

MONDAY 8 APRIL

**SRUC, PETER WILSON BUILDING, KINGS BUILDINGS, WEST MAINS ROAD,
EDINBURGH, EH9 3JG**

EARLY CAREER DAY

LECTURE ROOMS G & H

11:45 Early lunch
12:30 Welcome

WHAT BSAS OFFERS EARLY CAREER RESEARCHERS

12:40 Job Top Trumps warm up game

DETERMINE WHAT ASPECTS ARE IMPORTANT FOR YOU WHEN LOOKING AT JOBS

12:55

Speakers from a variety of backgrounds will be sharing their experiences and advice.

- 1) Jos Houdijk
Head of Monogastric Science Research Centre and Professor of Animal Nutrition and Health at SRUC
- 2) Nia Ball
Livestock Scientific Advisor for the Scottish Government
- 3) Laura Tennant
Ruminant Technical Advisor at Trouw Nutrition GB
- 4) Charlotte Kay
Associate Trainer at Quest Scotland & Curriculum Development Fellow at Perth College UHI
- 5) John Hickey
Chair of Animal Breeding & Career Track Fellow at The Roslin Institute

14:40 Q&A session with all speakers
15:00 Coffee break

15:20 Group activity

In groups participants, with help from speakers, are asked to come up with a feasible research proposal around 'making livestock farming more sustainable'. This will then be presented as a proposal to attendees and speakers.

17:20 – 17:30 – Sum up and close

EVENING SOCIAL - THE THREE SISTERS, 139 COWGATE, EDINBURGH EH1 1JS

19:00 arrive
19:30 Quiz with Buffet
21:30 Ceilidh - till late

TUESDAY 9 APRIL

LOMOND

75TH ANNIVERSARY CELEBRATION : ANIMAL SCIENCE FIT FOR THE FUTURE

11:00-12:30

Chair: Prof Helen Miller

11:00 S Voas, Chief Veterinary Officer Scotland

11:20 1 Yesterday's science; an unsafe foundation for future discovery?
C T Whittlemore, BSAS

11:40 What our young scientists want our society to be
K McDermott, University of Leeds

12:00 Discussion

TUESDAY 9 APRIL

TINTO

PRESIDENTS SESSION - ANIMAL SCIENCE FIT FOR THE FUTURE

13:30-15:00

Chair: Prof Helen Miller

13:30 2 The role of animals in a circular food system.
H H E van Zanten, Wageningen University

14:00 3 Application of computer vision and machine learning to assess physiological responses of consumers and livestock
F R Dunshea, The University of Melbourne

14:30 4 Novel approaches to investigating embryo-maternal interactions in cattle: Understanding life, the uterus and everything
N Forde, University of Leeds

TUESDAY 9 APRIL

MOORFOOT

TECHNOLOGY AND FUNDING SESSION

13:30-14:55

Chair: Dr David Telford

13:30 Introduction to the session
David Telford, Knowledge Transfer Network

13:35 The innovation funding landscape and opportunities for the livestock industry
Calum Murray, Innovate UK, UKRI

13:50 Delivering innovations for farmers and supply chains
Mark Young, Centre for Innovation Excellence in Livestock (CIEL)

14:05 Future technology that could benefit the livestock industry
Dave Ross, The Agricultural Engineering Precision Innovation (Agri-EPI) Centre

14:20 – 14:55: Questions and panel discussion

TUESDAY 9 APRIL

KILSYTH

MEAT AND CARCASS QUALITY

13:30-14:25

Chair: Prof Nigel Scollan (TBC)

- 13:30 5 The potential of near infra-red spectroscopy (NIRS) to authenticate the dietary history of beef
A P Moloney, M McGee, E G O'Riordan, F J Monahan, L Moran
- 13:40 6 Regional effects on consumer acceptability of grilled beef
Fui Shien Chong, T Hagan, L Farmer, M O'Sullivan, J Kerry, L Methven, A P Moloney, A W Gordon
- 13:50 7 Can the fatty acid profile of muscle discriminate between steers finished at pasture or indoors on *ad libitum* concentrates
A P Moloney, M G Keane, F J Monahan, T F O'Callaghan
- 14:00 8 Estimation of fatty acid profiles in meat using rumen microbiome information from beef cattle
R Roehé, M Martínez-Álvarez, M D Auffret, C-A Duthie, R D Stewart, M Watson, R J Dewhurst
- 14:05 9 Evaluation of the structural and rheological properties of wheat and maize ingredients that underpin differences in growth performance and meat quality in broilers
L L Brimble, Y Akter, M Kasprzak, C Hutchison, C O'Shea
- 14:10 10 Novel methods of extending shelf life of minced beef
J Tollerton, D Farrell, L Farmer
- 14:15 11 Using pre-weaning lamb liveweight as a predictor of carcass quality
A G Jones, T Takahashi, H Fleming, B A Griffith, P Harris, M R F Lee
- 14:20 12 Herd incidence of *Fascioliasis hepatica* and its impact on slaughter traits in beef cattle
T Pritchard, M P Coffey, E Wall

TUESDAY 9 APRIL

HARRIS

SHEEP, NUTRITION AND PRODUCTION SYSTEMS

13:30-14:50

Chair: Dr Ciaran Lynch

- 13:30 13 A further evaluation of the effects of supplementing ewes with Co, including method of administration on ewe and lamb performance
D V Hession, N R Kendall, J P Hanrahan, T W J Keady
- 13:40 14 Determination of the bioavailability of nanoparticle copper oxide using a copper depletion, repletion technique in growing lambs
A Williams, A M Mackenzie, J J Bennison, L A Sinclair
- 13:50 15 Is the maintenance energy requirement for current sheep flocks higher than recommended?
C T Yang, C M Wang, Y G Zhao, A Aubry, T Yan
- 14:00 16 Sheep grazing system performance under continuous stocking or cell grazing management during an unusual dry grazing season in Devon
M J Rivero, M Blackwell, H Flemming, J Hunt, S Cook, A Mead, M Heard, R Pywell, B Woodcock, J Storkey
- 14:10 17 Characterizing individual differences in goats responses to a nutritional challenge using milk metabolites
A Ben Abdelkrim, P Schmidely, J Tessier, A Eymard, T Larsen, N C Friggens
- 14:20 18 Rumen parameters of West African dwarf goats offered concentrate supplement containing varying levels of dried *Leucaena* leaves
O O Adelusi, A O Oni, O S Odeiran, O M Odebowale, C F I Onwuka

- 14:25 19 Effects of dietary and animal factors on maintenance energy requirements of sheep
C M Wang, C T Yang, Y G Zhao, A Aubry, T Yan
- 14:30 20 Absorption and excretion of phosphorus in sheep diets: Towards a sustainable diet
N A Sanchez Guerra, L E Robles Jimenez, M I Miranda Castañon, O Castelan Ortega,
M Gonzalez Ronquillo
- 14:35 21 Variation in individual feed intake profiles recorded in group-housed lambs
H M Wishart, N R Lambe
- 14:40 22 Ireland's national sheep flock: breed composition and source of replacements
T W J Keady, J P Hanrahan, D V Hession, B Moran, N R Kendall, K Hanrahan
- 14:45 23 Effect of inclusion of oregano oil in ewe concentrates on ewe and lamb performance
R G Wilkinson, C Gauld, N Naylor, A M Mackenzie, D Wilde

TUESDAY 9 APRIL

CARRICK

INDUSTRY PRIZE PRESENTATIONS

13:30-14:30

Chair: Dr John Dunn/Dr Helen Warren



- 13:40 212 Behavioural response to temperature and wind in dairy calves
D J Bell, A I Macrae, A Jennings, C S Mason, M A Mitchell, M J H;
- 13:50 136 Effect of environmental enrichment on feed intake and behaviour of dairy calves following milk consumption
M Hemingway-Wood O'Dell, J K Margerison, M Sorely, M Chaowarit
- 14:00 118 Optimising gene flow between parallel year groups to improve genomic prediction in Atlantic salmon breeding programmes
P K Kokkinias, P N Navarro, R H Houston, A H Hamilton, C H Haley, R P W Pong-Wong
- 14:10 75 Dietary starch level alters rumen pH and copper metabolism in lactating Holstein-Friesian dairy cows receiving added dietary sulphur and molybdenum
J H McCaughern, A M Mackenzie, L A Sinclair
- 14:20 166 Performance of a cow-side, progesterone based, lateral flow test for pregnancy diagnosis under field conditions in smallholder dairy systems
B Muasa, M Chagunda, C Ashworth, R J Dewhurst, A Peters

TUESDAY 9 APRIL

CROMDALE

DIGITAL POSTERS 1

15:05-15:23

Chair: Dr Jon Day

- 15:05 24 Effect of increasing digestible phosphorus around farrowing on performance of sow and litter
A Huting, X Benthem de Grave, F Molist
- 15:08 25 Post-weaning performance of pigs fed dry feed vs. wet feed
R Muns
- 15:11 26 Do outdoor reared piglets benefit from a supplemental iron injection?
S Laird, H M Miller
- 15:14 27 The effect of group size on piglet performance post-weaning – what constitutes a representative group for research purposes?
K McDermott, H M Miller
- 15:17 28 The effect of a combination of free and buffered acids on production performance and pathogenic microbial shedding in weaned piglets, with and without pharmaceutical zinc oxide supplementation.
W Udall, S Mansbridge

- 15:20 29 The effects of auditory enrichment on the behaviour of Holstein Friesian dairy cows
K Crouch, B Evans, V T Montrose

TUESDAY 9 APRIL TINTO

BEEF CATTLE - FEED EFFICIENCY

15:30-17:20

Chair: Prof David Kenny

- 15:30 30 Feed efficiency in temperate grass-based beef production systems: A review
M McGee, Teagasc
- 16:00 31 Cattle feed efficiency - Value to the beef industry and its perception and uptake
K Matthews, AHDB
- 16:30 32 Comparing the nitrogen utilisation efficiency of growing cattle before and after 2003
G Finney, E Magowan, F O Lively, S J Morrison, T Yan
- 16:40 33 Proteomic analysis of *M. longissimus dorsi* from cattle during dietary restriction and subsequent compensatory growth using label free mass spectrometry quantification
Y Mullins, K Keogh, D A Kenny, A K Kelly, S M Waters
- 16:50 34 Pasture productivity and live weight performance of dairy x beef steers managed under contrasting grazing management systems during an atypical drought year
S A Morgan, M J Rivero, M R F Lee
- 17:00 35 Weaned calf output in relation to suckler cow liveweight in purebred Charolais beef cows
J J Hyslop
- 17:05 36 The effect of alternative upland pasture management on cattle production
N G Williams, A P Williams, J M Gibbons, D R Chadwick
- 17:10 37 Effect of production system on the health, performance and carcass characteristics of Holstein bulls
N Rutherford, F O Lively, G Arnott
- 17:15 38 A comparison of ability to meet market specification and profit margin achieved by producer when continental steers are slaughtered at 22, 24 or 28 months of age
F M Titterton, A W Gordon, S J Morrison

TUESDAY 9 APRIL MOORFOOT

INDUSTRY SHOWCASE

15:30-17:00

Chair: Dr Jon Day and Prof Richard Dewhurst (TBC)

- 15:30 Alltech
- 15:35 Icerobotics
- 15:40 Neogen
- 15:45 CABI
- 15:50 Cambridge University Press
- 15:55 Burleigh Dodds Science Publishing
- 16:00 SEFARI Livestock Panel Debate: Can we have our meat and eat it?

TUESDAY 9 APRIL

KILYSTH

PIGS

15:30-17:10

Chair: Dr Stephen Mansbridge

- 15:30 39 Lowering dietary crude protein in pig diets: ammonia, odour and slurry production from finishing pigs
U M McCormack, A Reid, V E Beattie, S Smyth, K J McCracken, R Bradford, F J Gordon, E Magowan, M E E Ball
- 15:40 40 Sensitivity of growth performance and crude protein conversion ratio of finisher pigs to dietary protein and essential amino acids
J G M Houdijk, R Roehe
- 15:50 41 Microbiological survey of liquid feed for finisher pigs on eight commercial pig farms
F M O' Meara, G E Gardiner, J V O' Doherty, P G Lawlor
- 16:00 42 Nutritional evaluation of *Calopogonium mucunoides* as feed resource for grower pigs
A H Akinmutimi, O H Uzegbu
- 16:10 43 The effect of oil type and energy regimen during lactation on litter performance to weaning
A Lavery, R Muns, P G Lawlor, H M Miller, E Magowan
- 16:20 44 Supplementation of lactating sow diets with lysolecithin improves litter growth and uniformity across seven studies
A L Wealleans, M di Benedetto
- 16:30 45 Growth response of low and average birthweight pigs to sow lactation feed intake
S Hawe, E Magowan, N D Scollan, A W Gordon
- 16:40 46 Investigating the association between temperature and prevalence of respiratory conditions detected during meat inspection in pigs in England and Wales
H J Lee, M Friel, S Hajat, R P Smith, S Williamson, C Perkins, P Edwards, L M Collins
- 16:50 47 The effect of oil type and energy regimen during lactation on the fatty acid content of piglet blood plasma and adipose tissue at weaning
A Lavery, R Muns, H M Miller, P G Lawlor, E Magowan
- 16:55 48 The effect of keeping gilts on an indoor or outdoor production system, during gestation and lactation, on litter and piglet performance to weaning
H Davis, H M Miller
- 17:00 49 The impact of an Oregano based Eubiotic on the health and performance of sows and their progeny
M Le Bon, C Harlow, H N Hall
- 17:05 50 Developmental programming of porcine muscle progenitor cell fate by foetal growth restriction
Y Cortes, C Stenhouse, C Ashworth, C Esteves, X Donadeu

TUESDAY 9 APRIL

HARRIS

HEALTH AND DISEASE

15:30-17:00

Chair: Dr Abdul Chaudhry

- 15:30 51 Whole genome sequencing gives n-ewe insights into the role of *Dichelobacter nodosus* in the pathogenesis of ovine footrot
Z N Willis, D M Aanensen, J Parkhill, S Frost, M Ganter, K Giebel, M Gilhuus, R Grogono-Thomas, K J Purdy, L E Green
- 15:40 52 Variation in lamb performance under a targeted selective anthelmintic treatment regime is not underpinned by between-individual differences
A Hayward, T McNeilly, D McBean, A Greer, F Kenyon

- 15:50 53 Effect of sub-optimal mobility on production performance of pasture-based dairy cows
A O'Connor, E A M Bokkers, I J M de Boer, H Hogeveen, R Sayers, N Byrne, E Ruelle, L Shalloo
- 16:00 54 A survey of management practices prior to and at lambing which may influence lamb mortality on Irish sheep farms
D Shiels, C M Dwyer, K Hanrahan, J F Mee, S Fagan, T W J Keady
- 16:10 55 Udder health indicators in low-input dairy goat herds
A Argyriadou, R Giannakou, A I Gelasakis, G Arsenos
- 16:20 56 The effect of the mycotoxin deoxynivalenol on the function and metabolism of bovine kidney epithelial cells *in vitro*
J Bailey, J Breton, G Panic, T Cogan, M Bailey, J Swann, M R F Lee
- 16:30 57 Effects of mycotoxins and binder/deactivating agent on ruminal microbial digestion and metabolism *in vitro*
M R F Lee, T Cogan, J Bailey, V Morris, G Panic, M Bailey, J M Wilkinson, J R Swann
- 16:40 58 Identification of *Staphylococcal* species from clinical isolated from hard to treat cases of bovine mastitis using conventional diagnostic techniques and Matrix Assisted Laser Desorption Ionisation - Time of Flight Mass Spectrometry (MALDI-TOF)
J Quinn, L Dufty, S Ghorashi, J Connolly
- 16:50 59 Nickel nanoparticles induced testicular toxicity in male Sprague Dawley rats assessed by histopathology
F Jabeen, M Iftikhar, A S Chaudhry

TUESDAY 9 APRIL

CARRICK

PRESIDENT PRIZE PRESENTATIONS

15:30-16:40

Chair: Prof Helen Miller

- 15:40 33 Proteomic analysis of *M. longissimus dorsi* from cattle during dietary restriction and subsequent compensatory growth using label free mass spectrometry quantification
Y Mullins, K Keogh, D A Kenny, A K Kelly, S M Waters
- 15:50 100 Genetic parameters of faecal egg and oocyst counts, dag scores, live weight and immunological traits in Scottish Blackface sheep
A Pacheco, T McNeilly, G Banos, J Conington
- 16:00 101 Bayesian estimation of genetic parameters for piglet survival and birth weight at piglet and sow level using a population kept under outdoor conditions
T Q Nguyen, R J Dewhurst, P W Knap, S A Edwards, G Simm, R Roehe
- 16:10 180 Investigating the impact of rumen microbial genes on feed conversion efficiency, growth rate and feed intake in beef cattle
J Lima, M D Auffret, R D Stewart, R J Dewhurst, C-A Duthie, A W Walker, T C Freeman, M Watson, R Roehe, T J Snelling
- 16:20 185 The effect of xylanase and xylo-oligosaccharides on growth performance and faecal bacterial community composition of growing pigs
T A Sutton, H V Masey O'Neill, M R Bedford, H M Miller
- 16:30 200 The grazing efficiency of different varieties of perennial ryegrass for dairy cattle under rotational grazing conditions
T Tubritt, T Gilliland, L Delaby, M O'Donovan
- 19:00 Signet Library, Reception

WEDNESDAY 10 APRIL

LOMOND

HAMMOND

09:00-10:00

Chair: Prof Helen Miller

- 60 Nutritional Geometry: examining the critical roles of specific appetites in animal and human nutrition
D Raubenheimer, University of Sydney

WEDNESDAY 10 APRIL

CROMDALE

DIGITAL POSTERS 2

10:10-10:25

Chair: TBC

- 10:10 61 Investigating the use of Quietwean's and concentrate feed level on the performance and behaviour of suckler calves weaned indoors
L Chesney, F O Lively, N D Scollan, A W Gordon
- 10:13 62 Intake, growth, carcass and selected meat quality traits of steers offered grass silage and supplementary concentrates containing maize or wheat dried distillers grains
M McGee, M J Kelly, A K Kelly, A P Moloney
- 10:16 63 The effect of floor type on the lying and standing behaviour of finishing beef cattle
D E Lowe, F O Lively, A W Gordon
- 10:19 64 Effect of pre-grazing herbage mass on performance of early- and late-maturing suckler bred steers
P Doyle, A K Kelly, M McGee, A P Moloney, E G O'Riordan
- 10:22 65 Intake, live weight gain, feed efficiency, ultrasonic and body measurements of 'yearling' Charolais and Holstein-Friesian steers offered a high-concentrate diet
M McGee, C Fitzsimons, D A Kenny

WEDNESDAY 10 APRIL

TINTO

ANTIMICROBIAL RESISTANCE

10:30-12:00

Chair: Dr Mary Vickers

- 10:30 66 Antimicrobial resistance from beef cattle production
T Alexander, Agriculture and Agri-Food Canada
- 11:00 67 AMR - the human perspective
P Howard, Leeds Teaching Hospitals NHS Trust and University of Leeds
- 11:30 68 Effect of dietary supplementation of calves with essential oils on faecal bacterial count and abundance of antibiotic resistant bacteria
P Ray, S Allison, C Rymer, D Wilde
- 11:40 69 Pasture management practices are associated with the prevalence of antimicrobial resistance in grazing cattle
C Rymer, H Louvandini, A Abdalla, C Rodriguez Jimenez, A Tonks, P Spoto Corrêa, P Ray
- 11:50 70 Effect of pH on the abundance of antimicrobial resistance genes in manure
P Ray, A Pruden, C Teets, K Knowlton

WEDNESDAY 10 APRIL**MOORFOOT****DAIRY PERFORMANCE**

10:30-12:00

Chair: Dr Conrad Ferris

- 10:30 71 The effect of pasture allowance on the performance of in-calf holstein heifers in their second grazing season
R Patterson, S J Morrison
- 10:40 72 Prediction of dairy cow nitrogen intake over 305 days of lactation using long-term production data
X Chen, G Finney, E Garcia, C Ferris, E Magowan, T Yan
- 10:50 73 The effect of grazing season length and stocking rate on milk production and supplementary feed requirements within spring calving dairy systems in the north-east of Ireland.
L Cahill, D Patton, K M Pierce, B Reilly, B Horan
- 11:00 74 Relationships between blood metabolites and energy balance in early lactation dairy cows offered grass silage based diets: a meta-analysis
E H Cabezas-Garcia, A W Gordon, C P Ferris
- 11:10 75 Dietary starch level alters rumen pH and copper metabolism in lactating Holstein-Friesian dairy cows receiving added dietary sulphur and molybdenum
J H McCaughern, A M Mackenzie, L A Sinclair
- 11:20 76 Effect of altering the frequency of fresh pasture allocation on grass utilisation and the performance of lactating dairy cows.
J G Pollock, D A McConnell, A W Gordon
- 11:30 77 Effect of dairy management system on phytoestrogen concentrations of retail milk
N Nørskov, D I Givens, S Purup, S Stergiadis
- 11:35 78 Silage making practices on Northern Ireland dairy farms, and factors perceived by farmers to influence silage quality
C P Ferris, S Laidlaw, A W Gordon
- 11:40 79 Autumn feed budgeting and grazing strategies impact on animal performance and pasture productivity of intensive grass-based spring dairy cow production systems
S Evers, L Delaby, K M Pierce, B Horan
- 11:45 80 The impact of supplemental UV lighting, and a dietary additive, on the vitamin D content of bovine milk
W C McRoberts, E J McDonald, R A Loy, A W Gordon, L K Pourshahidi, C P Ferris
- 11:50 81 Effect of dietary cobalt supplementation on the intake, performance and whole tract digestibility in dairy cows fed tropical forages
W A D V Weerathilake, G A Prathapasinghe, W M P B Weerasinghe, L A Sinclair
- 11:55 82 Effect of the supplementation level with concentrate on milk and methane production in crossbreed tropical dairy cows grazing tropical
L E Robles Jimenez, A Xochitemol, M Benaouda, L Corona, E Castillo, O Castelan Ortega, M Gonzalez Ronquillo

WEDNESDAY 10 APRIL

KILSYTH

SUSTAINABLE LIVESTOCK FARMING

10:30-11:10

Chair: Dr Carol-Anne Duthie

- 10:30 83 Effects of breeding-herd management strategies on carbon footprints of pasture-based beef production systems calculated using measured emission factors
G A McAuliffe, T Takahashi, LM Cardenas, M S A Blackwell, T Darch, M Elayadeth Meethal, P Harris, C A Horrocks, K Le Cocq, T H Misselbrook, M R F Lee
- 10:40 84 Circadian rhythm in enteric methane emission among temperate grassland beef cattle offered three typical grass silage diets
M Elayadeth-Meethal, T H Misselbrook, H R Fleming, J Evans, M Jordana Rivero, M R F Lee
- 10:50 85 Effect of antibiotic treatments on dairy cow methane production, milk yield and dry matter intake
P R Hargreaves, M D March, R J Dewhurst
- 11:00 86 Archaea and members of the family, *Lachnospiraceae* are altered in the rumen microbiome of cattle divergent in methane yield grazing perennial ryegrass swards with and without white clover
P Smith, D Enriquez-Hidalgo, D Hennessy, M McCabe, D A Kenny, A K Kelly, S M Waters

WEDNESDAY 10 APRIL

CROMDALE

DIGITAL POSTERS 3

12:10-12:31

Chair: TBC

- 12:10 87 Effect of the alkaline ammonia treatment of wheat grain on *in vitro* rumen fluid pH, gas production and potential supply of amino acids into the abomasum
J K Margerison
- 12:13 88 Developing a rapid high throughput screening method for the estimation of rumen degradability of ruminant feedstuffs
E Ramos-Morales, E Jones, R L Ordonio, T C Fernando, C Whitehead, L Gomez, S McQueen-Mason, C J Newbold
- 12:16 89 The effect of lactic acid bacteria inoculation or molasses on the fermentation quality and nutritive value of amaranth (*amaranthus hypochondriacus*) (*var.maria*) silage
M Abbasi, Y Rouzbehan, J Rezaei, S-E Jacobsen
- 12:19 90 Effect of the alkaline ammonia treatment of oat feed on *in vitro* gas production, rumen fluid pH and potential supply of protein and amino acids for ruminants
J K Margerison
- 12:22 91 Assessment of ruminal fluid pH evolution across the weaning period in Holstein calves under field conditions
P Kazana, N Siachos, N Panousis, G Arsenos, G E Valergakis
- 12:25 92 Evaluation of the stress effects of oesophageal intubation for rumen sampling from sheep
P Kyriazopoulou, A Boissy, D Morgavi, M-M Mialon- Richard, R J Dewhurst, A I Macrae
- 12:28 93 Does birth order have an effect on blood gas, acid-base, and glucose status at birth in triplet-born lambs?
C Erichsen, A Jonker, P Maclean, F Knol, E Sandoval, C M Dwyer, S McCoard

WEDNESDAY 10 APRIL**TINTO****GENETICS AND GENOMICS 1**

13:30-14:50

Chair: Prof Eileen Wall

- 13:30 94 Comparative performance of Holstein-Friesian dairy cows of ELITE and National Average EBI on contrasting feeding treatments during early lactation
O Quigley, K M Pierce, F Buckley
- 13:40 95 Using commercial farm data to demonstrate the value of the national dairy selection index of Australia
J E Newton, H N Phuong, M E Goddard, J E Pryce
- 13:50 96 Withdrawn
- 13:50 97 The impact of including genotyped cows in the Single-Step genomic evaluation of bovine tuberculosis in Holstein dairy cattle in the United Kingdom
R Mrode, G Banos, M Winter, M P Coffey
- 14:00 98 Genetic parameters for live weight traits in purebred Irish Texel, Suffolk and Charollais lambs.
S Fitzmaurice, J Conington, N Fetherstone, T Pabiou, K McDermott, E Wall, G Banos, N McHugh
- 14:10 99 Effects of age at first joining and ewe genotype on performance of ewes from 2 to 6 years of age
T W J Keady, J P Hanrahan
- 14:20 100 Genetic parameters of faecal egg and oocyst counts, dag scores, live weight and immunological traits in Scottish Blackface sheep
A Pacheco, T McNeilly, G Banos, J Conington
- 14:30 101 Bayesian estimation of genetic parameters for piglet survival and birth weight at piglet and sow level using a population kept under outdoor conditions
T Q Nguyen, R J Dewhurst, P W Knap, S A Edwards, G Simm, R Roehe

WEDNESDAY 10 APRIL**MOORFOOT****RESEARCH INTO PRACTICE**

13:30-15:00

Chair: TBC

- 13:30 102 3D cameras can alert farmers to problem behaviours in pigs
E Baxter, SRUC
- 14:00 103 Developing sustainable livestock systems through participatory farmer research
C L Marley, Aberystwyth University
- 14:30 104 An investigation of the feasibility of running a mobile robot in a flock of broiler chickens and bird behavioural response
I C Dennis, S M Abeyesinghe, T G M Demmers
- 14:40 105 Impact of the introduction of the Nitrates Action Programme in Northern Ireland on the monthly concentrations of ammonia measured at three sites
C P Ferris, A W Gordon, S Laidlaw
- 14:50 106 Modelling the potential performance improvement value in Scottish and English sheep and beef systems
J Keelys

WEDNESDAY 10 APRIL

KILYSTH

RUMINANT NUTRITION

13:30-14:40

Chair: Prof Liam Sinclair

- 13:30 107 Effect of maize silage clamp density on aerobic stability and forage quality.
J Street, D R Davies, D Wilde, H Warren, J A Huntington
- 13:40 108 The effect of autumn management on perennial ryegrass sward quality and morphology in spring
C Looney, A Winger, A Claffey, M Egan
- 13:50 109 Impact of biostimulants on ryegrass silage quality, aerobic stability and animal performance
A Christou, H Fleming, T Cogan, M Gaffney, C J Hodgson, D R Davies, M R F Lee
- 14:00 110 Effect of feeding chitosan with different levels of crude protein on nitrogen intake, digestibility and utilisation in beef heifers fed total mixed ration
S Kirwan, TM Boland, E Serra, K M Pierce
- 14:10 111 Effect of a live yeast strain of *Saccharomyces cerevisiae* supplementation on growth, carcass yield and meat quality of finishing feedlot cattle
N Siachos, A Kougioumtzis, E Soufleri, S Vouraki, M Gauthier, G Arsenos
- 14:15 112 Intake, feed efficiency and growth-related performance of suckler-bred Charolais and Holstein-Friesian steers offered grass silage
M McGee, C Fitzsimons, D A Kenny
- 14:20 113 Effect of low moisture feed block supplementation on the rumen microbial fermentation of hay: *in-vitro*
N F Meades, K J Hart, C J Lister, C J Newbold, A Kingston Smith
- 14:25 114 Nutritional evaluation of *Enterolobium cyclocarpum* plant parts as supplementary feed in ruminant production system
O A Fasae, O D Adebayo

WEDNESDAY 10 APRIL

HARRIS

AQUACULTURE

13:30-14:40

Chair: Dr Simon Davies

- 13:30 115 Interaction of intestinal microbiome, health and nutrition for finfish production
S A M Martin, University of Aberdeen
- 14:00 116 Dietary utilization of soybean meal and rapeseed meal for Zebrafish (*Danio rerio*)
T A Aiyelari, AS Chaudhry, A B Chaudhry
- 14:10 117 Galacto-oligosaccharides: an investigation into dietary inclusion levels for rainbow trout (*Oncorhynchus mykiss*) for improved gut histomorphology
A Miles, S Davies, S Mansbridge
- 14:20 118 Optimising gene flow between parallel year groups to improve genomic prediction in Atlantic salmon breeding programmes
P K Kokkinias, P N Navarro, R H Houston, A H Hamilton, C H Haley, R P W Pong-Wong

WEDNESDAY 10 APRIL**CROMDALE****DIGITAL POSTER 4**

15:10-15:22

Chair: Maggie Mitchell

- 15:10 119 The comparison of models of using chest girth to estimate live weight of Adilo, Horro and Bonga sheep in Ethiopia
J Wamatu, A Alkhtib
- 15:13 120 Active dry yeast (*Saccharomyces cerevisiae*) supplementation boosts performance of growing lambs
D Djouvinov, O AlZahal
- 15:16 121 Effects of dietary replacement of maize with graded levels of melon husk on the performance of growing rabbits
O C Fasae, A M Bamgbose, A O Oso
- 15:19 122 Effect of Neem (*Azadirachta indica*) leaf meal on the growth performance and carcass characteristics of female growing rabbits
L T Egbeyale, O Y Ayo-Ajasa, O O Adeleye, I E Odeluyi, J A Abiona

WEDNESDAY 10 APRIL**TINTO****GENETICS AND GENOMICS 2**

15:30-16:10

Chair: Kim Matthews

- 15:30 123 Healthy milk from healthy cows: a genetic analysis of quantity and trace element concentrations in the milk and serum of dairy cows
S J Denholm, A A Sneddon, T N McNeilly, E Wall
- 15:40 124 The genetics of tooth loss and longevity in Scottish Blackface hill ewes
A McLaren, J Conington, I-A Boman, T Pabiou, N McHugh, A Waterhouse, N R Lambe
- 15:50 125 Introduction of a total merit index for dairy goats in Austria
B Fuerst-Waltl, C Fuerst
- 15:55 126 What advice would UK pig industry give to geneticists seeking to breed more disease resilient pigs?
A Bruce, S Beechener
- 16:00 127 Genetic variation in animal resilience to weather changes in UK dairy goats
E Sánchez-Molano, J Ilska, V Kapsona, S Desire, S Mucha, J Conington, G Banos
- 16:05 128 Modelling crossbreeding strategies for Boran cattle in Ethiopia
H Bunning, P Amer, E Wall, G Banos, M G G Chagunda, G Simm

WEDNESDAY 10 APRIL**MOORFOOT****ALTERNATIVE PROTEIN SOURCES**

15:30-16:50

Chair: Prof Michael Lee

- 15:30 129 Development of insect proteins and utilisation as a feed in Africa
C Tanga, International Centre of Insect Physiology and Ecology, Kenya
- 16:00 130 Alternative protein sources; an Australasian perspective
D Cadogan, Feedworks, Australia
- 16:30 131 Rumen protected rapeseed expeller (NovaPro) as an alternative to soya bean meal in dairy cow diets
P C Garnsworthy, N Saunders, J R Goodman, M Marsden, B May
- 16:40 132 Removing the dependence on perishable feed ingredients in *Tenebrio molitor* (yellow mealworm) diet
K Hawkey, J Stubberfield, L Parsons, T Parr, J Brameld, A Salter

WEDNESDAY 10 APRIL

KILYSTH

YOUNGSTOCK

15:30-17:10

Chair: Dr Jenny Gibbons

- 15:30 133 Management of young farmed livestock: why it matters and what can be done to optimise development
C M Dwyer, SRUC
- 16:10 134 Feeding behaviour and activity as early-indicators of disease in pre-weaned dairy calves
C-A Duthie, J M Bowen, G A Miller, D Bell, C Mason, M J Haskell
- 16:20 135 Monitoring of activity and feeding behaviour for early detection of respiratory disease in pre-weaned calves
J M Bowen, G A Miller, C Mason, D Bell, M J Haskell, C-A Duthie
- 16:30 136 Effect of environmental enrichment on feed intake and behaviour of dairy calves following milk consumption
M Hemingway-Wood O'Dell, J K Margerison, M Sorely, M Chaowarit
- 16:20 137 The effect of milk replacer fat content on the performance and carcass composition of pre-weaned Holstein Friesian bull calves
N Ferguson, A K Kelly, J R Dick, A P Moloney, D A Kenny
- 16:40 138 Pre-weaning and post-weaning growth performances of lambs may be uncorrelated
A G Jones, T Takahashi, H Fleming, B A Griffith, P Harris, M R F Lee
- 16:50 139 Effect of breed type and peripartum live weight on live-weight gain and time required to achieve marketing weight by dairy bull calves
M Sorley, J K Margerison, I Connerton, P C Garnsworthy, M Chaowarit
- 17:00 140 Effects of ewe parity and litter size on ewe and lamb performance to 5 weeks of age
D Shiels, C M Dwyer, J P Hanrahan, T W J Keady
- 17:05 141 The effect of milk replacer fat content on adipocyte development in subcutaneous adipose tissue of pre-weaned Holstein Friesian bull calves
N Ferguson, A K Kelly, A P Moloney, J McCormack, D A Kenny

WEDNESDAY 10 APRIL

HARRIS

HUMAN BONDS WITH COMPANION ANIMALS

15:30-16:35

Chair; Dr Jon Day

- 15:30 142 Non-invasive temperature monitoring in domestic species
A J Carter, Nottingham Trent University
- 16:00 143 Effect of probiotic supplemented-diets on serum Malondialdehyde (MDA) concentration of rabbits reared during the hot-dry season in a tropical Savannah
B M Shehu, W Buba
- 16:10 144 Influence of age on physical activity in cats (*Felis catus*)
M Smit, W Hendriks, K Weidgraaf, D G Thomas
- 16:20 145 Can activity be used to distinguish between pregnancy and pseudopregnancy in the domestic cat?
M Welch, M Potter, D G Thomas
- 16:30 146 Assessment of an innovative housing system for fattening rabbits: skin lesions, weight gain and hygienic aspects
S L Rauterberg, J Bill, S Kimm, N Kemper, M Fels
- 17:00-18:00 AGM Carrick
- 19:15 for 19:45 Conference Dinner - Assembly Rooms, 54 George Street, Edinburgh

THURSDAY 11 APRIL

LOMOND/TINTO

PRECISION LIVESTOCK - JOINT WPSA/BSAS

09:00-10:30

Chair: Dr Vicky Sandilands

- 09:00 147 Smarter systems for livestock production: challenges and opportunities for integrating technology into practice
L M Collins, University of Leeds
- 09:25 Development of a precision cervical dislocation tool for poultry from Science to Practice
J Sparrey, Livetec Systems Ltd
- 09:50 148 Automatic detection and tracking of individual pigs in a pen
H E Gray, L Zhang, X Ye, N Allinson, L M Collins
- 10:00 149 Animal-mounted sensor technology to predict 'time to calving' in beef and dairy cows
G A Miller, M A Mitchell, Z Barker, K Giebel, E Codling, J Amory, C-A Duthie
- 10:10 150 Markov chain matrices of jaw movement data from grazing animals can be valuable information when examining soil, sward and animal treatment effects
M S Dhanoa, M J Gibb, R Sanderson
- 10:20 151 Hand held technologies for assessment of nutrient digestibility
A Kingston-Smith, J Moorby, C K Reynolds, G Atkinson, D Leemans, M Smith, D Humphries, L Smith

THURSDAY 11 APRIL

KILSYTH

WORKSHOP: MODELS AND PROXIES FOR METHANE EMISSIONS FROM RUMINANTS

09:00-10:15

Chair: Prof Richard Dewhurst

- 09:00 152 Prediction of methane emissions in sheep using computed tomography (CT) measurements of rumen volume
N R Lambe, G A Miller, K A McLean, J Gordon, R J Dewhurst
- 09:10 153 Combining a process-based model of rumen fermentation with methane production data from respiration chambers
H Kettle, R Munoz-Tamayo, R J Dewhurst
- 09:20 154 The effects of red clover and grass silages on rumen metabolites, detected using nuclear magnetic resonance spectroscopy, associated with methane emissions from growing cattle
R Bica, R J Dewhurst, D Uhrin, A Macrae, J Palarea-Albaladejo, G Miller, J M Bowen
- 09:30 155 A feeding behaviour-based system to estimate methane emissions in cattle
J Fredy Ramirez-Agudelo, J Ricardo Rosero-Noguera, S Lucia Posada-Ochoa, C Santiago Escobar-Restrepo, R Muñoz-Tamayo
- 09:40 156 Near infrared technology applied to faeces as a proxy for indirect prediction of enteric methane emissions from dairy cows
G Ferronato, A Bayat, O Gachiuta, J Vilkki, P Bani
- 09:45 157 Novel statistical methods to improve analysis of laser methane detector data
S Brocklehurst, P R Hargreaves, M D March
- 09:50 158 Robust compositional regression to model methane production from ruminal volatile fatty acids
J Palarea-Albaladejo, N Stefelová, A Alfons, P Filzmoser, K Hron
- 09:55 Discussion

THURSDAY 11 APRIL**HARRIS****EQUINE HEALTH AND VET CARE**

09:00-10:30

Chair: Dr Debbie Nash

- 09:00 159 Equine grass sickness; an update
B McGorum, Univeristy of Edinburgh
- 09:30 160 The practical application of behaviour to veterinary care of equine
G Pearson, University of Edinburgh
- 10:00 161 Electromyographic and kinematic evaluation of movement and muscle activity in horses with temporary forelimb lameness induction: a preliminary report
L St George, T Spoomakers, F Serra Braganca, P R van Weeren, J Sinclair, S J Hobbs (Scholarship - Steve Bishop Early Career Award 2018)
- 10:10 162 Comparison of the faecal bacterial microbiota of healthy horses and horses with equine glandular gastric ulcer disease by high throughput sequencing of the 16S rRNA Gene
L A Buggle
- 10:20 163 Defining core bacterial community of Welsh Mountain ponies maintained in West of Scotland
A Garber, P Hastie, J M D Murray

THURSDAY 11 APRIL**CROMDALE****DIGITAL POSTERS 5**

10:40-10:55

Chair:? TBC

- 10:40 164 Using the 'pain face' scoring system does not detect pain due to lameness in dairy cows
M J Haskell, L B Hunter
- 10:43 165 Using social network analysis to measure the impact of social upheaval in captive animals
P E Rose, D Solakova, D P Croft
- 10:46 166 Performance of a cow-side, progesterone based, lateral flow test for pregnancy diagnosis under field conditions in smallholder dairy systems
B Muasa, M Chagunda, C Ashworth, R J Dewhurst, A Peters
- 10:49 167 Discriminant analysis of morphostructural differentiation of White Fulani (Yakana) and Bokolo *Adamawa Gudali* cattle in Sub-Saharan Africa
T M Adeoti, A E Amao, I F Olaleru, Y A Olaogun, A J Yinusa
- 10:52 168 Residual effect of fertilizer type and ensiling duration on fermentative characteristics of *Panicum maximum* silage.
M O Kolade, P A Dele, Okukenu O A, Amisu A A

THURSDAY 11 APRIL**TINTO****HEALTH REPRODUCTION AND FERTILITY**

11:00-12:30

Chair: TBC

- 11:00 169 Effect of feeding microalgae on the endocrine status and fertility of high yielding dairy cows
B E Till, J A Huntington, J Taylor-Pickard, L A Sinclair
- 11:10 170 RNA-Seq analysis of whole blood from early lactation dairy cows reveals changes in leukocyte gene expression associated with circulating IGF1
D C Wathes, L Buggiotti, M Salavati, H Takeda, GplusE Consortium

- 11:20 171 Raised α 1-acid glycoprotein (AGP) levels in cervico-vaginal mucus (CVM) 7 days *post partum* may identify cows at risk of developing endometritis early *post partum*
M Adnane, P Kelly, A Chapwanya, K Meade, C O'Farrelly
- 11:30 172 The relationship between milk oestradiol concentrations and activity during oestrus in lactating Holstein Friesian cows
H M H Zebari, S M Rutter, E C L Bleach
- 11:40 173 The effects of temperature-humidity index on conception rates of housed, Holstein Friesian dairy cows in the UK
E C L Bleach, E Tristram
- 11:50 174 Effects of uterine infection on milk production and reproduction outcomes in dairy cows in Ireland
N J Ryan, K G Meade, E J Williams, A C O Evans, M E Beltman
- 12:00 175 A meta-analysis of the effect of alternative management strategies on the duration of the interval from calving to first ovulation in suckler beef cows
R Lynch, A K Kelly, P Crosson, D A Kenny
- 12:10 176 Potential Role of Kisspeptin and Cytochrome P mRNA Genes in Pubertal Development and spermatogenesis in buffalo bulls (*Bubalus bubalis*)
H Rehman, M K Shahzad, I Rabbani, M S Yousaf, H Zaneb, K A Majeed, M Imran, S K Tahir
- 12:20 177 Development of local and systemic immunophenotyping assays in cattle
C Beynon, C O'Farrelly, K Meade
- 12:25 178 Cysteine and taurine increase HSP70 protein expression and reduce oxidative stress in cryopreserved ram semen
A Kafi, C Kershaw, T Herath, M Khalid

THURSDAY 11 APRIL

KILYSTH

GUT MICROBIOME

11:00-12:15

Chair: Dr Melanie Le Bon

- 11:00 179 Impact of rumen microbiome-host interaction on feed efficiency of beef cattle explained by microbial adhesion and mucosa interaction genes
M D Auffret, R D Stewart, R J Dewhurst, C-A Duthie, T C Freeman, M Watson, R Roehe
- 11:10 180 Investigating the impact of rumen microbial genes on feed conversion efficiency, growth rate and feed intake in beef cattle
J Lima, M D Auffret, R D Stewart, R J Dewhurst, C-A Duthie, A W Walker, T C Freeman, M Watson, R Roehe, T J Snelling
- 11:20 181 Protein nutrition and ETEC exposure impacts on growth performance and ileal but not faecal microbiome richness and diversity in weaned pigs
J Pollock, D L Gally, M R Hutchings, J G M Houdijk
- 11:30 182 The relationship between variation in the caecal microbiome and productivity of broiler chickens
A Tonks, R J Ellis, D Juniper, M J Woodward, C Rymer
- 11:40 183 Bacterial composition changes in response to zinc oxide within the gastrointestinal tract of newly weaned pigs until 28 days post-weaning
S Hazelden, K McDowall, H M Miller
- 11:50 184 Seeking to improve feed efficiency in pigs: microbial modulation via faecal microbiota transplantation in sows and dietary supplementation of offspring with inulin
UM McCormack, T Curiao, B U Metzler-Zebeli, T Wilkinson, H Reyer, F Crispie, P D Cotter, C J Creevey, G E Gardiner, PG Lawlor

- 12:00 185 The effect of xylanase and xylo-oligosaccharides on growth performance and faecal bacterial community composition of growing pigs
T A Sutton, H V Masey O'Neill, M R Bedford, H M Miller
- Poster 186 Altered abundance of rumen microbial species and reduction in microbial metabolic pathway diversity in sheep that are divergent in feed conversion efficiency
C C Sosa Arango, C Spillane, P Smith, N Claffey, T O'Rourke, S M Waters
- 12:10 187 Bacterial profiling the gastrointestinal tract of commercial pigs up to 28 days post-weaning
S Hazelden, K McDowall, H M Miller

THURSDAY 11 APRIL

HARRIS

MANAGING HORSES

11:00-12:10

Chair: Dr Stephanie Wood

- 11:00 188 The trials and challenges of marketing feed and supplements, a manufacturer's viewpoint
K Hore, Greencoat Ltd
- 11:30 189 How repeatable is the top-line evaluation system (TES)TM as a palpable muscle scoring system for horses?
C Walker, S Daniels
- 11:40 190 Influence of particle size and residual moisture on Near Infrared Reflectance Spectrometer (NIRS) analysis of minerals in hay
A Y Ikoyi, B Younge
- 11:50 191 The effect of hock angle on the stride characteristics and speed of flat raced thoroughbreds
L Bent
- 12:00 192 The factors that influence the decision-making process of equine euthanasia
B Winrow, C Brigden

THURSDAY 11 APRIL

TINTO

DAIRY CATTLE NUTRITION

13:30-15:00

Chair: Dr Sandy Mackenzie

- 13:30 193 Whole-farm feed efficiency on British dairy farms
P C Garnsworthy, E Gregson, J K Margerison, P Wilson, J R Goodman, J Gibbons, M Dorigo, M Topliff
- 14:00 194 Nitrogen isotopic fractionation to predict nitrogen-use efficiency of lactating Holstein Friesian dairy cows
R J Dewhurst, I E McCubbin, A H Bagnall, J F Flockhart
- 14:10 195 Has nitrogen utilisation efficiency of dairy cows been improved since the implementation of the Nitrate Directive Programme
G Finney, E Magowan, C P Ferris, T Yan
- 14:20 196 A rumen drench of prairie meal and rumen protected essential amino acids for 4 days after calving increases milk fat concentration and body weight of lactating dairy cows through 12 weeks *post partum*
C K Reynolds, L A Crompton, A K Jones, C G Bartram
- 14:30 197 Effect of fibre:starch ratio in dairy cow diets differing in maize:grass silage ratio, on milk fatty acid profile and its relationship with rumen hydrogen ion concentration
K E Kliem, H Hincapie Londono, U Tayyab, D J Humphries, C K Reynolds, L A Sinclair
- 198 WITHDRAWN

- 14:40 199 Feed sorting of low and high concentrate diets by Holstein and Jersey dairy cows
D W Olijhoek, P Løvendahl, A L F Hellwing, M R Weisbjerg, P Lund
- 14:50 200 The grazing efficiency of different varieties of perennial ryegrass for dairy cattle under rotational grazing conditions
T Tubritt, T Gilliland, L Delaby, M O'Donovan

THURSDAY 11 APRIL

KILYSTH

GLOBALISATION AND CLIMATE

13:30-14:45

Chair: Prof Geoff Simm

- 13:30 201 Field to yield: improving our assessment of livestock value on farm and beyond
A Cooke, G A McAuliffe, T Takahashi, M R F Lee, J Rivero
- 13:40 202 The environmental cost of increasing pasture productivity in the uplands
N G Williams, A P Williams, J M Gibbons, D R Chadwick
- 13:50 203 Modelling the impact of climate change on the yield of western European reseeded grasslands
M Dellar, C F E Topp, G Banos, A del Prado, G Pardo, N Fitton, E Wall
- 14:00 204 Whole farm modelling of the environmental impact of the inclusion of white clover in perennial ryegrass swards has on intensive pasture based dairy systems
J Herron, T P Curran, A P Moloney, D Hennessey, S McAuliffe, D O'Brien
- 14:20 205 Environmental impacts of housing and manure management systems in European pig production, through a life cycle perspective
G Pexas, S G Mackenzie, M Wallace, I Kyriazakis
- 14:30 206 Evaluation and prediction of nitrogen use efficiency and nitrogen excretion in beef cattle
A Angelidis, L Crompton, T Misselbrook, T Yan, C K Reynolds, S Stergiadis
- 14:35 207 Does choice of nutrient profiling rule affect relative environmental rankings of food products?
G A McAuliffe, T Takahashi, M R F Lee
- 14:40 208 Low-resolution soil sampling may provide no useful information to grazing farms
T Takahashi, P Harris, G A McAuliffe, A G Jones, M R F Lee

THURSDAY 11 APRIL

HARRIS

ANIMAL BEHAVIOUR AND WELFARE

13:30-14:30

Chair: Lis King

- 13:30 209 Economic and welfare impacts of providing positive life opportunities to farm animals
J E Stokes, S Mullan, T Takahashi, F Monte, D C J Main
- 13:40 210 Prioritisation of farm animal welfare issues in the UK using the Delphi method
F C Rioja-Lang, H. Bacon, M Connor, C M Dwyer
- 13:50 211 Dairy cows prefer a softer laneway surface, especially when lame
S Buijs, G E Scoley, D McConnell
- 14:00 212 Behavioural response to temperature and wind in dairy calves
D J Bell, A I Macrae, A Jennings, C S Mason, M A Mitchell, M J Haskell
- 14:10 213 The effect of number of lambs attempting to suck on triplet ewe behaviour
R Corner-Thomas, R Shanks, N Beausoleil

- 14:20 214 Using the effect of resting space allowance on resting behaviour in assessing heifers' welfare
I Tripon, L T Czyszter, M A Karatzia, E Sossidou
- 14:25 215 Can magnesium reduce stress and aggressive behaviours in pigs? – A systematic review
E V Bushby, L Dye, H M Miller, K Almond, L M Collins

THURSDAY 11 APRIL

CARRICK

POULTRY

13:30-14:40

Chair: Dr Stephen Mansbridge

- 13:30 216 Meta-analysis of the probiotic effect of yeast (*Saccharomyces cerevisiae*) on egg productions in laying hens
Ifeanyi Princewill Ogbuewu, Christain Anayochukwu Mbajiorgu
- 13:40 217 The effect of selenoprotein on the growth performance, indicators of oxidative stress and meat quality of broilers exposed to cyclical high temperature
C O'Shea, H Zhang, L Li, N Carter, Y Akter, P Celi, P Selle
- 13:50 218 Effect of selenium and yeast in the broiler diet on ampicillin resistance, virulence and nutrient utilisation by *E.coli* isolated from the broiler caecum
A Lee, M Woodward, D Juniper, M Aldeieg, C Rymer
- 14:00 219 Effects of replacing vitamin-mineral premix with leaf meal composite on the performance of broiler finisher chickens
A O Mosuro, O A Ogunwolfe, F O Jemiseye, B S Adedeji
- 14:10 220 Evaluation of the combination of vitamin D₃ and papaya leaf on muscle antioxidant activity of spent chicken
S Navid, M Hasiri
- 14:20 221 Assessment of the nutritional quality of crop contents of scavenging local chickens in Akwa Ibom State of Nigeria
K D Afolabi, I E Ebenso, O A Abu, I N Usoroidem
- 14:30 222 Differential effects of fibrolytic enzymes on the *in vitro* release of xylobiose from different cereal types
T Dale, J Brameld, T Parr, M Bedford

TUESDAY 9 APRIL

CROMDALE

POSTER VIEWING

13:00-13:20

- 223 Population genomic structure and linkage disequilibrium analysis of Ashanti Dwarf pigs of Ghana using genome-wide SNP data
S Naa Dodua Aryee, R Osei-Amponsah, B Kwadwo Ahunu, E N Amuzu-Aweh, B Skinner, C Sargent, J Bauer, N Affara
- 224 Correlation of somatic cell counts and California mastitis test for the diagnosis of subclinical mastitis in dairy sheep
G Bramis, S-A Termatzidou, A Theodoridis, G Arsenos
- 225 Sedation of Australian Merino lambs with acepromazine to reduce stress-related behaviours at weaning
A K Redfearn, A H Small, P W Hunt, D Niemeyer, G M Cronin
- 226 Dietary sodium diformate supplementation in sows during late gestation and lactation can improve performance of suckling piglets
C Lückstädt, S Petrovic

- 227 Diet effects on methane emissions from grazing cattle measured using the sulphur hexafluoride (SF₆) technique
R J Dewhurst, J M Bowen, G Miller, C-A Duthie
- 228 Effect of weaning age on body length, heart girth and withers height of dairy heifer calves
H Costigan, E Kennedy

WEDNESDAY 10 APRIL

CROMDALE

POSTER VIEWING

13:00-13:20

- 229 Assessing efficiency of meat sheep farms in the UK by performance evaluation and benchmarking
A Theodoridis, K Zaralis, C Davis, N Noble, G Arsenos
- 230 Assessing the precision and repeatability of thermal image measurements in dairy calves
G E Scoley, A W Gordon, S J Morrison
- 231 Consumer preferences for sheep and goat products in Greece: Qualitative insights
A Theodoridis, A Ragkos, G Arsenos, K Zaralis, R Zanoli
- 232 Effect of different rapidly fermentable carbohydrates sources addition on *in vitro* neutral detergent fibre (NDF) digestibility
A Palmonari, L Mammi, P Holder, L Fernandes, A Formigoni
- 233 Comparative evaluation of nutritional values of chicken, quail, turkey, and duck eggs
I O Dudusola
- 234 *In vitro* organic matter degradability and gas production measurements on whole canola (*Brassica napus*) seeds or canola seed meal, as potential constituents of ruminant diets
B Berenchein, C Pasinato, A Ulrich, A L Abdalla, I Bigaton Neto, AL Abdalla Filho
- 235 The effect of organic management strategies on milk production and milk processability characteristics within an Irish pasture-based system
K Scully, B Keogh, I Casey, J Humphreys
- 236 Quantitative label-free proteomic analysis of hepatic tissue from cattle during dietary restriction and subsequent compensatory growth
Y Mullins, K A Keogh, D A Kenny, A K Kelly, S M Waters

THURSDAY 11 APRIL

CROMDALE

POSTER VIEWING

13:00-13:20

- 237 Milk consumption monitoring as a farmer friendly indicator for advanced treatment in calves with neonatal diarrhea syndrome
P D Katsoulos, M A Karatzia, A Dedousi, D Čamo, C Boscós
- 238 Does the presence of maternal antibodies affect immune responses to vaccination in Merino lambs?
A Alexander, B Hine, I Colditz, A Bell, S Dominik
- 239 The effect of rotational grazing speed on sheep and grassland performance
T Meeke, A Aubry, A W Gordon
- 240 Malaysian and UK veterinarians' knowledge and attitudes towards cat pain
S S Zaini, C Phillips, J MacKay, F Langford

- 241 Relationships between the application of readily available nitrogen, and ammonia and ammonium concentrations measured by a National Ammonium Measurement Network sampler on the AFBI farm
C P Ferris, S Laidlaw
- 242 Effect of weaning age on growth performance of dairy heifer calves
H Costigan, E Kennedy
- 243 Effect of supplemental inorganic or chelated blends of copper, zinc and manganese on broiler chickens' performance
AA Ayoola, A O Fafiolu, O O Oluwatosin, B A Adewumi, A V Jegede, O W Ariyo, L Azevedo
- 244 A retrospective study: behavioural changes pre- Equine Grass Sickness diagnosis
L C Remnant, L J Cameron, K A Hunt
- 245 Equine parasite management practices
M Reid, H Glasgow
- 246 Equine End of Life (EEoL): from a veterinary professional's perspective
H Wilson, L Cameron
- 247 Lipidaemic changes in pubertal boars fed Aidan (*Tetrapleura tetraptera*) pod pulp meal
J Ezea, J C Ezike
- 186 Altered abundance of rumen microbial species and reduction in microbial metabolic pathway diversity in sheep that are divergent in feed conversion efficiency
C C Sosa Arango, C Spillane, P Smith, N Claffey, T O'Rourke, S M Waters **POSTER**

THURSDAY 11 APRIL

EQUINE TOUR OF VET SCHOOL, UNIVERSITY OF EDINBURGH, EASTER BUSH EH29 9RG

15:00-17:00