 Luisa A. Volpelli, Nicola Battistella, Francesco Gradari
Rural development and dialogue between the communities in Kosovo: an example of international cooperation O097
- 15.00-15.15 Francesca Petrera, Giovanni Tagliaferri, Andrea Galli, Fabio Abeni
Survey on dairy farmer use and interest for precision livestock farming tools O098
- 15.15-15.30 Maddalena Zucali, Alberto Tamburini, Giulia Gislon, Anna Sandrucci, Luciana Bava
Milk quality and milking practices in dairy goat farms in Lombardy O099

Thursday June 15th - Room T1

Animal welfare, health and behaviour - Pig health and behaviour

Chairmen:	Carolina Pugliese, Giovanna Martelli	
15.45-16.00	Silvia Parrini, Anna Acciaioli, Valentina Becciolini, Gustavo Campodoni, Oreste Franci <i>Study on the behaviour of Cinta Senese and Large White x Cinta Senese pigs reared at pasture</i>	O100
16.00-16.15	Giuseppe Carcò, Mirco Dalla Bona, Luca Carraro, Luigi Gallo, Maria A. Latorre, Manuel Fondevila, Stefano Schiavon <i>The daily feeding behaviour of growing pigs subjected to a feed restriction and to a reduction of dietary indispensable amino acid contents</i>	O101
16.15-16.30	Eleonora Nannoni, Luca Sardi, Marika Vitali, Giovanna Martelli <i>Growth traits, carcass and meat quality of heavy pigs receiving different enrichment tools</i>	O102
16.30-16.45	Luciana Rossi, Serena Reggi, Giovanni L. Alborali, Paolo Trevisi, Diana Luise, Angela Lombardi, Eugenio De Martini, Antonella Baldi <i>Seed-based vaccine immunogens administered in feed for the control of verocytotoxic E.coli infection in pig livestock</i>	O103

Thursday June 15th - Room T1

Nutrition and feeding - Feed evaluation

Chairmen:	Paolo Bani, Pier Paolo Danieli	
08.30-08.45	Afro Quarantelli, Marco Renzi, Marica Simoni, Alessandro M. Rosato, Federico Righi <i>Use of a new instrument for the in vitro evaluation of ruminants feeds through gas production: preliminary study</i>	O104
08.45-09.00	Martina Novacco, Matteo Ottoboni, Eleonora Fusi, Silvia Gastaldello, Valentina Furlan, Claudio Maran, Vittorio Dell'Orto, Federica Cheli <i>Electronic nose for the detection of mycotoxin contaminations in maize kernels</i>	O105
09.00-09.15	Monika Hejna, Antonella Baldi, Elisabetta Onelli, Davide Gottardo, Salvatore R. Pili, Vittorio Dell'Orto, Mauro Zaninelli, Luciana Rossi <i>Evaluation of heavy metals in intensive animal production systems</i>	O106
09.15-09.30	Silvia Parrini, Anna Acciaioli, Antonio Pezzati, Doria Benvenuti, Riccardo Bozzi <i>Application of FT- NIRS to estimate chemical components of freeze-dry herbages of Tuscany natural pasture</i>	O107
09.30-09.45	Marco Isidori, Fabrizio Rueca, Gabriele Mannucci, Massimo Tralbalza-Marinucci <i>Palatability of extruded dog diets supplemented with <i>Ascochyllum nodosum</i></i>	O108
09.45-10.00	Pier Paolo Danieli, Roberto Ruggeri, Riccardo Primi, Francesco Rossini, Emiliano Chiaretti, Catia Stamigna, Domenico Chiaretti, Vincenzo Natoli, Bruno Ronchi <i>A preliminary nutritional assessment of six genotypes of tef (<i>Eragrostis tef</i>) as potential forage sources</i>	O109
10.00-10.15	Marta Castrica, Carlotta Giromini, Raffaella Rebucci, Davide Gottardo, Valentino Bontempo, Antonella Baldi <i>Evaluation of polyphenolic content and antioxidant activity in agri-food wastes and by-products using chemical and physiological extraction</i>	O110
10.15-10.30	Andriyani Astuti, Cuk Tri Noviani, Ali Agus, Subur Priyono Sasmito Budhi, Ristianito Utomo, Evi Septiani <i>The effect of duration of storage and storage method on chemical composition and in vitro digestibility of complete calf pellet</i>	O183

Thursday June 15th - Room H

Animal food quality and safety - Milk and cheese quality

Chairmen:	Andrea Summer, Umberto Bernabucci	
08.30-08.45	Sudeb Saha, Giovanni Bittante, Stefano Schiavon, Giacomo Cesaro, Matteo Ganesella, Leonardo Armato, Enrico Fiore, Luigi Gallo <i>Effects of rumen fluid pH on rumen activity and quality and technological properties of milk</i>	O111
08.45-09.00	Massimo Todaro, Raimondo Gaglio, Maria L. Scatassa, Giovanna Sala, Francesca Mazza, Isabella Mancuso, Luca Settanni <i>Effect of the wooden vats on traditional cheese characteristics</i>	O112
09.00-09.15	Federica Salari, Iolanda Altomonte, Rosario Licitra, Mina Martini <i>Vitamin D content in donkey milk: preliminary results</i>	O113
09.15-09.30	Giorgia Stocco, Andrea Summer, Massimo Malacarne, Alessio Cecchinato, Giovanni Bittante <i>Factors affecting the detailed mineral profile of bovine milk from multi-breed herds</i>	O114

09.30-09.45	Claudio Cipolat-Gotet, Alessio Cecchinato, MaryAnne Drake, Bruno Martin, Giovanni Bittante <i>Influence of dairy farming system and animal factors on sensory descriptors of model cheeses from individual cows</i>	O115
09.45-10.00	Matteo Bergamaschi, Alessio Cecchinato, Flavia Gasperi, Franco Biasioli, Giovanni Bittante <i>Discrimination of dairy systems using the volatile fingerprinting of ripened cheese detected by a fast and non-invasive spectrometric technique (PTR-ToF-MS)</i>	O116
10.00-10.15	Alessandro Dalla Riva, Jasmina Burek, Daesoo Kim, Greg Thoma, Martino Cassandro, Massimo De Marchi <i>Life cycle assessment of Italian mozzarella cheese manufacturing</i>	O117

Thursday June 15th - Room AU

Animal food quality and safety - Meat quality

Chairmen: Andrea Serra, Paolo Polidori

12.00-12.15	Andrea Serra, Giuseppe Conte, Elisabetta Giannessi, Laura Casarosa, Carla Lenzi, Alessandro Baglini, Francesca Ciucci, Alice Cappucci, Marcello Mele <i>Cholesterol content and fatty acid composition of phospholipids and triglycerides are affected by the histological characteristics of semimembranosus and triceps brachii muscle fibre of Maremmana and Limousine bovine breeds</i>	O118
12.15-12.30	Roberto Tocci, Eleonora Pippi, Matteo Campostrini, Andrea Martini, Clara Sargentini <i>Consumer acceptance of ewe meat deriving from traditional and halal Tuscan market</i>	O119
12.30-12.45	Alice Cartoni Mancinelli, Simona Mattioli, Alessandro Dal Bosco, David Ranucci, Raffaella Branciarri, Cesare Castellini <i>Geese reared in organic vineyard: qualitative traits of breast meat</i>	O120
12.45-13.00	Simone Mancini, Giovanna Preziuso, Sara Minieri, Alessandro Dal Bosco, Valentina Roscini, Gisella Paci <i>Enhanced antioxidant capacity and reduced lipid oxidation in cooked rabbit burgers added with Zingiber officinale</i>	O121

Thursday June 15th - Room T1

Joint session (NF + FQ + APR) - Insects in animal nutrition

Chairmen: Marina Pasquini, Achille Schiavone

11.00-11.15	Maria F. Iulietto, Paola Sechi, Margherita Ceccarelli, Luca Grispoldi, Beniamino T. Cenci-Goga <i>Exploring consumer perception of entomophagy: data from an online survey</i>	O122
11.15-11.30	Andrea Dama, Marco Meneguz, Manuela Renna, Carola Lussiana, Achille Schiavone, Francesco Gai, Enrico Bressan, Laura Gasco <i>Innovative protein sources in animal diets: bioconversion of vegetable waste with black soldier fly (Hermetia illucens)</i>	O123
11.30-11.45	Simona Mattioli, Valentina Roscini, Giacomo Rossi, Gabriele Rondoni, Maurizio Servili, Alessandro Dal Bosco, Mariano Pauselli, Cesare Castellini, Eric Conti <i>Fatty acids profile of Tenebrio molitor larvae grown in different oil-enriched substrates</i>	O124
11.45-12.00	Andrea Osimani, Federica Cardinali, Lucia Aquilanti, Nino Loreto, Sara Ruschioni, Paola Riolo, Maria F. Trombetta, Marina Pasquini <i>The microbiota of fresh mealworms as revealed by PCR-DGGE</i>	O125
12.00-12.15	Sihem Dabbou, Marco Cullere, Michele De Marco, Ilaria Biasato, Elena Biasibetti, Maria T. Capucchio, Stefania Bergagna, Daniela Dezzutto, Francesco Gai, Laura Gasco, Achille Schiavone, Antonella Dalle Zotte <i>Effects of black soldier fly (Hermetia illucens L.) larvae fat inclusion on growth performance, blood traits, carcass characteristics morphometric and histological parameters of finisher broiler chickens</i>	O126
12.15-12.30	Marco Cullere, Michael Woods, Giulia Tasoniero, Stefaan De Smet, Eric Claeys, Simone Vincenzi, Elsje Pieterse, Louwrens C. Hoffman, Antonella Dalle Zotte <i>Apparent nutrient digestibility of broiler quail diets supplemented with black soldier fly larvae reared on two different substrates</i>	O127
12.30-12.45	Enrico Bressan, Francesco Gai, Sihem Dabbou, Achille Schiavone, Manuela Renna, Andrea Dama, Marco Meneguz, Giovanni Perona, Ivo Zoccarato, Laura Gasco <i>Hermetia illucens partially defatted meal in piglets nutrition: preliminary results</i>	O128

Thursday June 15th - Room T1

Joint session (NF + FQ) - Dietary strategies and quality of food

Chairmen:	Maria F. Trombetta, Giuseppe Luciano	
14.00-14.15	Giulia Rossi, Stefano Schiavon, Giovanni Bittante, Giovanna Lomolino, Alberto Simonetto, Claudio Cipolat-Gotet, Marta Cattin, Franco Tagliapietra <i>Garlic as supplement for lactating cows: consequences on milk and cheese products</i>	O129
14.15-14.30	Federica Castellani, Nadia Bignardi, Andrea Vitali, Elettra Marone, Fiorentina Palazzo, Lisa Grotta, Giuseppe Martino <i>Effect of cow feeding supplementation with olive pomace on the development of aromatic compounds in milk and dairy products</i>	O130
14.30-14.45	Mirco Corazzin, Alberto Romanzin, Edi Piasentier, Stefano Bovolenta <i>Milk fatty acid profile of Italian Simmental cows as affected by pasture type and supplement level</i>	O131
14.45-15.00	Lucia Bailoni, Nadia Guzzo, Gianfranco Gabai, Roberto Mantovani <i>Fatty acids profile in early and commercial milk of dairy cows supplemented with flaxseed during the dry period</i>	O132
15.00-15.15	Miriam Iacurto, Germana Capitani, Federico Vincenti, Umberto Bernabucci <i>Effects of glycerol esters (Butyrflex®) on productive performances and meat quality of Limousine young bulls</i>	O134
15.15-15.30	Bernardo Valenti, Valentina Roscini, Giuseppe Luciano, Umberto Rossetti, Alessandro Priolo, Marcella Avondo, Mariano Pauselli <i>Dietary pomegranate pomace to improve milk fatty acid composition in grazing ewes</i>	O135

Friday June 16th - Room T2

Animal breeding and genetics - Other species

Chairmen:	Roberta Ciampolini, Fabio Pilla	
11.30-11.45	Katarzyna Stadnicka, Janusz Debski, Rita Gil, Michalina Debowska, Marek Bednarczyk <i>Revealing avian oviduct cell proteome and secretome in vitro and its susceptibility to modification</i>	O136
11.45-12.00	Simone Ceccobelli, Luigi Orrù, Simone Trbalza, Piera Di Lorenzo, Antonella Lamontanara, Francesca M. Sarti, Alessandro Dal Bosco, Emiliano Lasagna <i>RNA-Seq analysis reveals different mechanisms in fatty acids biosynthesis in two chicken strains</i>	O137
12.00-12.15	Agata Szczerba, Takashi Kuwana, Aleksandra Dunislawska, Luiza Chojnacka-Puchta, Dorota Sawicka, Grazyna Plucienniczak, Marek Bednarczyk <i>Efficiency of in vitro and in vivo chicken primordial germ cells modification</i>	O138
12.15-12.30	Martina Zappaterra, Roger Ros-Freixedes, Martina Bordini, Joan Estany, Roberta Davoli <i>ELOVL6 gene and SNP effects on fatty acid composition of backfat in Italian Large White pigs</i>	O139
12.30-12.45	Samuele Bovo, Gianluca Mazzoni, Giuseppina Schiavo, Francesca Bertolini, Giuliano Galimberti, Antonia B. Samorè, Stefania Dall'Olio, Luca Fontanesi <i>Genome wide association studies for haematological and clinical-biochemical parameters in Italian Large White pigs</i>	O140
12.45-13.00	Elena Facchini, Rita Rizzi, Giulio Pagnacco, Giulietta Minozzi <i>Estimation of genetic parameters for honey production in the honeybee – Preliminary results</i>	O141
13.00-13.15	Andrea Talenti, Dayna L. Dreger, Stefano Frattini, Beatrice Coizet, Federica Danelli, Stefano P. Marelli, Amedeo Picchi, Jacopo Riva, Enrico Moretti, Raffaella Cocco, Daniele Bigi, Luigi Liotta, Michele Polli, Gustavo Gandini, Giulio Pagnacco, Elaine A. Ostrander, Paola Crepaldi <i>Genomic landscape and biodiversity of Italian dogs</i>	O142

Friday June 16th - Room H

Aquaculture, poultry and rabbit production - Aquaculture

Chairmen:	Alessandra Roncarati, Emilio Tibaldi	
09.00-09.15	Chiara Ceccotti, Simona Rimoldi, Chiara Ascione, Genciana Terova <i>Effects of butyrate and taurine supplementation in European sea bass diet based on soybean meal</i>	O143
09.15-09.30	Gloriana Cardinaletti, Paola Beraldo, Bianca M. Poli, Maria Messina, Emilio Tibaldi <i>Including marine microalgae in European seabass (Dicentrarchus labrax) diets: effects on digestive-absorptive functions</i>	O144

09.30-09.45	Luca Parma, Erika Bonvini, Luciana Mandrioli, Rubina Sirri, Cinzia Viroli, Ramon Fontanillas, Pier Paolo Gatta, Alessio Bonaldo <i>Feeding European sea bass (<i>Dicentrarchus labrax</i>) with increasing dietary fibre levels: impact on growth, blood biochemistry, gut histology and gut evacuation</i>	O145
09.45-10.00	Chiara Ascione, Emi Gliozheni, Chiara Ceccotti, Simona Rimoldi, Genciana Terova <i>Effects of dietary butyrate supplementation on histone modifications and the expression of inflammatory-related genes in European Sea bass (<i>Dicentrarchus labrax</i>)</i>	O146
10.00-10.15	Marina C.T. Meligrana, Gian Enrico Magi, Giuseppe Catone, Paolo Melotti, Alessandra Roncarati <i>Effects of different feeds on performances of rainbow trout (<i>Oncorhynchus mykiss</i>) broodstocks</i>	O147
10.15-10.30	Maria Messina, Francesca Tulli, Tiziana Bongiorno, Gloriana Cardinaletti <i>Effects of feed restriction and re-feeding on body condition, plasma metabolites and intestinal brush border enzymes activity in rainbow trout <i>Oncorhynchus mykiss</i></i>	O148
10.30-10.45	Francesca Tulli, Alberto Niccolai, Graziella Chini-Zittelli, Mario Tredici, Emilio Tibaldi <i>Apparent digestibility of different microalgae dried biomass in rainbow trout (<i>Oncorhynchus mykiss</i>)</i>	O149
10.45-11.00	Fausto Scoppetta, Roberta Galarini, Danilo Giusepponi, Marinella Capuccella <i>Antibiotic use in a rainbow trout fattening farm in Umbria: sustainability, residues and farm environmental impact</i>	O150

Friday June 16th - Room C

Animal husbandry and environmental impact - Husbandry systems and environmental impact

Chairmen:	Marcello Mele, David Meo Zilio	
11.30-11.45	Giacomo Pirlo, Susanna Lolli <i>Environmental impact of milk production in two samples of organic and conventional farms in Lombardy</i>	O151
11.45-12.00	Elisabetta Vida, Doriana E. A. Tedesco <i>Carbon footprint of integrated milk production and bioenergy systems</i>	O152
12.00-12.15	Luciana Bava, Giulia Gislon, Jacopo Bacenetti, Anna Sandrucci, Alberto Tamburini, Maddalena Zucali <i>Carbon footprint of PDO cheeses: Grana Padano and Gorgonzola</i>	O153
12.15-12.30	Alice Cappucci, Eleonora Bulleri, Giuseppe Conte, Francesca Ciucci, Arianna Buccioni, Andrea Serra, Laura Casarosa, Marcello Mele <i>In vitro study of the effects of different tannin extracts on rumen ammonia and methane production</i>	O154
12.30-12.45	Octavio A. Castelán Ortega, Luisa T. Molina, Gloria S. Hernández Pineda, Paulina E. Pedraza Beltrán, Mohammed Benaouda, Manuel González Ronquillo <i>Sustainable reduction of methane emissions from cattle's enteric fermentation</i>	O155
12.45-13.00	Gloria S. Hernández Pineda, Paulina E. Pedraza Beltrán, Mohammed Benaouda, José M. Palma García, Francisca Avilés Nova, Luisa T. Molina, Octavio A. Castelán Ortega <i>Effect of three tanniferous plants on methane emission by dairy cows</i>	O156
13.00-13.15	Monika Hejna, Nadia Stroppa, Alessandra Moscatelli, Diego De Nisi, Vittorio Dell'Orto, Salvatore R. Pilu, Antonella Baldi, Luciana Rossi <i>Phytoremediation as an innovative approach to control heavy metals output from livestock</i>	O157
13.15-13.30	Enrico Fabrizio, Andrea Costantino, Lorenzo Comba, Paolo Cornale, Luca M. Battaglini <i>EPAnHaus project: assessment of the energy use for climate control into animal houses</i>	O158

Friday June 16th - Room H

Animal welfare, health and behaviour - Small ruminant health and behaviour

Chairmen:	Gianni Battaccone, Gabriele Acuti	
11.30-11.45	Valentina Becciolini, Oreste Franci, Silvia Parrini, Anna Acciaioli <i>Feeding behaviour of Massese lamb reared indoors</i>	O159
11.45-12.00	Valeria Giovanetti, Mauro Decandia, Marco Acciaro, Mauro Mameli, Giovanni Molle, Andrea Cabiddu, Carla Manca, Rossella Cossu, Maria G. Serra, Salvatore P. G. Rassu, Corrado Dimauro <i>The effect of different time epoch settings on the classification of sheep behaviour using tri-axial accelerometry</i>	O160
12.00-12.15	Carla Manca, Cristian Porcu, Valeria Giovanetti, Gianpaolo Epifani, Marco Acciaro, Mauro Decandia, Marilia Gallus, Maria Dattena, Fiammetta Berlinguer, Giovanni Molle <i>Effect of a flushing treatment based on a glucogenic mixture on sheep body temperature as measured by thermal imaging</i>	O161

12.15-12.30	Silvia Crotti, Deborah Cruciani, Alberto Fazzari, Chiara F. Magistrali, Ludovica Curcio, Laura Madeo, Paola Papa, Pietro Antenucci, Cristina Pesca <i>Ovine foot-rot: a welfare and economic concern</i>	O162
12.30-12.45	Christian Lambertz, Ioanna Pouloupoulou, Matthias Gauly <i>Endoparasites in sheep and goats: prevalence and control strategies of mountain farms in Northern Italy?</i>	O163
12.45-13.00	Valentina Becciolini, Riccardo Bozzi, Maria P. Ponzetta <i>Growth and morphometry of farmed fallow deer (<i>Dama dama</i> L., 1758) from birth to six months of age</i>	O164

Friday June 16th - Room T1

Nutrition and feeding - Ruminant nutrition

Chairmen: Antonello Cannas, Luigi Calamari		
09.00-09.15	Elena Bonfante, Alberto Palmonari, Damiano Cavallini, Ludovica Mammi, Giorgia Canestrari, Mattia Fustini, Andrea Formigoni <i>Fecal sample time-points to estimate uNDF240 excretion in dairy cows</i>	O165
09.15-09.30	Marcella Sabino, Victor Adriano Okstoft Carmelo, Gianluca Mazzoni, Katia Cappelli, Stefano Capomaccio, Paolo Ajmone-Marsan, Andrea Verini-Supplizi, Massimo Trabalza-Marinucci, Haja N. Kadarmideen <i>Transcriptome analysis reveal sex-specific gene expression in lambs supplemented with essential oils</i>	O166
09.30-09.45	Marco Acciaro, Mauro Decandia, Valeria Giovanetti, Carla Manca, Gianni Battaccone, Salvatore P. G. Rassu, Giovanni Molle <i>Herbage intake of Sarda suckler cows characterized by two different calving periods in a mountain pasture</i>	O167
09.45-10.00	Ika Sumantri, Ali Agus, Tridjoko Wisnu Murti, Nuryono, Josef Boehm <i>Effects of bentonite inclusion in naturally aflatoxin contaminated diet on aflatoxin excretion and milk production of Indonesian Friesian Holstein</i>	O168
10.00-10.15	Mondina F. Lunesu, Mauro Decandia, Giovanni Molle, Marco Acciaro, Giampaolo Epifani, Ana H. D. Francesconi, Alberto S. Atzori, Giovanni C. Bomboi, Paola S. Nicolussi, Alberto Prandi, Antonello Cannas <i>Effects of partially replacing cereal grains with soyhulls on energy partitioning in ewes and goats in mid lactation</i>	O169
10.15-10.30	Damiano Cavallini, Mattia Fustini, Alberto Palmonari, Andrea Formigoni <i>Effect of the presence/absence of long hay and the administration of ad libitum or restricted TMR</i>	O170
10.30-10.45	Ramy Elgendy, Federica Castellani, Fiorentina Palazzo, Mery Giantin, Lisa Grotta, Mauro Dacasto, Giuseppe Martino <i>RNA sequencing-based transcriptome profiling of dairy cows fed with a polyphenol-rich grape pomace-supplemented diet</i>	O171

Friday June 16th - Room T2

Animal food quality and safety - Food safety

Chairmen: Luisa A. Volpelli, Vincenzo Chiofalo		
09.00-09.15	Margherita Ceccarelli, Luca Grispoldi, Paola Sechi, Maria F. Iulietto, Filippo Bertero, Serena Franceschini, Marco Revoltella, Beniamino T. Cenci-Goga <i>Prevalence of Escherichia coli from lymph nodes of bovine carcasses and detection of stx1, stx2 and eaeA genes with multiplex polymerase chain reaction</i>	O172
09.15-09.30	Karama Musafiri, Luca Grispoldi, Isidro García-Meniño, Jesús Blanco, Margherita Ceccarelli, Paola Sechi, Maria F. Iulietto, Rosalia Materazzi, Jorge Blanco, Beniamino T. Cenci-Goga <i>Characterization of verotoxin-producing Escherichia coli (STEC) in dairy cattle's faeces from Pretoria, South Africa</i>	O173
09.30-09.45	Paola Sechi, Maria F. Iulietto, Salvatore Barbera, Luca Grispoldi, Margherita Ceccarelli, Filippo Bertero, Serena Franceschini, Beniamino T. Cenci-Goga <i>Effect of lactic acid bacteria on the quality of beef hamburger under different storage conditions</i>	O174
09.45-10.00	Marco Tretola, Ambra Di Rosa, Matteo Ottoboni, Valentina Caprarulo, Carlotta Giromini, Francesco Leone, Vittorio Dell'Orto, Vincenzo Chiofalo, Luciano Pinotti <i>Former food products safety: stereomicroscopy and computer vision for evaluation of packaging remnants contamination</i>	O175

Friday June 16th - Room T1

Joint session (NF + FQ) - Dietary strategies and quality of food

Chairmen:	Miriam Iacurto, Giovanni Savoini	
11.30-11.45	Greta Farina, Elena Mariani, Mauro Vasconi, Raffaella Rebucci, Vittorio M. Moretti, Alessandro Agazzi, Giovanni Savoini, Guido Invernizzi <i>Camelina cake in laying hens diet to enrich eggs with omega-3 fatty acids</i>	O176
11.45-12.00	Claudio Forte, Raffaella Branciari, Massimo Trabalza-Marinucci, Gabriele Acuti, Dino Miraglia, David Ranucci, Rossana Roila, Roberta Ortenzi, Michela Codini, Andrea Valiani <i>Dietary administration of olive mill wastewater extract to improve broiler performance and oxidative status in chicken meat</i>	O177
12.00-12.15	Francesca Ciucci, Alice Cappucci, Giuseppe Conte, Laura Casarosa, Eleonora Bulleri, Marcello Mele, Andrea Serra <i>Olive pomace diet supplementation of Cinta Senese swine: effect on fatty acid composition and on lipid peroxidation of sausages.</i>	O178
12.15-12.30	Sara Chiapparini, Raffaella Rossi, Federica Maghin, Siria Tavaniello, Giuseppe Maiorano, Carlo Corino <i>Effect of long term supplementation with Lippia spp. extract on meat quality parameters in heavy pigs</i>	O179
12.30-12.45	Valentina Roscini, Giuseppe Luciano, Mariano Pauselli, Miriam Iacurto, Nastaran Samadirad, Silvia Ruggeri, Luciano Morbidini <i>Fatty acids and oxidative stability of meat from lambs fed with linseed and brewers spent grains</i>	O180
12.45-13.00	Luciano Morbidini, Valentina Roscini, Giuseppe Luciano, Mariano Pauselli <i>Consumer testing of meat from Apennine lambs fed diets containing linseed and brewers spent grain</i>	O181

ASPA 22nd Congress

Perugia, June 13th–16th, 2017

Italian Journal of Animal Science 2017; volume 16: supplement 1

Agenda for poster presentations

ANIMAL BREEDING AND GENETICS

Salvatore Mastrangelo, Maria T. Sardina, Marco Tolone, Rosalia Di Gerlando, Anna M. Sutura, Luca Fontanesi, Baldassare Portolano <i>Distribution of functional variants within runs of homozygosity in four Italian cattle breeds</i>	P001
Sven Menčik, Marija Špehar, Željko Mahnet, Dominik Knežević, Mario Ostović, Valentino Beretti, Paola Superchi, Alberto Sabbioni <i>Litter size traits in Black Slavonian and Nero di Parma pig breeds: effects of farrowing management and sow number per herd</i>	P002
Michela Ablondi, Attilio Rossoni, Chiara Nicoletti, Alberto Sabbioni <i>A methodology for the parentage diagnosis of the Italian Brown breed</i>	P003
Liliana Di Stasio, Antonino Duchi, Alfredo Pauciuolo <i>Biodiversity in tench populations of Sicily</i>	P004
Luiza Chojnacka-Puchta, Dorota Sawicka, Grazyna Plucienniczak, Marek Bednarczyk <i>Lipofection conditions of CHO-K1 cells with the use of two transposon systems</i>	P005
Gianfranco Cosenza, Barbara Auzino, Roberta Ciampolini, Daniela Gallo, Marco Iannaccone, Rosanna Capparelli, Alfredo Pauciuolo <i>Genetic variability detected at the (c-type) milk lysozyme encoding gene in donkey</i>	P006
Gianfranco Cosenza, Luigi Ramunno, Daniela Gallo, Marco Iannaccone, Rosanna Capparelli, Meichao Gu, Alfredo Pauciuolo <i>First marker discovery in ACACA gene and association study with milk yield in Mediterranean river buffalo</i>	P007
Marco Iannaccone, Marina Papaiani, Andrea Fulgione, Flora Ianniello, Daniela Gallo, Gianfranco Cosenza, Rosanna Capparelli <i>The interleukin-10 polymorphism g.3936 G>A is uncoupled with bovine tuberculosis susceptibility in water buffalo (Bubalus bubalis)</i>	P008
Sara Albarella, Nadia Musco, Emanuele D'Anza, Deborah Frate, Vincenzo Peretti, Francesca Ciotola <i>Effects of diets rich in β-glucans on chromosome stability of peripheral blood lymphocytes of pigs</i>	P009
Meichao Gu, Gianfranco Cosenza, Yong Guo, Liliana Di Stasio, Alfredo Pauciuolo <i>Complex transcriptomic pattern identified at river buffalo DGAT1</i>	P010
Alessandra Crisà, David Meo Zilio, Roberto Steri, Gennaro Catillo, Luca Buttazzoni <i>Establishment of a crossbreed Simmental x Holstein experimental herd and first assessment of heterosis effects on technical and biological parameters</i>	P011
Mario Barbato, Marcello Del Corvo, Tad S. Sonstegard, Paolo Ajmone-Marsan <i>Signals of adaptive introgression between European taurine and indicine cattle revealed by local ancestry inference</i>	P012
Marco Tolone, Maria T. Sardina, Rosalia Di Gerlando, Salvatore Mastrangelo, Anna M. Sutura, Baldassare Portolano <i>A pipeline for variants discovery using next-generation DNA sequencing data</i>	P013
Daniela Finizio, Antonino Di Grigoli, Carmelisa Valluzzi, Paola Di Gregorio, Adriana Di Trana, Andrea Rando, Giuseppe Maniaci, Marco Alabiso, Adriana Bonanno <i>Effect of CSN1S1 G allele on some characteristics of milk produced by Cinisara cows</i>	P014
Mayra M. Gómez Carpio, Vincenzo Landi, Amparo Martínez Martínez, José Manuel León Jurado, Maria Antonia Revidatti, José Luis Vega-Pla, Juan Vicente Delgado Bermejo, BioHorse Consortium <i>The genetic structure of Hispano-Arabe horse in the Spanish context</i>	P015
Vincenzo Landi, Mayra M. Gómez Carpio, Amparo Martínez Martínez, Jordi Jordana, Anna Castelló, Javier Fernández, Juan Vicente Delgado Bermejo, Marcel Amills <i>Capramur project: Genomic analysis of the genetic determination of milk yield, composition and body condition and viability in Murciano-Granadina goats</i>	P016

Javier Forero, Mayra M. Gómez Carpio, Vincenzo Landi, Amparo Martínez Martínez, Juan Vicente Delgado Bermejo <i>Preliminary results of the project "Backcross recovery and conservation of the Iberian pig variety Manchado de Jabugo"</i>	P017
Valerio J. Utzeri, Orsolya Ivett Hoffmann, Anisa Ribani, Giuseppina Schiavo, Luca Fontanesi <i>A genomic landscape of mitochondrial DNA insertions in the rabbit nuclear genome</i>	P018
Samuele Bovo, Gianluca Mazzoni, Flaminia Fanelli, Marco Mezzullo, Giuseppina Schiavo, Giuliano Galimberti, Francesca Bertolini, Stefania Dall'Olio, Uberto Pagotto, Luca Fontanesi <i>Comparative analysis of metabolomics profiles of plasma and serum in pigs</i>	P019
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Foreword

The 22nd Congress of the Animal Science and Production Association (ASPA) is hosted in Perugia, a wonderful university city with a long tradition in agriculture, veterinary and animal sciences. The Congress is the result of the precious collaboration among the Department of Agricultural, Food and Environmental Sciences and the Department of the Veterinary Medicine of the University of Perugia as well as other Italian scientific Institutions such as the Università Politecnica delle Marche (Ancona), University of Camerino, Università degli Studi della Tuscia (Viterbo) and the Council for Agricultural Research and Economics – CREA ZA (Monterotondo, Roma).

This edition of the ASPA Congress has received a total of 333 scientific contributions: 180 oral presentations and 153 posters have been selected. The Congress sessions with their relative number of papers are listed as follows: Animal breeding and genetics (97), Nutrition and feeding (70), Animal food quality and safety (53), Animal welfare, health and behaviour (43), Aquaculture, Poultry and Rabbit production (40), and Animal husbandry and environmental effect (30).

I would like to point out that 18 main lectures will be presented across all the scientific sessions.

I wish to thank first of all the Organizing Committee, Dr Emiliano Lasagna (Chairperson), Dr Gabriele Acuti (Secretary), Dr Stefano Capomaccio, Professor Alessandro Dal Bosco, Dr Miriam Iacurto (Secretary), Professor Paolo Polidori, Professor Maria Federica Trombetta. I also wish to thank all the members of the Scientific Committee, Professor Cesare Castellini (Chairperson), Professor Umberto Bernabucci, Dr Luca Buttazzoni, Dr Katia Cappelli, Dr Simone Ceccobelli, Dr Andrea Giontella,

Professor Nicola Lacetera, Professor Massimo Trabalza-Marinucci (Secretary), Professor Luciano Morbidini, Professor Marina Pasquini, Professor Mariano Pauselli, Professor Alessandra Roncarati, Professor Francesca Maria Sarti, Professor Maurizio Silvestrelli, Dr Carmela Tripaldi.

Special thanks to Professor Oliviero Olivieri, President of the Congress, for the contribution of the University of Perugia in the organisation of the Congress. Additional thanks to the Technical organizing Secretariat, MV Congressi SpA, in particular to Mrs Roberta Pasquini. Indeed, I would like to congratulate and to thank all those persons who have organised the meeting and have collaborated in reviewing the summaries and thank them for what they have done for ASPA and for the Italian Animal Science. A special thank goes to Professor Rosanna Scipioni, Editor-in-Chief of the Italian Journal of Animal Science, for having contributed to the edition of these proceedings.

Finally, I acknowledge the University of Perugia and the institutional agencies, in particular the Ministry of Agricultural, Food and Forestry Policies (MIPAAF), the Region Umbria, the Municipality of Perugia and the main sponsors.

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orange) were assessed in both fresh and frozen semen. Semen quality parameters recorded in fresh semen show a good quality soon after collection. After thawing, no significant effect of the equilibration time (10 *vs* 30 min) was observed for all the sperm quality parameters assessed. However, slightly higher values were observed with 10 min equilibration compared to 30 min: sperm motility = 33.5% *vs* 31.8%, SMD = 40.7% *vs* 38.7%, viability = 36.3% *vs* 35.9%. These results lead us to assume that the equilibration time of 10 minutes is sufficient to allow dehydration of sperm cells. The development of an effective freezing protocol is required to create a sperm cryobank to support the *ex situ in vitro* conservation of the original population of Mediterranean brown trout in the Biferno river.

P074

Comparison of two basic extenders on the *in vitro* post-thaw quality of rabbit semen

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Semen cryopreservation is a strategic tool to secure genetic diversity. Research efforts have focused on developing freezing protocols to improve the cryopreservation of rabbit semen by the reduction of sperm cryoinjuries. Since a lack of knowledge about the use of basic extenders, we tested the effect of a commercial extender (Cortalap®) compared to Tris-citrate-glucose (TCG) on the *in vitro* post-thaw quality of rabbit semen. Six pools of semen (4 ejaculates/pool) were collected from 40 adult rabbit bucks of Bianca Italiana breed from the Italian Rabbit Breeders Association (ANCI-AIA, Volturara Appula (FG), Italy), an aliquot from each pool was used for the analysis of fresh semen, the remaining part of pooled semen was cooled at 5 °C for 90 minutes. Each pool was split into two equal aliquots, and each of them were diluted to a ratio 1:1 (v:v) with a freezing extender composed of TCG or Cortalap® both containing 16% of dimethylsulfoxide and 0.1 M sucrose. The diluted semen was packaged into 0.25 mL plastic straws, equilibrated at 5 °C for 45 min. Semen was frozen at heights of 5 cm above liquid nitrogen for 10 min, then straws were transferred into liquid nitrogen for storage at -196 °C. Sperm samples were thawed at 50 °C for 10 seconds. Sperm motility (phase contrast microscopy), viability (SyBr-

PI), acrosome integrity (FITC-PSA) and DNA intactness (Acridine orange) were examined on fresh and post-thawed sperm. Sperm variables among the fresh and cryopreserved semen were compared by ANOVA, followed by Duncan's comparison test, the level of significance was set at $p \leq .05$. Results showed that the cryopreservation process impaired the post-thaw quality of rabbit semen compared to fresh semen ($p < .05$). However, the quality of frozen-thawed semen was affected by the freezing extender. In fact, the post-thaw semen quality was significantly improved in semen samples diluted in the Cortalap® extender compared with TCG for total and progressive motility (43.4 ± 1.4 *vs* 36.8 ± 1.5 and 36.5 ± 1.1 *vs* 30.2 ± 1.9), sperm viability (52.5 ± 1.8 *vs* 44.6 ± 2.1) and acrosome integrity (37.5 ± 0.6 *vs* 30.9 ± 1.2). The present results show that the Cortalap® extender provided better *in vitro* condition to preserve sperm integrity (membrane and acrosome) and function (motility) during the cryopreservation process. However, further studies are needed to confirm these results *in vivo*.

P075

Advantages and disadvantages of mechanical separation process applied to fishery industry

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Fish represent an important source of nutrients, such as essential fatty acids and minerals, so numerous technological strategies have been adopted for exploiting the huge amount of no directly marketable specimens without altering fish nutritional quality. Recently, mechanical separation process (MSM) have been demonstrated to be successfully applied to fish by-products for increasing processing yield. The present study aims to compare the impact of mechanical separation with manual mincing applied on farmed European sea bass, gilthead sea bream, rainbow trout, and wild Atlantic horse mackerel by evaluating technological yield and nutritional quality of obtained meat. Eighteen fish for each species were subdivided to the two different treatments. MS process yield was found higher than the manual one when applied to sea bass, sea bream, and trout (58, 63%, 70% respectively against 39, 40, and 53%). Horse mackerel instead was better separated by manual operation. MS seemed to slightly (around 2%) but significantly increase water content and decrease minerals in all the species except sea bass. Interestingly, even Ca tended to decrease confirming the efficiency of the mechanical separation process in muscle separation from the skeletal part of the fish, which is the main source of Ca. Hopefully, lipid fraction of the considered species remained

unaltered. Few differences in C18:2n6 (1.18 *vs* 1.00 g/100 g total fatty acids), and C22:1n11 (0.27 *vs* 0.20 g/100 g total fatty acids) were found for horse mackerel minced and MSM meat. Globally, seawater species confirmed to be richer in PUFA n3 than freshwater species being around 55, 33, and 38 g/100 g total fatty acid in mackerel, sea bass and sea bream, whereas 21 g/100 g total fatty acids were found in trout. Processing may promote oxidative damages as confirmed by TBARS content of MSM samples, however sea bass and sea bream were found the most susceptible by doubling their TBARS content compared to minced samples. Trout and horse mackerel were mostly unaffected even if TBARS values of the latter exceeded 6 mg/100g muscle. maybe because of both intrinsic lipid susceptibility and killing/handling procedure after fishing. In conclusion, mechanically separation process can be adopted in order to exploit unmarketable fish, however not all the species shown to be equally prone. Globally, sea bass and trout were the most suitable from a technological and qualitative perspectives.

Acknowledgements

This work was financially supported by the Regione Toscana, that funded the project called "Realization of a product based on processed fish for the enhancement of Tuscany aquaculture (TRA.AC.TO.)".

P076

On-growing turbot (*Scophthalmus maximus*, Linnaeus 1758) in a land-based aquafarm in Southern Italy: preliminary results

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Turbot (*S. maximus*) is considered a possible candidate to increase the number of farmed fish species and contribute to diversify Italian aquaculture production. Rearing techniques, developed in France and Spain, highlighted good growth performances for this species, while breeding attempts in Italy, carried out in the past, failed due to the high water temperatures reached in the tanks during the fattening cycle in the summer. The present study aims to evaluate the feasibility of turbot rearing in a land-based aquafarm located in the Campania region, South of Italy. 7000 turbot juveniles (initial weight 7.5 g) were purchased from a specialized French

hatchery (France Turbot) and placed in a rectangular concrete raceway (27x7 m) at the Soc. Coop. "Acquamarina" located in Villa Literno (CE, Italy) in December 2015. The tank was adapted to the species and fitted with a shading net. Fish were fed commercial diets (Biomar, Spain). Dissolved oxygen (>8 mg/l) and temperature were monitored daily, while pH (7.3 ± 0.1), salinity (37‰) and TAN (<5.5 mg/l) were determined monthly. The farm sources its water from wells, with a constant temperature of 18 °C, with slight seasonal fluctuations (16 °C-20 °C) in tank, still contained within the ranges tolerated by the species thanks to a proper management of water renewal and to the shading. In addition, the low pH and temperature values allowed un-ionized ammonia to be kept under control and at acceptable levels for the species (0.04 mg/l)."

Monthly, a sample of fish, representative of the population, was weighed to determine the average weight of the subjects, the FCR and the SGR. At the beginning and during the trial, a sample of subjects was sacrificed to evaluate the whole body and the fatty acid profile of the fillets. After 445 days of rearing, fish reached an average weight of 770 g, with a FCR of 1.15 and a SGR of 1.04. These performances allow us to hypothesize the achievement of the minimum commercial size (1 kg in Italy) within 18 months of rearing. These preliminary results suggest that in particular environmental conditions and adopting appropriate farming solutions, on-growing turbot in Italy is feasible. This could act as a catalyst to revitalize a sector, such as fish farming, which has been in difficulty in recent years especially in the Campania region.

Acknowledgements

The authors would like to thank Luciano Cavaliere, owner of the farm Acquamarina and Dr. Agostino Pascale for the technical support.

P077

Sensory comparison of mussels (*Mytilus galloprovincialis*) farmed in the Adriatic and Sardinian Sea

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Italy, with Spain and France, is a top producer of molluscan shellfish in the EU; the national production of bivalve mollusc (111,000 tons) accounts for 63% of the Italian aquaculture