

Provisional Programme and Application Form

Queen's University, Belfast, UK



**FOOD, FEED, ENERGY AND
FIBRE FROM LAND
A VISION FOR 2020**



Organised by the
British Society of Animal Science,
Agricultural Research Forum and the
World Poultry Science Assoc (UK Branch),
in collaboration with the Association
of Applied Biologists



In association with the Institute of Agri-Food
and Rural Land Use, Queen's University



An International Conference to address
future challenges for land use

bsas
british society of animal science

Agricultural Research Forum



Please READ these notes before completing application form

APPLICATIONS One per delegate please. Application form, accompanied by the appropriate payment to be sent to the BSAS Office. A confirmation including receipt will be issued to all delegates. Delegates may also register on line BSAS webpage http://www.bsas.org.uk/Meetings_&_Workshops/

CONFERENCE FEE All authors must register by **MONDAY 22 FEBRUARY**, failure to register by this date will result in the summary being withdrawn from the programme and not being published in the proceedings. The Conference registration fee includes the BSAS/Agricultural Research Forum Proceedings. Application forms for the discounted rate must be received by 28 February.

BSAS Students and retired members A special low rate conference fee is offered to BSAS students/post graduates and retired members.

Registration entitles you to attend:

- All BSAS/Agricultural Research Forum Sessions (Monday - Wednesday)
- Joint WPSA/BSAS Session Tuesday

WPSA Conference BSAS/Agricultural Research Forum delegates are invited to attend the WPSA Gordon Memorial Lecture on Tuesday.

STUDENT PROGRAMME All students attending the BSAS/Agricultural Research Forum/WPSA Conference are invited to attend the Student Sunday. Only BSAS student members will be entitled to the FREE Student Sunday package which includes the Sunday/Monday programme, social and meal on Sunday. Please join the society if you wish to take advantage of this package. Non-members can also attend this programme at a cost of £50 - see application opposite.

ACCOMMODATION We have negotiated some good B&B deals with quality 3* and 4* hotels, but rooms are limited so our prices will only hold until end of February 2010. Please book direct with the hotel, quote 'animal science' to get this special rate, single occupancy, per person per night.

University area, 5-10 minutes walk

Wellington Park <http://www.wellingtonparkhotel.com> £65
Express by Holiday Inn <http://www.exhi-belfast.com> £59
Ibis (University Street) <http://www.ibishotel.com> £55

In town, 10-15 minutes walk

Park Inn <http://www.belfast.parkinn.co.uk> £55
Days Inn <http://www.daysinn.com> £59

Good Budget Accommodation

For students and the budget minded, there are standard rooms at Stranmillis College just behind Queen's University for just £29 B&B! These must be booked through BSAS.

MEALS Evening Meals The Conference Dinner is on Monday at the City Hall. The Tuesday Evening Event which includes a buffet is being held in The Space, Students Union, Queen's Campus.

Lunch A snack bar, where delegates may purchase a light lunch, will be available Monday and Wednesday in the Cloisters Restaurant, Student Union, Queen's Campus. Please note that Tuesday lunch has to be booked in advance (see application form).

PAYMENT We accept payment using the following credit cards: Visa (credit and debit), Mastercard and Switch or you may prefer to pay by cheque, made payable to **BSAS**. Electron and Maestro cards are not accepted. Please make your payment in £ sterling.

CANCELLATION 30 days prior to the conference: 75% refund. Within 30 days of the conference: No refund. BSAS will not be held responsible for any reason outside their control should the conference not be able to commence or curtailed early.

LOSS or DAMAGE BSAS will not be held responsible for any loss or damage of personal items of the delegates, accompanying persons, or exhibitors or injury at Queen's University.

CARPARKING Car parking is limited.

WIFI ACCESS Wifi will be available on site and is included in the registration fee.

BSAS SUBSCRIPTION BSAS Members may pay their BSAS 2010 Subscription together with their conference fee. Non-members may also join the society via the Annual Conference Application Form and thereby take advantage of the discounted conference fee. **Please enclose the completed BSAS Membership Application Form and relevant membership information as requested.** All forms can be downloaded from the BSAS website.

BSAS, PO Box 3, Penicuik, Midlothian, EH26 0RZ, UK
Tel: +44 (0)131 445 4508 Fax: +44 (0) 131 535 3103
Email: BSAS@sac.ac.uk <http://www.bsas.org.uk>

Venue - Queen's University, Belfast
Campus Map Key (see BSAS/Queen's website)
Whitla Hall (7); Peter Frogatt Centre (2)

BSAS/AGRICULTURAL RESEARCH FORUM CONFERENCE APPLICATION FORM

Whitla Hall, Queen's University, Belfast

12 April - 14 April 2010

Name (Prof/Dr/Mr/Mrs/Miss/Ms) First NameSurname.....

Address BLOCK

.....CAPITALS

ORGANISATION (for lapel badge)PLEASE

Telephone No..... Fax No..... Email.....

Membership No (if known):.....

BSAS CONFERENCE FEE	(please tick box as appropriate)			STUDENT PROGRAMME		
	on or before 28 Feb	on or after 1 March				
Member	£250	<input type="checkbox"/>	£330	<input type="checkbox"/>	BSAS Student Sunday programme	
Non member	£330	<input type="checkbox"/>	£365	<input type="checkbox"/>		
Member - retired and students	£100	<input type="checkbox"/>	£120	<input type="checkbox"/>		
Non-member - retired and students	£125	<input type="checkbox"/>	£145	<input type="checkbox"/>		
Day rate Conference Fee		Tues	Mon	Wed	All other delegates £50 <input type="checkbox"/> includes Sunday evening buffet, tea and coffee. (see details opposite)	
BSAS member one day conference fee	£150	<input type="checkbox"/>	£100	<input type="checkbox"/>		£
Non-member	£200	<input type="checkbox"/>	£130	<input type="checkbox"/>		
Member - retired and students	£ 60	<input type="checkbox"/>	£ 50	<input type="checkbox"/>		

Presenting theatre/Highlights Presenting poster **Please note authors must register by 22 Feb**

ACCOMMODATION For Hotel accommodation and special rates see page 1.	Stranmillis College, Belfast @ £29 per night B&B. Single occupancy, standard accommodation, shared facilities.	£
	Sunday <input type="checkbox"/> Monday <input type="checkbox"/> Tuesday <input type="checkbox"/> Wednesday <input type="checkbox"/>	

MEALS	Monday - BSAS/ARF Conference Dinner City Hall	£45.00	<input type="checkbox"/>	£
	Lunch Tuesday (see meals opposite)	£8.00	<input type="checkbox"/>	
	Tuesday - BSAS/ARF Evening event including buffet	£25.00	<input type="checkbox"/>	

Special requirements, diet - etc. Please specify

SUBSCRIPTIONS AND PROCEEDINGS		
2010 BSAS Subscription (retired and postgraduates half price)		
<input type="checkbox"/> Current member	<input type="checkbox"/> New member 2010 (enclose membership application form)	
Membership including on-line access to the journal ANIMAL		£65.00/£32.50
Membership including on-line access to ANIMAL and the hardcopy		£115/£82.50
Undergraduates FREE includes on-line access to ANIMAL		
Additional copies of the 2010 BSAS Annual Proceedings @ reduced rate - £30.00		£

Visa Credit card number
 Mastercard
 Switch 3 digit no (back of card) _____ Issue no (switch) _____
 Visa debit Card Expiry Date _____

Name of Credit card holder (block capitals)

(cheques should be made payable to BSAS)

Please pay by credit card or cheque and return application form to **TOTAL REMITTANCE**

AC2010, BSAS, PO Box 3, Penicuik, Midlothian, EH26 ORZ, UK

Tel: + 44 (0) 131 445 4508 Fax: + 44 (0) 131 535 3103 Email: bsas@sac.ac.uk

ANNUAL CONFERENCE - 12-14 APRIL 2010		Queens University, Belfast				
Sunday PM	11-Apr-10 Stranmills College					Posters SDH (Adjacent to Whitla Hall)
	Student Programme					Monday - Tuesday Coffee
Monday	12-Apr-10 Whitla Hall	PFC 212 (150)	PFC 209 (100)	PFC 210 (70)	PFC 211 (56)	Feed Studies - Sheep and Goats
AM		Student Programme				Rumen Studies
13:30-15:00	Presidents Session 13:30-15:00 Ch: Dr Sinclair Mayne	Recent Advances in Crop Science 13:30-15:00 Ch: Dr John Spink	Rumen Degradation and Fermentation 13:30-14:55 Ch: Dr Mike Lee	Animals and Environment 13:30-15:11 Ch: Prof Nigel Scollan	What the Equine Industry requires from Animal Science 13:30-15:00 Ch: Catherine Hale	Sheep and Beef Studies
15:00-16:00	Tea and Highlights (Highlight discussions commence 15:15)					Environment
16:00-17:55	Genetics and Health 16:00-17:30 Ch: Prof Rainer Roehe	Ruminants - Milk Production and Quality 16:00-18:05 Ch: Dr Conrad Ferris	Nutrition 16:00-17:05 Ch: Prof John Robinson	Livestock and Climate Change: Impacts and Mitigation 16:00-17:30 Ch: Dr Harry Clark	Equine Performance 16:00 - 17:20 Ch: Dr David Marlin	Feed Evaluations/Techniques
19:30	Conference Dinner, The City Hall, Belfast					Reproduction
						Soils and Water
						Discussion Highlights
						Monday Tea 15:15 - 16:00
						Dairy - Ch: Dr Dave Roberts
						Pigs - Ch: Dr Peador Lawlor
						Ruminants - Ch: Dr Aidan Moloney
						Posters SDH (Adjacent to Whitla Hall)
Tuesday	13 April 2010					Tuesday Coffee - end of Day
08:45-09:45	Hammond Lecture Animal Science - Recent Progress and Future Challenges 08:45-09:45 Ch: Dr Sinclair Mayne					Dairy Nutrition
10:15-12:15	What Industry wants from Animal Science 10:15-11:45 Ch: Prof Nigel Scollan	Gaseous Emissions from Animal Ruminants 10:15-11:30 Ch: Dr Rogier Schulte	Cattle Behaviour 10:15-11:45 Ch: Dr Aidan Moloney	Advances in Equine Science a) Advances in Equine Nutrition b) Advances in Equine Behaviour and Welfare 10:15-12:15 Ch: Dr Debbie Nash		Dairy Grassland Genetics Agricultural Economics Health Issues Calf Nutrition
12:00-13:45	Lunch and Highlights (lunch available from 12:00 - 13:30; Highlight discussions commence 13:00 hours)					Discussion Highlights
13:45-15:30	Progress and Potential from Animal Breeding WPSA/BSAS joint session 13:45-15:30 Ch: Dr Seamus Hanrahan	Soil Quality and Pollution 13:45-15:30 Ch: Prof Nicholas Holden	Priorities for Land Use - food, fibre, fuel or feed? 13:45-14:45 Ch: Dr Alistair Carson	Companion and Captive Animals 13:45-14:25 Ch: Dr Jennie Litten-Brown & Dr Lucy Tucker		Tuesday Lunch 13:00 - 13:45
15:30-16:00	Tea					Genetics Ch: Dr Mike Coffey
16:00-18:00	Developments in Genetic Evaluations 16:00-18:00 Ch: Marco Winters	Environmental Contamination Control 16:00-18:00 Ch: Dr Karl Richards	Agricultural Economics 16:00-17:45 Ch: Dr Michael Wallace	Animal Health 16:00-17:35 Ch: Dr Bernadett Earley		Animal Health Ch: Dr Spiridoula Athanasiadou
18:00-19:00	AGM					Meat Quality Ch: Dr Ian Richardson
20:00	Evening Event, The Space, Queen's					
Wednesday	PFC G06 (300) 14 April 2010					
08:45-10:30	Improvements in Measuring Phenotypes 08:45-10:30 Ch: Linda Farmer	Genetics and Feed Efficiency 08:45-10:10 Ch: Dr Huw Jones	Calf Rearing 08:45-09:40 Ch: Dr John Mee	Health, Welfare and Behaviour 08:45-10:45 Ch: Dr David Kenny		WPSA Conference is in the Canada Room Queen's University 13-14 April 2010
10:10-11:00	Tea					WPSA Programme under separate cover
11:00-13:00	Carcass Composition and Meat Quality 11:00 -13:00 Ch: Dr Ian Richardson & Peter Kennedy	Increasing Food Production from Grassland with Reduced Environmental Impact 11:00-12:58 Ch: Dr Edward O'Riordan	Reproduction 11:00 13:05 Ch: Dr Stephen Buckley	Pigs 11:10-12:50 Ch: Dr Mick Hazzledine		

STUDENT SUNDAY/MONDAY PROGRAMME 2010

***Sunday 11 April
Stranmillis College***

Time	Workshop 1
14:00	Registration
14:15	Introduction to statistics
15:00	Break
15:15	Descriptive and Inferential statistics
16:00	Break
16:15	Posters
17:00	Break
17:15	Relaxation Techniques
19:00	Dinner and social

***Monday 12 April
Queens University***

	Workshop 2
09:00	Networking
10:30	Break
11:00	Presentation techniques

All students are welcome - however if you wish to take advantage of student discounts then please join the Society.

Theatre Sessions

Monday, 12 April 2010

12:00 Registration Whitla Hall

(Students Union cash bar open for sandwiches, light lunch)

Whitla Hall

PRESIDENT'S SESSION - A VISION FOR 2020

Session 13:30 - 15:00 hours

Chair: Dr Sinclair Mayne

- 13:30 PS1 Challenges and opportunities for European Agriculture
M Dempsey, Farmers' Journal, Ireland
- 14:00 PS2 Meeting the challenge of prioritising land use- the role of agricultural science
L Firbank, BBSRC, UK
- 14:30 PS3 Harnessing scientific developments in practice
A Carson, AFBINI, UK

SDH (Room adjacent to Whitla Hall)

15:00 Tea/coffee and Highlights - discussions commence at 15:15

SDH (ADJACENT TO WHITLA HALL)

15:15- 16:00 HIGHLIGHTS - DISCUSSION SESSION

GENETICS AND HEALTH

Session 16:00 - 17:30 hours

Chair: Professor Rainer Roehle

- 16:00 1 Genetic associations between tuberculosis and economically important performance traits in Irish Holstein Friesian dairy cows
M L Bermingham, S J More, M Good, A R Cromie, I M Higgins, D P Berry
- 16:15 2 Determining the genetic susceptibility or resistance to bovine digital dermatitis in cattle
R A Scholey, W E R Ollier, R W Blowey, R D Murray, S D Carter
- 16:30 3 Genetic association between direct and indirect measures of body energy in dairy cows
G. Banos, M P Coffey
- 16:45 4 Genetic and non-genetic factors influencing *Ostertagia ostertagi* antibodies in UK H-F cattle
C Hayhurst, A Bradley, K Hunter, A B Forbes, M D Royal
- 17:00 5 Nutritional sensitivity of correlations between estimated breeding values for faecal egg counts and resistance to parasites in periparturient ewes
A Kidane, P Sakkas, J G M Houdijk, B J Tolkamp, S Athanasiadou, I Kyriazakis
- 17:15 6 Performance of Suffolk and Texel sheep grazing pastures with contrasting levels of gastrointestinal nematode parasite challenge
J P Hanrahan, B Good

19:30 Conference Dinner - City Hall

Theatre Sessions

Monday, 12 April 2010

PFC 212

RECENT ADVANCES IN CROP SCIENCE

Session 13:30 - 15:00

Chair: John Spink

- 13:30 ACS Perspective on crop research: Food vs Fuel
L Easson, AFBINI, UK
- 14:00 7 Changes in the Irish *Phytophthora infestans* population affect potato late blight resistances
S Kildea, L J Dowley, F Hutton, D Griffin
- 14:15 8 Monitoring of organic and inorganic nitrogen sources for the nitrogen nutrition of winter wheat using a chlorophyll meter
G Meade, T Mc Cabe
- 14:30 9 Crop establishment systems for winter oilseed rape
P D Forristal, K Murphy
- 14:45 10 Evaluation of separated solid pig manure as a nitrogen source for spring barley (*Hordeum vulgare* L.)
G Meade, T Mc Cabe
- 14:50 11 Assessment of environmental risk of applying municipal biosolids of municipal and industrial effluents to short rotation coppice (SRC) willow grown as an energy crop
A R McCracken, P J Moore, L Walsh
- 14:55 12 The effects of rhizome size, planting density and plastic mulch on the growth and dry matter yield of miscanthus over three seasons
D L Easson, E G A Forbes, A R McCracken

SDH (ADJACENT TO WHITLA HALL)

15:15- 16:00 HIGHLIGHTS - DISCUSSION SESSION

Theatre Sessions

Monday, 12 April 2010

PFC 212

RUMINANTS - MILK PRODUCTION AND QUALITY

Session 16:00 - 18:05

Chair: Dr Conrad Ferris

- 16:00 13 Improvements and validation of milk fatty acid predictions using mid-infrared spectrometry
H Soyeurt, S McParland, D Berry, E Wall, N Gengler, F Dehareng, P Dardenne
- 16:15 14 Effects of feeding *Chrysanthemum coronarium* flowers to lactating dairy cows on milk fatty acid composition.
D J Humphries, R J Wallace, K J Shingfield, K E Kliem, C K Reynolds
- 16:30 15 Effect of omitting one milking weekly on milk production and quality
B O'Brien, D Gleeson, J Humphreys
- 16:45 16 Effect of rumen protected choline supplementation on milk production and composition of lactating Friesian cows
M Mohsen, H Gaafar, M Khalafallah, A Shitta, A Elsheikh
- 17:00 17 Effect of calving difficulty on the saleable milk yield of UK Holstein Friesian dairy cattle at different stages of lactation
A C Barrier, M P Coffey, M J Haskell
- 17:15 18 The effect of adding stinging nettle (*Urtica dioica*) haylage to a total mixed ration on performance and rumen function of lactating dairy Cows.
D J Humphries, C K Reynolds
- 17:30 19 The fatty acid composition of milk available at retail over the course of one year
K E Kliem, D I Givens
- 17:45 20 Effect of low energy high fibre and grass silage feeding strategies on metabolic status of dairy cows in the peri-partum period
M Butler, J Patton, J J Murphy, F J Mulligan
- 17:50 21 Differential transport of trans fatty acids by bovine plasma lipoprotein fractions: 1. Soya oil and partially hydrogenated vegetable oil
E Vargas-Bello-Pérez, P C Garnsworthy
- 17:55 22 Differential transport of trans fatty acids by bovine plasma lipoprotein fractions: 2. Fish oil and partially hydrogenated vegetable oil
E Vargas-Bello-Pérez, P C Garnsworthy
- 18:00 23 The association between herd size, herd expansion and breeding policy, reproduction and production performance of spring calving Irish dairy herds
J Jago, D P Berry

19:30 Conference Dinner - City Hall

Theatre Sessions

Monday 12 April, 2010

PFC 209

RUMEN DEGRADATION AND FERMENTATION

Session 13:30 - 14:55

Chair: Dr Mike Lee

- 13:30 24 *In situ* dry matter digestion of different fodder tree leaves in Pakistan
M. R. Virk, J.I. Sultan, U.B. Cheema
- 13:45 25 Effect of incubation time on chemical compositions and *in vitro* digestibility of treated extracted gambir leaf waste (*Uncaria Gambir Roxb*) with mix *Rhizopus sp* and *Aspergillus niger* as animal feed
Neni Gusmanizar, Yetti Marlida, Montesqrit Dasya
- 14:00 26 Development of an intra-ruminal nylon bag technique for feed evaluation which does not require the use of fistulated animals
R W Mayes, J H Pagella, E R Ørskov
- 14:15 27 The effect of dietary proportions of kale (*brassica oleracea*) and grass silage on rumen pH and volatile fatty acid concentrations in dry dairy cows
B Keogh, P French, F J. Mulligan
- 14:30 28 The effects of individual or blended essential oils on rumen gas production and ammonia accumulation *in vitro*
K Mitchell, S Chikunya
- 14:35 29 Effect of phenotypic residual feed intake and diet type on ruminal microbial population in beef heifers
C A Carberry, D A Kenny, M S McCabe, S M Waters
- 14:40 30 Effect of feeding level on dry matter degradation characteristics of canola meal and soybean meal
Mohsen Pourabedin, Ahmad Afzalzadeh, Ali Akbar Khadem
- 14:45 31 Nutrient composition and *in vitro* degradability of some tropical shrubs from Pakistan
M R Virk, A S Chaudhry
- 14:50 32 Comparison of ruminal degradability models using the number of runs of sign of residuals
M H Fathi Nasri, M Danesh Mesgaran, J France, E Kebreab

SDH (ADJACENT TO WHITLA HALL)

15:15- 16:00 HIGHLIGHTS - DISCUSSION SESSION

Theatre Sessions

Monday 12 April, 2010

PFC 209

NUTRITION

Session 16:00 - 17:05

Chair: Professor John Robinson

- 16:00 33 Effect of body weight at weaning on piglet feeding behaviour immediately post weaning and selection for two levels of dietary lysine.
F H Reynolds, J M Forbes, H M Miller
- 16:15 34 The effect of glycerol on nutrient digestibility in finishing pigs
M E E McCann, E Magowan, KJ McCracken, VE Beattie, F J Gordon, M D Scott, A Thompson, R Bradford
- 16:20 35 The effect of feeding genetically modified Bt maize (MON810) on weanling pig growth performance and organ weights following a 30 day feeding period
S G Buzoianu, M C Walsh, G E Gardiner, M C Rea, P Ross, P G Lawlor
- 16:25 36 An investigation into the effect of milk supplementation from birth on performance of naturally suckled piglets
A H Stewart, F Baker, S Icely, R Hooper
- 16:30 37 Using high quality forages to improve *in vitro* rumen degradability and fermentation of low quality forages
M M H Khan, A S Chaudhry
- 16:35 38 Mid-lactation Holstein dairy cows performance response to differed alfalfa hay particle size with varied ruminal starch sources: dry mater intake, digestibility and milk production
S M Nasrollahi, M Khorvash, G Ghorbani, A Teimouri Yansari, A Zali
- 16:40 39 An evaluation of the effect of grass silage and concentrate feed level on ewe and subsequent progeny performance and on potential concentrate sparing effect
T W J Keady, J P Hanrahan
- 16:45 40 Using different levels of sorghum in finishing Ghezel×Arkhar-Merino crossbred lambs diets and its effects on animal performance
A Hosseinkhani, H Daghigh Kia, A Taghizadeh, A Rostami Baroj, S Alijani
- 16:50 41 The effect of soaking and urea treatments on the voluntary intake of wheat straw by sheep
AM Shirif, AS Chaudhry, A Younger
- 16:55 42 Nutritional and economical feasibility of using reeds silage compared to corn silage as sheep feed
Fawzy Abo-Donia
- 17:00 43 Effect of feeding steam treated pith bagasse on milk constituents and blood parameters of Lori ewes in Khouzestan Province, Iran
R Ebrahimi, M Eslami, J Fayazi, M Faseleh jahromi

19:30 Conference Dinner - City Hall

Theatre Sessions

Monday 12 April, 2010

PFC 210

ANIMALS AND ENVIRONMENT

Session 13:30 - 15:11

Chair: Prof Nigel Scollan

- 13:30 RE1 Reducing GHG emissions from grazing livestock; the New Zealand experience
H Clark, Agresearch, New Zealand
- 13:55 RE2 Greenhouse gas emissions from Irish Livestock Production Systems
P Crosson, Teagasc, Ireland
- 14:20 44 Comparison of the performance and carbon footprint of dairy-origin beef systems
L E R Dawson
- 14:32 45 An examination of the performance, nutrient digestibility, enteric methane emissions and rumen fermentation characteristics of beef cattle fed either barley or ground ear maize based diets
M B Lynch, D A Kenny, T M Boland
- 14:44 46 Performance of an on-farm anaerobic digester using dairy cow slurry as the sole feedstock
J P Frost, S R Gilkinson
- 14:56 47 Effect of diet, bedding material and ambient temperature on the production of volatile fatty acids and ammonia in the bedding of steers in an arctic production system
G A Romero-Perez, T A McAllister, K H Ominski, D O Krause
- 15:01 48 Biosafety assessment of pig manure during composting with straw, sawdust and greenwaste bulking agents
G Mc Carthy, P Lawlor, T Nolan, M Gutierrez, G Gardiner
- 15:06 49 The effect of dietary benzoic acid concentration on nitrogen utilisation, manure ammonia and odour emissions in finisher pigs
D P Murphy, J V O'Doherty, K M Pierce, T M Boland, J J Callan, M B Lynch

SDH (ADJACENT TO WHITLA HALL)

15:15- 16:00 HIGHLIGHTS - DISCUSSION SESSION

LIVESTOCK AND CLIMATE CHANGE: IMPACTS AND MITIGATION

Session 16:00 - 17:30

Chair: Dr Harry Clark

- 16:00 50 Investigation of faecal archaeol as a biomarker for rumen methanogens
F L Gill, R D Pancost, I D Bull, E McGeough, P O'Kiely, R J Dewhurst
- 16:15 51 Development of Tiers 2 and 3 enteric methane emission factors for cattle and sheep using Hillsborough herd data and calorimetric methane measurements
T Yan, V B Woods, S J Morrison, F O Lively, R Annett, L E R Dawson, A Carson
- 16:30 52 Effect of level of dietary soy oil supplementation and concentrate to forage ratio on feed intake, methane production and rumen fermentation variables of beef steers
K J Petrie, T M Boland, K J Hart, C M McCarney, S M Waters, D A Kenny
- 16:45 53 Effect of either soya or linseed oil supplementation of grazing dairy cows on milk production and methane emissions
JD Rowntree, KM Pierce, F Buckley, KJ Petrie, JJ Callan, DA Kenny, TM Boland
- 17:00 54 Chemical composition of different fractions of *Solanum lycocarpum* St Hil.
H R Lima Neto, A S Chaudhry, M M H Khan
- 17:15 55 Biological and economic consequences of a changing climate on UK livestock
E Wall, A Wreford, K Topp, D Moran

Theatre Sessions

Monday 12 April, 2010

PFC 211

WHAT THE EQUINE INDUSTRY REQUIRES FROM ANIMAL SCIENCE

Session 13:30 - 15:00

Chair: Catherine Hale

- 13:30 E11 Contrasts between academic and commercial research approaches
D Marlin, Consultant, UK
- 14:00 E12 What industry requires from the application of research from equine and animal science
J Winfield, FBHS, UK
- 14:30 E13 Potential opportunities for industry, colleges providing equine science courses and primary research departments to work more closely
P Harris, WALTHAM Centre for pet Nutrition, UK

SDH (ADJACENT TO WHITLA HALL)

15:15- 16:00 HIGHLIGHTS - DISCUSSION SESSION

EQUINE PERFORMANCE

Session 16:00 - 17:20

Chair: Dr David Marlin

- 16:00 AEP1 Equine exercise physiology: a challenge for the twenty first century
C A Roberts, University of Cambridge, UK
- 16:30 56 Conformation and its effect on laterality in the thoroughbred racehorse
L J Pocock, M Moore-Colyer
- 16:35 57 A Comparison of the response of equine heart rate to different equine exercise regimes
C E S Barratt, J C Litten-Brown, C K Reynolds
- 16:40 58 The Influence of Equine Facial Dermatoglyphic Profiles on English and Irish Thoroughbred (*Equus caballus*) Flat Racehorse Performance Ratings
J M Williams
- 16:45 59 Factors that effect the success of embryo transfer in polo ponies
L Ticehurst, J Wiseman, H V Masey O'Neill
- 16:50 60 Molecular estimation of historical effective population size in Thoroughbred horses
L J Corbin, S C Bishop, J Swinburne, M Vaudin, S Blott, J A Woolliams
- 17:05 61 Genetic evaluation of sport horses for performance in Eventing competitions in Great Britain
I D Stewart, S Brotherstone, J A Woolliams

19:30 Conference Dinner - City Hall

Theatre Sessions

Tuesday, 13 April 2010

Whitla Hall

HAMMOND LECTURE

Session 08:45 - 09:45

Chair: Dr Sinclair Mayne

08:45 HM Animal Science - Recent progress and future challenges
J D Oldham, SAC

WHAT INDUSTRY WANTS FROM ANIMAL SCIENCE

Session 10:15 - 11:45

Chair: Dr Nigel Scollan

10:15 WI1 Research needs for an efficient livestock industry
I Crute, AHDB, UK

10:45 WI2 With all those profits.....Do retailers care about animal science?
M Dobbs (adviser to Tesco), Westpoint Farm Vets, UK

11:15 WI3 Challenges in meat industry- impact on animal science research
J Birnie, Dunbia, UK

SDH (ADJACENT TO WHITLA HALL)

13:00 - 13:45 HIGHLIGHTS - DISCUSSION SESSION

PROGRESS AND POTENTIAL FROM ANIMAL BREEDING

(WPSA/BSAS JOINT SESSION)

Session 13:45 - 15:30

Chair: Dr Seamus Hanrahan

13:45 PP1 Quantitative and Molecular Genetics; a love story
D Berry, Teagasc, Ireland

14:15 PP2 Genomic selection in poultry and pig breeding: a breakthrough technology?"
G Albers, Hendrix-genetics, The Netherlands

14:45 62 Increase in accuracy using multi-trait genomic breeding value estimation
M P L Calus, R.F. Veerkamp

15:00 63 Response to genomic selection in the Scottish Blackface breeding programme
E A Navajas, R M Sawalha, C A Duthie, R Roehe, T Roughsedge

15:15 64 Discovery of novel single nucleotide polymorphisms in the bovine growth hormone receptor gene and their association with performance traits in Holstein-Friesian cattle in Ireland
M S. McCabe, S M. Waters, D P Berry

Theatre Sessions

Tuesday, 13 April 2010

Whitla Hall

DEVELOPMENTS IN GENETIC EVALUATIONS

Session 16:00 - 18:00

Chair: Marco Winters

- 16:00 65 Effect of LMI status of pedigree Suffolk and Charollais sire on lamb growth on commercial farms
J P Hanrahan
- 16:15 66 Using standardised data as a means to overcome the limitations of fitting polynomials in a genetic analysis of lifetime ewe weights using random regression
G E Pollott, G Galea
- 16:30 67 Phenotypic performance of progeny from UK sires selected on maternal beef EBVs
K.L. Moore, R Mrode, B Lowman, T Roughsedge
- 16:45 68 Genetic parameters for animal price and live-weight from routinely collected data at livestock marts
N McHugh, R.D. Evans, P.R. Amer, D.P. Berry
- 17:00 69 Estimation of genetic parameters for test-day somatic cell count in UK Holstein Friesian dairy herds
T.C. Pritchard, E. Wall, R.A. Mrode, K. Moore, M.P. Coffey
- 17:15 70 Estimates of heterosis for non-production traits for an all dairy breed genetic evaluation in the United Kingdom
R Mrode, M Coffey, K Moore, E Wall
- 17:30 71 Development of calving ease evaluations for UK Holstein-Friesian cows
E Wall, R Mrode, G Banos, M Coffey
- 17:45 72 Implementation and first year results on the use of genomic selection in dairy cattle in Ireland
J F Kearney, A Cromie, D P Berry

18:00 AGM Whitla Hall

Theatre Sessions

Tuesday, 13 April 2010

Whital Hall

HAMMOND LECTURE

Session 08:45 - 09:45

Chair: Dr Sinclair Mayne

08:45 HM Animal Science - Recent progress and future challenges
J D Oldham, SAC, UK

PFC 212

GASEOUS EMISSIONS FROM ANIMAL RUMINANTS

Session 10:15-11:30

Chair: Dr Rogier Schulte

- 10:15 73 Environmental impact of three high-concentrate diets fed to bulls
H M G van der Werf, C Martin, M Doreau
- 10:30 74 The effect of application timing on ammonia emissions from cattle slurry in Ireland
S T J Lalor, GJ Lanigan
- 10:45 75 The influence of strain of Holstein-Friesian cow and feeding systems on greenhouse gas emissions from pastoral dairy farms
D O'Brien, L Shalloo, C Grainger, J J Murphy, B Horan, M Wallace
- 11:00 76 An inventory of methane emissions from ruminant animals in Northern Ireland due to enteric fermentation-a comparison using Tier 1 and Tier 3 emission factors
V B Woods, T Yan
- 11:15 77 Field assessment of the balance between greenhouse gases and ammonia emissions from grassland under various N-management regimes
F Bourdin, G Lanigan, R Sakrabani, M Kibblewhite
- 11:20 78 Saponins in ruminant nutrition: a potential methane inhibitor?
H R Lima Neto, A S Chaudhry
- 11:25 79 Evaluation of methane emissions by spring calving Holstein Friesian dairy cows offered a grass-only diet or a total mixed ration
B F O'Neill, M A O'Donovan, E Lewis, F J Mulligan, J J Murphy, J Patton, M Deighton

SDH (ADJACENT TO WHITLA HALL)

13:00 - 13:45 HIGHLIGHTS - DISCUSSION SESSION

Theatre Sessions
Tuesday, 13 April 2010

PFC 212

SOIL QUALITY AND POLLUTION

Session 13:45 - 15:30

Chair: Prof Nicholas Holden

- 13:45 SQP1 Soil-atmosphere exchange of greenhouse gases: interactions of soil physical factors and biological processes
K Smith, University of Edinburgh, UK
- 14:15 80 The effect of ploughing intensity on grassland CO₂ and N₂ fluxes
O Ni Chonchubair, D Krol, C Narayan, K Richards, M Williams, M B Jones, B A Osborne, G J Lanigan
- 14:30 81 Can the nitrification inhibitor DCD decrease nitrous oxide emissions from slurry applied to grassland?
E Cahalan, K G Richards, C Mueller, M I Khalil, C Watson, R Laughlin, D Hennessy, D Devaney
- 14:45 82 The effect of application method and timing of application on slurry ¹⁵NH₄-N recovery in herbage and soil
N J Hoekstra, K G Richards, O Schmidt
- 15:00 83 An investigation of the effects of 'Biosolids' on soil biota
T F Kennedy, N Artuso, J Connery, O Schmidt
- 15:15 84 The impact of soil type and soil biology on the survival of *Escherichia coli* O157
E L Moynihan, K Ritz, S Tyrrel, K Richards
- 15:20 85 Dry matter production of perennial ryegrass swards following varying levels of poaching damage on a free-draining acid brown earth soil
G Tuñon, E Kennedy, D Hennessy, P Kemp, N Lopez Villalobos, M O'Donovan
- 15:25 86 The effects of dairy cow weight on selected soil physical properties related to compaction
T Herbin, D Hennessy, J J Murphy, K Richards, A Piwowarczyk, N M Holden

Theatre Sessions
Tuesday, 13 April 2010

PFC 212

ENVIRONMENTAL CONTAMINATION CONTROL

Session 16:00 - 18:00

Chair: Dr Karl Richards

- 16:00 ECC1 Fate and transport nutrients and pathogens applied to the land
T Steenhuis, Cornell University, USA
- 16:30 87 The effect of co-blending water treatment residual with manure on the concentrations of soluble phosphorus in runoff
S M O'Rourke, R H Foy, C J Watson
- 16:45 88 The effect of dairy cows grazing in early spring on phosphorus loss in overland flows post first and second grazing events
D A McConnell, C P Ferris, D G Doody, C T Elliott, D I Matthews
- 17:00 89 Assessing groundwater denitrification under two contrasting land uses in South-East Ireland
M M R Jahangir, P Johnston, M I Khalil, K G Richards
- 17:15 90 Laboratory study of a denitrification system using a permeable reactive barrier
A Serrenho, O Fenton, M Rodgers, M G Healy
- 17:30 91 The addition of chemical amendments to dairy cattle slurry for the control of phosphorus (P) in runoff from grasslands
R B Brennan, O Fenton, M Rodgers, M G Healy
- 17:45 92 Effect of cultivation of clover based grassland on N losses to groundwater on a clay-loam soil
M Necpalova, W Keogh, E Fitzgerald, J Humphreys
- 17:50 93 Treatment of dairy soiled washwater using a woodchip filter
E Ruane, M Rodgers, P French, P Murphy
- 17:55 94 The effect of soil test P on export of P in overland and macropore flow from a tillage rotation
D Ryan

18:00 AGM Whitla Hall

Theatre Sessions

Tuesday, 13 April 2010

Whital Hall

HAMMOND LECTURE

Session 08:45 - 09:45

Chair: Dr Sinclair Mayne

08:45 HM Animal Science - Recent progress and future challenges
J D Oldham, SAC, UK

PFC 212

CATTLE BEHAVIOUR

Session 10:15-11:35

Chair: Dr Aidan Moloney

- 10:15 95 Are cows more likely to lie down the longer they stand?
B J Tolkamp, M J Haskell, C A Morgan, S P Turner
- 10:30 96 Factors affecting dairy cow preference to be indoors or at pasture
G Charlton, S M Rutter, M East, L A Sinclair
- 10:45 97 Adding straw to a total mixed ration and the method of straw inclusion affects production and eating behaviour of lactating dairy cows
D J Humphries, D E Beever, C K Reynolds
- 11:00 98 The effect of time of day when dairy heifers are introduced to a group containing mature cows on welfare and performance
A R Boyle, C P Ferris, D J Kilpatrick, N E O'Connell
- 11:15 99 The effect of the provision of 'furniture' on the use of a loafing area by continuously housed dairy cattle
M J Haskell, S Bain, D J Roberts, F M Langford
- 11:30 100 Influence of bedding substrates on lying and rising behaviour in dairy heifers
J McBride, N E O'Connell

SDH (ADJACENT TO WHITLA HALL)

13:00 - 13:45 HIGHLIGHTS - DISCUSSION SESSION

PRIORITIES FOR LAND USE - FOOD, FIBRE, FUEL OR FEED

Session 13:45 - 14:45

Chair: Dr Alistair Carson

- 13:45 PLU1 Global Challenges: Land Use for Food and Energy - 2020 and beyond
P Gregory, SRI, UK
- 14:15 PLU2 Re-defining efficiency of food production from livestock
M Wilkinson, University of Nottingham, UK

Theatre Sessions
Tuesday, 13 April 2010

PFC 209

AGRICULTURAL ECONOMICS

Session 16:00 - 17:45

Chair: Dr Michael Wallace

- 16:00 AE1 Title to be confirmed
T Donnellan, Teagasc, Ireland
- 16:30 101 Estimating a marginal abatement cost curve for greenhouse gas emissions from Irish agriculture using farm-level data
J P Breen, T Donnellan, M Wallace
- 16:45 102 Risk and the decision to produce biomass crops: a stochastic analysis
D Clancy, J Breen, F Thorne, M Wallace
- 17:00 103 Analysis of distribution system in beef marketing
Ghobad Asgari Jaffarabadi, Alireza Vahabi
- 17:15 104 The impact of spring grazing and harvest date on the total forage costs of an integrated grazed and conserved perennial ryegrass sward
E Finneran, P Crosson, M Wallace
- 17:30 105 Nutrient management efficiency in Ireland - A data envelopment analysis of specialist dairy and tillage farms
C Buckley

18:00 AGM Whitla Hall

Theatre Sessions

Tuesday, 13 April 2010

PFC 210

ADVANCES IN EQUINE SCIENCE

Session 10:15-12:15

Chair: Dr Debbie Nash

ADVANCES IN EQUINE NUTRITION

- 10:15 AEN Faeces: A model for hindgut function?
J-A Murray, University of Edinburgh
- 10:45 106 The impact of feeding controlled fermented lucerne or dry chaff on the digestibility of competition diets
D G Thomas, LA Tucker
- 11:00 107 The effect of an encapsulated fatty acid mixture on the fatty acid composition of mares' milk
M D Scott, V E Beattie, L M Katz

ADVANCES IN EQUINE BEHAVIOUR AND WELFARE

- 11:15 AEB Title to be confirmed
J Murphy, University College Dublin, Ireland
- 11:45 108 Quantitative comparison of pressure distribution exerted by different numnahs beneath the saddle of a ridden horse
A Dickason, O H Chaffe, N R McEwan, D M Nash
- 12:00 109 Passion for horses: improving horse welfare communication through identifying information search patterns, knowledge levels, beliefs, and daily practices of horse enthusiasts
E K Visser, E C Van Wijk, H J M Kortstee, J A A M Verstegen

SDH (ADJACENT TO WHITLA HALL)

13:00 - 13:45 HIGHLIGHTS - DISCUSSION SESSION

COMPANION AND CAPTIVE ANIMALS

Session 13:45 - 14:40

Chair: Dr Jennie Litten-Brown and Dr Lucy Tucker

- 13:45 CCA1 Nutritional management of captive cheetahs; is the domestic cat an appropriate model?
K Bell (Whitehouse-Tedd), WALTHAM Centre for Pet Nutrition, UK
- 14:15 110 Influence of cat owners' feeding practice and attitude towards obesity on body condition of cats
A Kikuchi, E Bleach, S Chikunya
- 14:20 111 The effect of a novel complementary feedstuff on canine faecal consistency and odour
C L Carmichael, M Scott, A Wylie, D Wells, V E Beattie
- 14:25 112 Behavioural and vocal responses in *Canis Lupus* in response to transposed playbacks
N Wheadon, R Morgan, J C Litten-Brown
- 14:30 113 A study into the effect of the introduction of Ring-tailed Lemurs (*lemur catta*) to a walk-through enclosure at Cotswold Wildlife Park
E J Farhall, J C Litten-Brown
- 14:35 Seasonal effects on energy requirements in young cats in a temperate environment
D G Thomas, M Hekman, K A Weidgraaf, E N Bermingham

Theatre Sessions

Tuesday, 13 April 2010

PFC 210

ANIMAL HEALTH

Session 16:00-17:35

Chair: Dr Bernadette Earley

- 16:00 114 Bovine tuberculosis: Herd-level surveillance of *Mycobacterium bovis* genotypes in Northern Ireland (2003-2008)
R A Skuce, T R Mallon, C McCormick, S H McBride, G Clarke, A Thompson, C Cousens, A W Gordon, S W McDowell
- 16:15 115 *In vitro* screening of various forages for anthelmintic activity on *Haemonchus contortus* eggs
J Daryatmo, H Hartadi, E.R Orskov, K Adiwimarta, W Nurcahyo
- 16:20 116 Resistance to *Teladorsagia circumcincta* is due to an early switch from a Th1 to Th2 immune response in experimentally infected Ovar-DRB1*0203 carrier lambs
M Hassan, J P Hanrahan, B Good, G Mulcahy, T Sweeney
- 16:25 117 Utilisation of cassava leaf and carica papaya leaf as feeds and anthelmintics for goats
K Adiwimarta, J Daryatmo, E R Orskov, R W Mayes, H Hartadi
- 16:30 118 IgE and interleukin-5 production and faecal dry matter in parasite-resistant Australian sheep
AR Williams, D G Palmer, I H Williams, P E Vercoe, L J E Karlsson
- 16:35 119 Effect of maternal exposure to nematode parasites in ewes on lamb performance and parasite resistance
J G M Houdijk, L A Jones, B J Tolkamp, S Athanasiadou, M R Hutchings
- 16:50 120 Resistance to gastrointestinal nematodes during the periparturient period is sensitive to specific amino acid deficiency
P Sakkas, L A Jones, J G M Houdijk, D P Knox, I Kyriazakis
- 17:05 121 Asymptomatic carriage of *Clostridium difficile* PCR ribotype 078 in pigs
L A Brunton, J S Knapp, J Heritage, H M Miller
- 17:20 122 Development of infection models to assess subclinical disease in pigs through the use of acute phase proteins as markers
S Athanasiadou, J G Houdijk, P D Eckersall, J C Low, I Kyriazakis

18:00 AGM Whitla Hall

Theatre Sessions

Wednesday, 14 April 2010

PFC GO6

IMPROVEMENTS IN MEASURING PHENOTYPES

Session 08:45-10:30

Chair: Dr Linda Farmer

- 08:45 IMP1 Improvements in methods for measuring carcass and meat quality
B Moss, I Richardson, University of Bristol, UK
- 09:15 123 The potential of hyperspectral imaging for the measurement of meat quality
M Whitworth, B W Moss, A Chau, K Matthews
- 09:30 124 Predicting carcass cut yields in cattle using routinely collected digital images
T Pabiou, F Fikse, L Kreuchwig, G Keane, M Drennan, A Cromie, A Nasholm, D Berry
- 09:45 125 Accuracy of virtual partial dissection by computed tomography as predictor of beef carcass composition
E A Navajas, R I Richardson, D W Ross, N Prieto, J J Hyslop, G Simm, R Roehe
- 10:00 126 Prediction of beef carcass composition and tissue distribution using ultrasound scanning
N R Lambe, D W Ross, E A Navajas, J J Hyslop, N Prieto, C Craigie, L Bunger, G Simm, R Roehe
- 10:15 127 The influence of blooming on the near-infrared spectra of beef
B W Moss, A Gordon, K Matthews, P Hadley, D Homer
- 10:20 128 Potential of nuclear magnetic resonance spectroscopy to measure biochemical changes during post mortem aging of beef hung by Achilles or pelvic suspension prior to rigor
S F Graham, T Kennedy, A Gordon, L J Farmer, C Elliot, B W Moss
- 10:25 129 Predicting beef cut composition and meat quality traits by spiral computed tomography
N Prieto, E A Navajas, R I Richardson, D W Ross, J J Hyslop, G Simm, R Roehe

Theatre Sessions

Wednesday, 14 April 2010

PFC GO6

CARCASS COMPOSITION AND MEAT QUALITY

Session 11:00-13:00

Chair: Dr Ian Richardson and Peter Kennedy

- 11:00 130 A comparison of six models used to describe ewe growth to maturity
G E Pollott, G Galea
- 11:12 131 Adaptation of Meat Standards Australia quality system for Northern Irish beef
L J Farmer, D J Devlin, N F S Gault, A W Gordon, B W Moss, R J Polkinghorne, J M Thompson, E L C Tolland, I J Tollerton, R Watson
- 11:24 132 Finishing strategies for Belgian Blue and Limousin cross steers
M G Keane
- 11:29 133 The relationship between beef quality and carcass quality attributes measured under commercial conditions
C Craigie, D Ross, C Maltin, R Purchas, S Morris, R Roehe
- 11:34 134 External preference mapping of beef: Relationship of fatty acids and flavour precursors with consumer's preferences
O R Oltra, L J Farmer, B Moss, A W Gordon, J Birnie
- 11:39 135 Effect of lipid-rich plant extract on the fatty acids composition and meat quality of Belgian-Blue cross bred steers
E J Kim, R I Richardson, M R F Lee, K Gibson, N D Scollan
- 11:51 136 The potential of a plant extract to provide fluorescent chlorophyll derivatives to act as markers of faecal contamination on carcasses
M R F Lee, M B Scott, R I Richardson, E J Kim, F Lundby, A Veberg Dahl, N D Scollan
- 12:03 137 Influence of season and finishing diet on the fatty acid composition of beef longissimus dorsi muscle
A J McAfee, E M McSorley, G J Cuskelly, A M Fearon, B W Moss, J A M Beattie, A Doyle, A Gordon, J M W Wallace, M P Bonham, J J Strain
- 12:15 138 Prediction of beef carcass and selected primal subcutaneous fat yields using data from images captured on-line in abattoir
N Prieto, D W Ross, E A Navajas, R I Richardson, J J Hyslop, C Craigie, G Simm, R Roehe
- 12:20 139 Genetic relationships between muscle density, measured by x-ray computed tomography (ct), and lamb growth and carcass traits
N R Lambe, J Conington, E A Navajas, K A McLean, R Roehe, L Bunger
- 12:25 140 Effect of chicory grazing on killing out percentage and meat eating quality in lambs
J G M Houdijk, G R Nute, E A Navajas, R I Richardson, D W Ross
- 12:30 141 Effects of forage type and dietary proportion on the growth and carcass characteristics of finishing lambs
R W Annett, A F Carson
- 12:42 142 Distinguishing between different beef production systems using α -tocopherol, β -carotene and lutein measurements in beef
F T Roehrle, A P Moloney, O Schmidt, S M Harrison, F J Monahan
- 12:54 143 Instrumental meat quality and fatty acid composition of lean muscle from beef steers offered grass silage alone or in combination with legume/cereal based wholecrop silage at two concentrate levels
P C Kennedy, L E Dawson, B W Moss, A Fearon, D J Kilpatrick

Theatre Sessions Wednesday, 14 April 2010

PFC 212

GENETICS AND FEED EFFICIENCY

Session 08:45-10:10

Chair: Dr Huw Jones

- 08:45 144 Impact of genetic selection on feed efficiency on carcass traits in Irish beef cattle
J J Crowley, R D Evans, D P Berry
- 09:00 145 Increasing feed efficiency using genetic improvement and intensive pasture based systems of milk production
J Coleman, B Horan, K P Pierce, D P Berry
- 09:15 146 Food intake and feeding behaviour of Holstein-Friesian and Jersey x Holstein-Friesian crossbred dairy cows
E R Vance, C P Ferris, C T Elliott, D J Kilpatrick
- 09:30 147 Explaining variation in energy balance using high density SNP information
K L Verbyla, M P L Calus, Y de Haas, H A Mulder, R F Veerkamp
- 09:45 148 Single nucleotide polymorphisms in the bovine Neuropeptide Y5 Receptor gene and their predicted role in physico-chemical characteristics of the receptor protein
T Alam, B Bahar, S Waters, M McGee, T Sweeney
- 10:00 149 Effect of breed and sire expected progeny difference for carcass weight on the expression of growth related genes in muscle of steers
S M Keady, D A Kenny, M G Keane, S M Waters
- 10:05 150 Study of growth performance on crossbred lambs of fat-tailed and tailed sheep breeds
Mehdi Momen, Nasser Emam Jomea Kashan, Maysam Mohseni Badal Abadi, Sayed Davod Sharifi

INCREASING FOOD PRODUCTION FROM GRASSLAND WITH REDUCED ENVIRONMENTAL IMPACT

SESSION 11:00 -12:58

Chair: Dr Edward O'Riordan

- 11:00 GEI1 Increasing milk production from grassland with reduced environmental impact
J-L Peyraud, INRA, France, P Dillon, Teagasc, Ireland
- 11:25 GEI2 Progress in red production from grassland
L Dawson, AFBINI, UK
- 11:50 151 Effect of variety, nitrogen fertilization and regrowth interval on fatty acid levels of perennial ryegrass post establishment
M Cristilli, M B Lynch, D McGilloway, S Barth, T M Boland
- 12:02 152 The effect of grass species on nitrogen response in grass clover swards
T J Gilliland, A D Farrell, D Mc Gilloway, D Grogan
- 12:14 153 Organic management strategies and its effect on clover-based grassland production
B Keogh, J Humphreys, P Phelan, M Necpalova, I Casey, E Fitzgerald
- 12:26 154 A meta-analysis of the impact of stocking rate on the productivity of pasture-based milk production systems
B McCarthy, L Delaby, K M Pierce, F Journot, B Horan

Continued/.....

Theatre Sessions

Wednesday, 14 April 2010

PFC 212

INCREASING FOOD PRODUCTION FROM GRASSLAND WITH REDUCED ENVIRONMENTAL IMPACT

- 12:38 155 The effect of sward perennial ryegrass content and defoliation method on seasonal and total dry matter production
P Creighton, E Kennedy, T J Gilliland, T Boland, M O'Donovan
- 12:43 156 Semi-natural, western hill vegetation under defined management systems, 1995 to 2008
M Walsh, R Moles
- 12:48 157 An evaluation of tyfon and chicory, as the sole forage or in combination with perennial ryegrass on the performance of finishing lambs
T W J Keady, J P Hanrahan
- 12:53 158 Nitrogen recovery in herbage from dung pats and urine patches applied at two different times during the growing season
R A Law, C P Ferris

PFC 209

CALF REARING

Session 08:45-09:40

Chair: Dr John Mee

- 08:45 159 Relationships between IGF-I concentration and age at first calving of Holstein-Friesian heifers with their survival up to third calving
J S Brickell, D C Wathes
- 09:00 160 Factors associated with selling price of dairy calves at livestock marts
N McHugh, A G Fahey, R D Evans, D P Berry
- 09:15 161 The effect of winter diet on the weight gain and body condition score of weanling dairy replacement heifers
E Kennedy, R Sayers, J P Murphy, S Fitzgerald, F Buckley
- 09:30 162 A clinical and pathological investigation of perinatal mortality in dairy calves: preliminary results from a recent prospective study
J F Mee
- 09:35 163 Effect of weaning system on the performance of dairy calves fed using computerised milk and concentrate dispensers
S J Morrison, A F Carson, D J Kilpatrick

Theatre Sessions

Wednesday, 14 April 2010

PFC 209

REPRODUCTION

Session 11:00-13:05

Chair: Dr Stephen Buckley

- 11:00 R11 Infertility in the high producing dairy cow: Where is the light at the end of the tunnel
M Lucy, University of Missouri, USA
- 11:30 164 Factors affecting ovulation potential in Holstein-Friesian dairy cows
H S Gilmore, A R G Wylie, C T Elliott, R A Law
- 11:45 165 The effects of genetic merit for fertility traits on ovarian dynamics during the oestrous cycle in lactating dairy cows
S B Cummins, P Lonergan, A C O Evans, S T Butler
- 12:00 166 The relationship between progesterone during the early luteal phase and embryo survival in dairy heifers
M H Parr, M P Mullen, M A Crowe, J F Roche, P Lonergan, A C O Evans, M G Diskin
- 12:15 167 Uterine endometrial gene expression in heifers of high or low fertility on day 14 of the estrous cycle
A P Killeen, D G Morris, D A Kenny, M G Diskin, S M Waters
- 12:30 168 Incidence of fertilization failure and embryo loss in Holstein Friesian heifers and *postpartum* dairy cows
R A Law, E J Williams, H S Gilmore, F Carter, F J Young, P Lonergan, M A Crowe, M G Diskin, C P Ferris, A Evans
- 12:45 169 Mathematical model of the bovine oestrous cycle
H M T Boer, C Stötzel, S Röblitz, P Deuflhard, R F Veerkamp, H Woelders
- 12:50 170 Effect of calving ease on the subsequent performance of cow and calf in UK Holstein-Friesian cattle
S A E Eaglen, J A Woolliams, M P Coffey, E Wall
- 12:55 171 Progesterone mediated changes in the composition of cattle oviduct and uterine fluid
D Morris, S Hugentobler, H Leese, P Humpherson, J Sreenan, M Diskin
- 13:00 172 The effect of strategic supplementation of trans-10, cis-12 conjugated linoleic acid on the reproductive performance of lactating dairy cows
I Hutchinson, P Lonergan, A Evans, R Dewhurst, S Butler

Theatre Sessions

Wednesday, 14 April 2010

PFC 210

HEALTH, WELFARE AND BEHAVIOUR

Session: 08:45-10:45

Chair: Dr David Kenny

- 08:45 173 Effect of feed space allowance on the performance of dairy cows offered grass silage based diets
C P Ferris, N O'Connell, D C Patterson, D J Kilpatrick
- 09:00 174 Key housing and management factors affecting lameness levels on Northern Ireland dairy farms
L G Baird, D N Logue, A F Carson, M A McCoy, N E O'Connell
- 09:15 175 Selection of sires with good lambing and lamb vigour characteristics within three Suffolk strains
S M Matheson, J Roden, W Haresign, L Bünger, C M Dwyer
- 09:30 176 Grazing patterns and habitat selection of the Scottish Blackface compared with a crossbred, Texel X Scottish Blackface using GPS telemetary collars
E McCloskey, J H McAdam
- 09:45 177 Remote physiological monitoring in livestock: Assessment of stress in transit to improve welfare
M A Mitchell, P J Kettlewell, M Villarroell, M Farish, E Harper
- 10:00 178 Effectiveness of different footbath solutions in the treatment of digital dermatitis in dairy cows
M H M Speijers, L G Baird, D N Logue, N E O'Connell
- 10:15 179 Exploration of potential mechanisms for parasite induced anorexia of sheep through modelling
Y C S M Laurenson, S C Bishop, I Kyriazakis
- 10:30 180 A multimedia-based cognitive-behavioural intervention program improves attitudes and handling behaviours of stockpeople in livestock farming
M A W Ruis, G J Coleman, S Waiblinger, I Windschnurer, X Boivin

Theatre Sessions

Wednesday, 14 April 2010

PFC 210

PIGS

Session 11:10-12:50

Chair: Dr Mick Hazzledine

- 11:10 181 The effect of birth weight on the variation in live weight of pigs at weaning
J Allen, E Magowan, V E Beattie, M E E McCann, A Thompson
- 11:25 182 Can Hampshires tolerate low lysine diets post weaning?
A E Taylor, S Jagger, P Toplis, I Wellock, H M Miller
- 11:40 183 The post weaning and finishing performance of pigs with different wean weights when offered a high or low allowance of starter diets
E Magowan, V E Beattie, M E E McCann, A Thompson, R Bradford, K J McCracken, F J Gordon, M Scott
- 11:55 184 The effect of terminal sire breed and slaughter weight on pig production and carcass performance
E Magowan, M E E McCann
- 12:00 185 Effect of short-term feeding of genetically modified Bt maize (MON810) on gut microbiota, intestinal morphology and immune status of weanling pigs
M C Walsh, S G Buzoianu, G E Gardiner, M C Rea, O M Hart, P Ross, P G Lawlor
- 12:05 186 Effect of dietary chicory on boar taint
D Zammerini, F M Whittington, G R Nute, S I Hughes, M Hazzledine, J D Wood
- 12:10 187 A note on the effect of breed on the feeding behaviour of pigs and variation in feed intake, feed conversion ratio and feeding behaviour between pigs of the same breed
E Magowan, M E E McCann
- 12:15 188 Comparison of a β -glucan-supplemented wheat-based diet with an oat-based diet on apparent total tract nutrient digestibility, nitrogen utilisation and accompanying manure odour and ammonia emissions from finisher pigs
C J O'Shea, D A Gahan, M B Lynch, T Sweeney, J J Callan, J V O'Doherty
- 12:20 189 Influence of within pen gender composition and weight variation on the welfare and growth performance of finishing pigs
S Conte, L Boyle, P Lawlor, N O'Connell
- 12:25 190 Effect of piglet birth weight on serum triglyceride levels at weaning and at slaughter
C Amdi, N C Stickland, L Giblin, L McNamara, T Ryan, M Walsh, P G Lawlor
- 12:30 191 Effect of supplementing late gestation sows with *Saccharomyces cerevisiae* on piglet growth performance
A L Wealleans, J C Litten-Brown
- 12:35 192 The impact of chronic environmental stressors the social behaviour of growing pigs, *Sus scrofa*
M Parker, E O'Connor, M McLeman, T Demmers, J Lowe, R Owen, E Davey, C Wathes, S Abeyesinghe

Poster Sessions
Monday 13:00 - Tuesday 10:15

SDH (ADJACENT TO WHITLA HALL)

FEED STUDIES - SHEEP AND GOATS

- 193 The influence of oak leaves on the ruminal parameters of sheep
M J Abarghuei, Yousef Rouzbehan, Dariosh Alipour
- 194 Study of fattening capacity by different levels of metabolizable energy and crude protein in male Balouchi lambs
Mohammad Raisianzadeh, Ali Reza Hessabi, Siamak Parsaie, Mehran Abazari
- 195 The effects of dried Pistachio Epicarp on lambs' performance
A Mahdavi, M Zaghari, M Zahedifar, A Nikkiah, F Alemi, A Hosseini, Z Mirabdolbaghi, H Lotfolahiyan
- 196 The Effect of feeding Pomegranate seed pulp on dry matter intake and performance of southern Khorasan goats
J Modaresi, M H Fathi, O Dayani, L Rashidi
- 197 Determination of diet selection and cooperation daily nutrient requirements of goat in Steppe region of Yazd Province, Iran(Case study: Nodoshan Rangelands)
Anahita Rashtain, Masour Mesdaghi, Fatollah Boldaji
- 198 Performance of growing lambs fed with increasing levels of sorghum grains containing tannins
P B G Schiavinatto, A L Abdalla, C Costa, J D F Gomes, B Berenchtein, P P Santos, A C B Camargo, L A Castilho, A S Morsy, C G Shen, R C Lucas, M A Factori
- 199 Influence of season and finishing diet on the fatty acid composition of lamb longissimus dorsi muscle
A J McAfee, E M McSorley, G J Cuskelly, A M Fearon, BW Moss, J A M Beattie, A Doyle, A Gordon, J M W Wallace, M P Bonham, J J Strain
- 200 Effects of various levels of wheat bran on weight gain of Baluchi sheep breed of Iran
F Ganji, M Bashtani, H Farhangfar, P Rowlinson, MR Asghari
- 201 The effect of rumen isolated bacteria on degradation of sugarcane pith processed with steam and or exogenous enzyme in in vitro culture condition
M Chaji, T Mohammadabadi, M Bojarpour
- 202 The influence of steam treated sugarcane pith as feed ingredient on digestibility and passage rate of Iranian Baluchi sheep
M Chaji, A A Naserian, R Valizadeh, T Mohammadabadi, S TabatabaiVakili
- 203 Quantification of cellulolytic bacteria using in vitro culture containing treated or untreated cottonseed hulls determined by real-time polymerase chain reaction
Ali Faramarzi Garmroodi, Mohsen Danesh Mesgaran, Ali Reza Vakili, Alireza Heravi Moussavi, Abdol Mansour Tahmasbi, Hossein Jahani-Azizabadi
- 204 Foot health in sheep - prevalence of hoof lesions in UK and Irish sheep
J Conington, M H M Speijers, A Carson, S Johnston, S Hanrahan

Poster Sessions
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SDH (ADJACENT TO WHITLA HALL)

RUMEN STUDIES

- 205 *In vitro* gas production parameters of sesame (*Sesamum indicum*) straw treated with sodium hydroxide, urea or sulphuric acid
M Malekhhahi, M Danesh Mesgaran, A Heravi Mousavi, A Vakili, A Tahmasbi, H Jahani-azizabadi
- 206 Comparison of different native barley varieties using an *in vitro* gas production technique using rumen fluid from fistulated and from slaughtered sheep as inocula
E Parand, A Taghizadeh
- 207 How binding compounds interfere in the *in vitro* rumen degradability results of the gas production bioassay for tannins
I C S Bueno, P B Godoy, A L Abdalla
- 208 Fermentation and *in vitro* gas production of high pressure steam treated sugarcane pith by rumen fungi
M Chaji, T Mohammadabadi, M Eslami
- 209 Inter-animal variation in aspects of ruminal digestion when cattle were offered a range of rations
A P Moloney, C Joos, S E Grace, F J Monahan, D A Kenny
- 210 Chemical composition and *in vitro* digestibility of leaflet date-palm treated with *Neurospora intermedia* fungi
Moazameh Gevary, Yousef Rouzbehan, Zohre Hamidi-Esfahani
- 211 Effect of polyethylene glycol and polyvinylpyrrolidone on *in vitro* gas production of raisin waste
A Taghizadeh, M Besharati
- 212 Use of real-time PCR assay for monitoring *in vitro* ruminal cellulolytic bacteria population as affected by non-structural carbohydrates
Farkhondeh Rezaii, Mohsen Danesh Mesgaran, Ali Reza Heravi Moussavi, Ali Reza Vakili, Mohammad reza Nasiri, Shahrokh Ghovvati
- 213 Effect of various Iranian native medicinal herbs or spices on *in vitro* ruminal disappearance of lucerne hay
H Jahani-Azizabadi, M Danesh Mesgaran, A R Vakili, K Rezayazdi, A R Heravi Mousavi
- 214 Effect of adding polyethylene glycol and polyvinylpyrrolidone on organic matter digestibility, metabolizable energy and net energy for lactation of grape pomace using *in vitro* gas production technique
M Besharati, A Taghizadeh

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SDH (ADJACENT TO WHITLA HALL)

SHEEP AND BEEF FEED STUDIES

- 215 The effect of non-fibre carbohydrates supplementation on methanogenesis bacteria and protozoa populations in rumen fluid as determined by real-time polymerase chain reaction
A Vakili, M Danesh Mesgaran, H Jahani-Azizabadi, S Ghovvati, E Milani, F Rezaee
- 216 Effect of dietary whole cottonseed and different crude protein level on digestibility of diets fed to Kermani male lambs
Omid Dayani, Porya Dadvar, Mohsen Afsharmanesh
- 217 The effect of oil Palm Petiole in total mixed diet on the growth of Bali cows (*Bos Sondaecus*)
M Afdal, D Darlis, S Syarif, A Kasim, A R Alimon, N Abdullah
- 218 Fermentation kinetics and protein digestibility estimation of sheep diets containing different levels of Babaçu meal and cake *in vitro*
V Rodrigues Vasconcelos, A Luiz Abdalla, M Mourão Ramos Azevedo, A Salah Morsy, J Lindenberg Rocha Sarmiento, N González Ybarra, I Cláudio da Silva Bueno, M Regina Peçanha, L Aparecido Castinho, R Carlos Lucas
- 219 Effect of microbial inoculants on ruminal dry matter and nutrients degradability of maize silage using *in situ* method in Zel Sheep
A Teimouri Yansari
- 220 Intake, digestibility and chewing activity of rice straw as effective Source
A Teimouri Yansari
- 221 Use of biodiesel co-product from *Jatropha curcas* as ingredient for animal feed
B Berenchein, A L Abdalla, A S Morsy, A L Abdalla Filho, L A Castilho, P B G Schiavinatto, P P dos Santos, M R S R Peçanha, J D F Gomes, J Silva, C G Shen, R C Lucas, N F Arieta

ENVIRONMENT

- 222 Characterisation of the fibre composition of common grass species under varying management conditions
C King, J McEniry, M Richardson, P O'Kiely
- 223 Validation of the sulphur hexafluoride tracer technique for estimating methane emissions from dairy cows using respiration chambers: preliminary data
C Muñoz, T Yan, A W Gordon, D A Wills
- 224 The effect of offering grass silage alone or in combination with legume:cereal wholecrop silage on methane emissions of Holstein steers
P C Kennedy, L E Dawson, D J Kilpatrick
- 225 The effect of electromagnetic water treatment on *in vitro* methane production
M O'Brien, P O'Kiely
- 226 Effect of legume and perennial ryegrass herbage on *in vitro* methane output using the total gas production technique
A Navarro-Villa, M O'Brien, S Lopez, T M Boland, P O'Kiely
- 227 *In vitro* methane output of perennial ryegrass produced under four grazing management regimes and sampled throughout the growing season
P Purcell, M O'Brien, T M Boland, M O'Donovan, P O'Kiely
- 228 The effect of sward maturity on the *in vitro* digestibility and methane production of sward components
C J Quinlan, M B Lynch, M O'Brien, A Navarro, T M Boland
- 229 Effect of sward maturity on the dry matter intake, enteric methane emission and milk solids production of pasture grazed dairy cows
M H Deighton, C M Wims, B M O'Loughlin, E Lewis, M O'Donovan

Poster Sessions
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SDH (ADJACENT TO WHITLA HALL)

FEED EVALUATIONS/TECHNIQUES

- 230 Effect of irradiation and heat processing on ruminal degradability of protein in whole soybean
Amin Akbarian, Gholam Reza Ghorbani, Mohammad Khorvash, Mehdi Dehghan, Parvin Shawrang, Ebrahim Ghasemi, Majid Jafari
- 231 Effect of adding different levels of probiotic on *in vitro* gas production of noodle waste
M Besharati, A Taghizadeh, A Ansari
- 232 Effect of peppermint (*Mentha piperita*) essential oil on *in vitro* gas production parameters of lucerne hay and cottonseed hulls
E Jani, M Danesh Mesgaran, A R Vakili, A Soleimani, H Jahani-Azizabadi
- 233 *In vitro* gas production parameters of chickpea (*Cicer arietinum* L) by-product
Einollah Abdi Ghezeljeh, Mohsen Danesh Mesgaran
- 234 Use of *in situ* technique to evaluate three weed forages
Mohsen kazemi, A M tahmasbi, Reza valizadeh, A R vakili, M M moheghi
- 235 Effect of polyethylene glycol on the *in vitro* production of gas and ammoniac from pistachio hulls
Atiyeh Bohluli, Abasali Naserian
- 236 Parameters of *in vitro* gas production of high fat sunflower meal treated with sodium hydroxide and or formaldehyde by rumen bacteria+protozoa
T Mohammadabadi, M Danesh Mesgaran, M R Nasiri, M Chaji
- 237 The kinetic of *in vitro* gas production of tannic acid treated sunflower meal with or without poly ethylene glycol
T Mohammadabadi, M Chaji, S Tabatabaei
- 238 Effect of black pepper (*Pepper nigrum*) essential oil on *in vitro* gas production parameters of lucerne hay, barley grain or sugar beet pulp
M Sadjadian, M Danesh Mesgaran, A R Vakili, A R Heravi Mousavi, H Jahani-Azizabadi, H Aghel
- 239 Nitrogen fractionations, *in situ* ruminal degradation and post-ruminal crude protein disappearance of overheat and overheat-xylose processed guar meal
H Jahani-Azizabadi, M Danesh Mesgaran, A R Vakili, M Vatandoost, M Mojtahedi, E Abdi Ghezeljeh, A Hojjat Panah, A Fanaie-Nokar
- 240 *In vitro* first order dry matter disappearance kinetics of chemically and physically treated cottonseed hulls
Ali Faramarzi Garmroodi, Mohsen Danesh Mesgaran, Ali Reza Vakili, Alireza Heravi Moussavi, Abdol Mansour Tahmasbi, Hossein Jahani-Azizabadi
- 241 Effect of Phosphorus supplementation of ammoniated rice straw on ruminal fermentability, synthesised microbial protein and degradability *in vitro*
M Zain, R Ningrat, N Jamarun, A Tjakradidjaya
- 242 Use of white rot fungi to improve the feed value of rice straw
J W Cone, J J P Baars, A S M Sonnenberg
- 243 Cultivation of oyster mushrooms (*Pleurotus* species) to improve the *in vitro* dry matter digestibility of wheat straw for feeding to ruminants
H Omed, A Avagyan, M Hale
- 244 Evaluation of condensed tannin content of some native tanniniferous plants from semi-arid regions in Brazil
R C Lucas, A L Abdalla, M E Q Vieira, J D F Gomes, M R R S Peçanha, M T Lima, R Moura, B Berenchtein, A S Morsy, Y A Soltan

Poster Sessions

Monday 13:00 - Tuesday 10:15

SDH (ADJACENT TO WHITLA HALL)

FEED EVALUATIONS/TECHNIQUES

- 245 Chemical composition and dry matter degradability coefficients of Fennel seed
Mohsen Kazemi, A M Tahmasbi, Reza Valizadeh, Mohsen Danesh Mesgaran, A A Naserian
- 246 Effect of urea and polyethylene glycol on chemical composition of pistachio by-products silage
Amir Mokhtarpour, Abasali Naserian, Reza Valizadeh, Abdolmansour Tahmasebi
- 247 Nutritional quality of microwave irradiated full-fat soybean
M Taghinejad Roudbaneh, A A Sadeghi, S R Ebrahimi, M Chamani

REPRODUCTION

- 248 Evaluation of some serum metabolites: their effect on ovarian cysts in dairy cattle postpartum
Gholamali Moghaddam, Ehsan Ziaei, Hossein Daghigh Kia, Abbas Rafat
- 249 Evaluation of some blood metabolites and hormonal changes in early postpartum ovarian cyst in dairy cattle
Gholamali Moghaddam, Ehsan Ziaei, Hossein Daghigh Kia, Abbas Rafat
- 250 Effect of IGF-1 on bovine embryo developmental competence in normal and heat stress conditions
M Zhandi, A Towhidi, MH Nasr-Esfahani, P Eftekhari-Yazdi, A Zare Shahneh, E Dirandeh
- 251 Logistic regression analysis of some environmental factors affecting open days in Iranian primiparous Holstein cows
H Farhangfar, P Rowlinson, S Hassani, MH Fathi Nasri
- 252 Prediction of live-weight from linear body measurements in Iranian buffaloes
Bahareh Taheri Dezfuli, Mohammad Babaei, MohamadReza Mashayekhi, Sima Savar Sofla
- 253 Productive and reproductive abilities of native camel in southwest of Iran
Aziz Kardooni, Bahaodin Alemzadeh, MohammadReza Mashayekhi, Bahareh Taheri Dezfuli
- 254 Effect of unheated mare serum on in vitro maturation of sheep oocytes
M Khodaei Motlagh, A Zare Shahne, M Daliri, H Kohram, F Gharagoozlou, H Deldar

SOILS AND WATER

- 255 The impact of land spreading organic wastes on biomass crops: ground waters
D Ryan, K McDonnell, J Finnan
- 256 Treatment of piggery wastewaters using woodchip biofilters
K Carney, M Rodgers, P Lawlor
- 257 Characterisation of soiled water on Irish dairy farms
D Minogue, P Murphy, P French, F Coughlan, T Bolger
- 258 Use of geophysical techniques to conceptualise groundwater connectivity and sub-surface nutrient (NO₃) fluxes in hydrogeologically complex terrain
O Fenton, A Haria, M.G Healy, K.G Richards
- 259 Maintaining biodiversity in intensive grassland: Ground beetle communities in watercourse margins
D Madden, J Finn, S Harrison, D O hUallachain
- 260 Composting the solid fraction of separated pig manure with sawdust, chopped straw or shredded green waste
T Cota Nolan, S M Troy, P B Lynch, P G Lawlor
- 261 The use of Integrated Constructed Wetlands for the treatment of swine wastewaters.
C M Harrington, M Scholz, B Lynch, P Lawlor, N Culleton

Highlight Discussion Sessions
Monday 15:15 - 16:00

SDH (ADJACENT TO WHITLA HALL)

DAIRY

Session 15:15-15:39

Chair Dr Dave Roberts

- 15:15 262 Effects of physical forms of total mixed rations on ruminal pH and chewing activity of lactating cow
M Haj Shamsaei, A Foroughi, M Bashtani, H Farhangfar, H Naeemipour, P Rowlinson
- 15:18 263 Estimation of the effect of dilution due to milk yield on milk somatic cell count across cow parities
S J More, K O'Sullivan, B O'Brien, D P Berry, P T Kelly
- 15:21 264 Associations between age at first calving, liveweight at first calving and milk production in Holstein-Friesian dairy cows
E Kennedy, S Mc Parland, DP Berry
- 15:24 265 Effect of dairy management, season and breed on protein composition of retail whole milk
S Stergiadis, C J Seal, C Leifert, M D Eyre, G Butler
- 15:27 266 Fatty acid composition of retail whole milk from Jersey and Guernsey cows over a two year study
S Stergiadis, CJ Seal, C Leifert, MD Eyre, G Butler
- 17:30 267 Effect of incremental dietary addition of 2-hydroxy-4-(methylthio) butanoic acid isopropyl ester on milk production and composition of dairy cows
R H Phipps, A K Jones, E Devillard, P-A Geraert, R Bennett, C K Reynolds
- 15:33 268 The effect of forage source and supplementary rumen protected methionine on nitrogen balance in autumn calved dairy cows offered a low crude protein diet
S J Whelan, F J Mulligan, J J Callan, K M Pierce
- 15:36 269 Effect of 2-hydroxy-4-(methylthio) butanoic acid isopropyl ester on rumen degradability of fibre in lactating dairy cows measured *in situ*
D J Humphries, R H Phipps, E Devillard, P-A Geraert, R Bennett, C K Reynolds

Highlight Discussion Sessions

Monday 15:15 - 16:00

SDH (ADJACENT TO WHITLA HALL)

PIGS

Session 15:15-15:36

Chair: Dr Peadar Lawlor

- 15:15 270 Effect of phosphorus level and inulin inclusion in a wheat based finisher pig diet on nitrogen, phosphorus and calcium metabolism and intestinal microflora
P F Varley, T Sweeney, J J Callan, B Flynn, C McCarney, J V O'Doherty
- 15:18 271 Mitigation of phosphorus and nitrogen from pigs manure fed diets balanced according to ideal protein concept, supplemented with phytase
J A Moreira, B Berenchein, D M S S Vitti, R M Patinõ, T S Silva, T T Santos, JB Lopes, M R R Peçanha, L A Castilho
- 15:21 272 Lameness and limb lesions in replacement gilts on a commercial farm
L A Boyle, E Bullo, T Cota Nolan
- 15:24 273 Influence of regrouping regime on lying behaviour parameters in weaned pigs
G A Finney, N E O'Connell
- 15:27 274 An investigation of the relationship between pig weight and subsequent variation in weight
J Allen, E Magowan, V E Beattie, M E E McCann, F J Gordon
- 15:30 275 Fusarium mycotoxins in UK straw from the 2008 harvest - Implications for pigs on straw bedding
S G Edwards, A H Stewart
- 15:33 276 Enhanced utilization of palm kernel cake as a feed resource for growing-finishing pigs using exogenous enzyme
A O K Adesehinwa, A B Omojola, M A Adesina, OA Ladokun

RUMINANTS

Session 15:15-15:33

Chair Dr Aidan Moloney

- 15:15 277 Effect of forage species, ryegrass water soluble carbohydrate concentration, and red clover polyphenol oxidase activity on *in vitro* rumen efficiency of nitrogen utilization
A Belanche, M R F Lee, J M Moorby, M Scott, C J Newbold
- 15:18 278 Effects of forage species, grass water soluble carbohydrates and red clover polyphenol oxidase activity on the *in vitro* rumen microbial ecosystem
A Belanche, M R F Lee, J M Moorby, M Scott, C J Newbold
- 15:21 279 *In vitro* rumen simulated metabolism (RUSITEC) of freshly cut or wilted grasses with contrasting polyphenol oxidase activities: the effect on rumen parameters, lipolysis and biohydrogenation
M R F Lee, A Cabiddu, V Niderkorn, F J Hou, E J Kim, N D Scollan
- 15:24 280 Effects of timing and duration of fish oil supplementation of pregnant ewes on maternal and offspring performance up to weaning
R W Annett, A F Carson
- 15:27 281 Compensatory growth in suckler beef cattle production systems on two commercial farms in Scotland
J J Hyslop
- 15:30 282 Effect of restricted access time to pasture in spring on the performance of autumn- and spring-calving beef suckler cows and their progeny
N Gould, M McGee, DA Kenny, W Minchin, P Lawrence, E G O'Riordan

Poster Sessions
Tuesday 10:15 - 18:00

SDH (ADJACENT TO WHITLA HALL)

DAIRY NUTRITION

- 283 The effect of nutritional management of dairy cows post-calving and yeast supplementation on milk fatty acid profiles in the first eight weeks of lactation
R Alibrahim, FM Mulligan, RA Palladino, KM Pierce
- 284 Effect of cobalt extra-supplementation on milk production and composition of heat stressed lactating Holstein dairy cows
K Karkoodi
- 285 The effect of high fat sunflower meal treated with formaldehyde and sodium hydroxide on milk yield and composition in Holstein dairy cow
T Mohammadabadi, M Danesh Mesgaran, MR Nasiri, M Chaji
- 286 Fatty acid composition of milk from Holstein cows fed fish oil, canola oil, or their combination in early lactation
T Sadat Vafa, A Ali Naserian, A Reza Heravi Moussavi, R Valizadeh, M Danesh Mesgaran, M Ali Khorashadizadeh
- 287 Effects of different levels of fish oil and canola oil on nutrient intake and digestibility of early lactating Holstein dairy cows
T Sadat Vafa, A Ali Naserian, A Reza Heravi Moussavi, R Valizadeh, M Danesh Mesgaran, M Ali Khorashadizadeh
- 288 Effects of feeding zinc sources on enzymatic activity, and concentration of some hormones in Holstein dairy cattle
S Sobhanirad, R Valizadeh, M Hosienpoor-Mashhadi, E Rabeie-Motlagh
- 289 Evaluation of nutritional values of caraway-seed pulp feeding Holstein dairy cattle
M M Moheghi, A M Tahmasbi, A A Naserian, A Halim, M Kazemi
- 290 The effect of grazing different pasture herbage masses on rumen pH in lactating dairy cows
E Lewis, F Coughlan, M O'Donovan, C Wims
- 291 *In vitro* effect of rumen acid load on ruminal total bacteria and Fibrobacter succinogenes populations determined by real-time PCR
S Danesh Mesgaran, A Heravi Mousavi, J Arshami, A Vakili, S Ghovvati, H Jahani-azizabadi
- 292 Effect of alfalfa particle size and rumen starch source on faecal potential permeability and particle size in mid lactation Holstein cows
S M Nasrollahi, M Khorvash, G Ghorbani, E Ghasemi

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SDH (ADJACENT TO WHITLA HALL)

DAIRY

- 293 The effect of Caseinate supplementation on performance and microbial nitrogen flow in well-fed early lactating Holstein dairy cows
M Kazemi-Bonchenari, K Rezayazdi, A Nikkhah, H Kohram, M Dehghan-Banadaky, M Eslami
- 294 Effect of different sources of pectin feedstuffs on milk yield and composition of early lactating Holstein cows
M Kordi, AA Naserian, R Valizadeh, A M Tahmasbi
- 295 Effects of organic and inorganic zinc supplements on some biochemical parameters in serum of early lactating Holstein cows
S Sobhanirad, R Valizadeh, R Bahari-Kashani, E Rabeie-Motlagh
- 296 The effects of dry matter content and hay particle size of TMR on eating and lying behaviours of dairy cows
Ali Hosseinkhani, Hossein Daghigh Kia, Reza Valizadeh
- 297 Effects of milk production and seasonal calving on some blood metabolite changes in dairy cows at *postpartum* period
Ehsan Ziaee, Gholamali Moghaddam, Hosein Daghigh Kia, Abbas Rafat, Hamid Davarpoor
- 298 Effect of probiotics in mid lactation of high producing Holstein dairy cows
A Shahmoradi, G Ghorbani, M Khorvash, S M Nasrollahi
- 299 Investigation of milking equipment cleaning procedures in three geographical areas where milk chemical residues were identified in bulk milk
D Gleeson, B O'Brien
- 300 Comparative grazing behaviour of Holstein-Friesian and Jersey dairy cows and their F₁ cross in pasture based production systems
R Prendiville, KM Pierce, F Buckley
- 301 Comparative somatic cell score and milking characteristics of Holstein-Friesian, Jersey and Jersey×Holstein-Friesian cows at pasture
R Prendiville, K M Pierce, F Buckley
- 302 Animal performance and economic implications of Holstein-Friesian, Jersey and Jersey×Holstein-Friesian cows under seasonal pasture based systems
R Prendiville, L Shalloo, K M Pierce, F Buckley

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SDH (ADJACENT TO WHITLA HALL)

GENETICS

- 303 Genetic aspects of lambing difficulty in Scottish Blackface Sheep
J Conington, N Lambe, J Ilksa
- 304 Genetic associations between Johne's disease and susceptibility to *Mycobacterium bovis* and *Mycobacterium avium* subsp *avium* in Irish Holstein Friesian dairy cows
M L Bermingham, S J More, M Good, A R Cromie, P Mullaney, I M Higgins, D P Berry
- 305 Genetic variation in serological response to *Mycobacterium avium* subspecies *paratuberculosis* and its association with performance in Irish Holstein-Friesian cows
D P Berry, M Good, A R Cromie, S J More
- 306 Transcriptional activities of bovine lactoferrin (LTF) gene promoter haplotypes
B Bahar, F O'Halloran, L Giblin, T Sweeney
- 307 The impact of selection on milk production on the lactoferrin content of milk in Irish Holstein-Friesians
S McParland, L Giblin, R F Veerkamp, D P Berry
- 308 The influence of genetic selection on the milk fatty acid profile of spring calving dairy cows
S McParland, D P Berry, J Coleman, R F Veerkamp, H Soyeurt
- 309 Development of a new crossbreed based evaluation for carcass quality of Piétrain boars in the Walloon Region of Belgium
M F Dufresne, H Hammami, V Jaspert, J Wavreille, N Gengler
- 310 A comparison of ITS and IGS sequences of ovine nematodes
B Conneely, B Good, E McCarthy, S Hanrahan, T deWaal
- 311 The effect of inbreeding upon some growth traits in Najdi calves
Bahareh Taheri Dezfouli, Sima Savar Sofla, MohamadReza Mashayekhi
- 312 Prolactin genotyping of Najdi cattle breed using PCR-RFLP
S Sharifi, H Roshanfekr, R Khatami, KH Mirzadeh
- 313 Determination of mitochondrial D-loop sequence of Iranian Moghani sheep breed
A Mohammadhashemi, N Pirany, B Baghban Kkohne Roz, M Nassiry, A Parand
- 314 Application of fixed regression test-day model for genetic evaluation of Iranian Holsteins
Y Shamshirgaran, H Farhangfar, A A Aslaminejad, M Tahmorespour, P Rowlinson
- 315 Estimation of genetic and environment trend for birth weight and weaning weight in Najdi calves
Bahareh Taheri Dezfouli, Sima Savar Sofla, MohammadReza Mashayekhi
- 316 Estimates of genetic parameters on economical traits in Khorasan Karakul sheep
S Akbar Shiri
- 317 Single nucleotide polymorphisms in the growth hormone and insulin-like growth factor 1 genes are associated with production and fertility traits in dairy cows
C O Lynch, M P Mullen, S M Waters, D J Howard, P O'Boyle, D P Berry, D A Kenny, F Buckley, B Horan, M G Diskin
- 318 Sequence variations in the growth hormone and insulin-like growth factor 1 genes are associated with body size traits in Holstein-Friesian dairy cattle
M P Mullen, D P Berry, D J Howard, C O Lynch, M G Diskin, DA Magee, D E MacHugh, L Giblin, S M Waters

Poster Sessions

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SDH (ADJACENT TO WHITLA HALL)

- 319 Associations between the K232A polymorphism in the DGAT1 gene and performance of Holstein-Friesian dairy cattle in Irish and UK herds
B K Meredith, R Mrode, M Winters, J F Kearney, E Wall, D P Berry
- 320 Parentage Verification of Caspian horse in Iran using microsatellites Markers
Hamidreza Seyedabadi, Cyrus Amirinia, Sima Savar Sofla
- 321 Study on polymorphism of BMP-15 gene in Iranian native goats
Hamid Deldar-Tajangokeh, Ahmad Zare-shahneh, Mohammad Javad Zamiri, Ardashir Nejati-Javaremi, Mahdi Khodaie

GRASSLAND

- 322 The effects of the nitrification inhibitor dicyandiamide on herbage production when applied at varying time points and rates in the autumn
P J O'Connor, D Hennessy, M O'Donovan, B Lynch
- 323 The use of nitrification inhibitors as a strategy for increasing grass yields: can this environmental tool also benefit agronomic efficiency?
D Devaney, E Cahalan, K G Richards, C Mueller, R Laughlin, C Watson, D Hennessy
- 324 An evaluation of the effects of extended grazing pasture with ewe lambs on sward botanical composition
T W J Keady, J Moran, J P Hanrahan
- 325 The effects of autumn rotation length and cutting height on a perennial ryegrass-white clover sward
P Phelan, B Keogh, I A Casey, E Fitzgerald, J Humphreys
- 326 Using NIRS to predict composition characteristics of *Lolium perenne* L cultivars
G A Burns, T J Gilliland, D A McGilloway, M O'Donovan, E Lewis, N Blount, P O'Kiely
- 327 Yield and chemical composition of contrasting maize cultivars at sequential stages of maturity
J P Lynch, P O'Kiely, E M Doyle
- 328 Farm system N balances for contrasting intensive grassland dairy production systems
W Ryan, D Hennessey, L Shalloo, J Murphy, T Boland
- 329 Effect of post-grazing sward height on grass production and performance of four beef heifer genotypes
W Minchin, M McGee
- 330 Effect of concentrate supplementation on milk production of spring calving dairy cows with restricted herbage allowance and subsequent carryover effects
C Wims, T Boland, L Delaby, M O'Donovan
- 331 A comparison between cut and intensively grazed swards on DM yield of perennial ryegrass
C Wims, M McEvoy, T Boland, M O'Donovan
- 332 An evaluation of grass growth models for use in perennial ryegrass swards in Ireland
C Hurtado-Uria, D Hennessy, L Shalloo, R Schulte, D O Connor
- 333 Evaluating the economic performance of grass varieties
M McEvoy, M O'Donovan, L Shalloo

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GRASSLAND

- 334 Irish Grassland: feedstock for a green biorefinery application
S O Keeffe, RPO Schulte, L Kirwan, PC Struik
- 335 Late blight control in Northern Ireland using partially-resistant potato cultivars and reduced fungicide inputs
L R Cooke, G Little
- 336 Utilisation of clear-fell forestry residues as a biomass energy source: production, storage, comminution and costs and analysis of brash bale contents
E G A Forbes, D L Easson, M Fairgrieve
- 337 The relationship between bulk density and energy input, in biomass pellet production
J P Carroll, J Finnan
- 338 Seaweed extracts as possible agents in improving the emergence of barley, oats and maize in Northern Ireland
P C Mercer, R B Copeland, H S S Sharma, J Bingham

AGRICULTURAL ECONOMICS

- 339 Impact of the economic recession on emissions of greenhouse gases from agriculture in the Republic of Ireland
K Hanrahan, P R Gillespie, T Donnellan
- 340 The returns to farm afforestation in Ireland: a discounted cash flow analysis
M Ryan, J P Breen, D Clancy, F Thorne, M Wallace
- 341 Development of a dairy processing sector model for the Irish dairy industry
U Geary, L Shalloo, N Lopez
- 342 The effect of various economic, demographic, land use and landcover variables on the REPS participation decision
G Murphy, S Hynes, E Murphy, C O'Donoghue
- 343 A preliminary analysis of completion of a statutory code of practice risk assessment document by farmers in Ireland
J McNamara, M Cushion, J Grant, L Connolly

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HEALTH ISSUES

- 344 Study seasonal and liver/lung condemnation in sheep, cattle and buffalo in Khoy abattoir in Northwest, Iran
Meysam Mohseni Badalabadi, Naser Emam Jomeh Kashan, Mahdi Momen
- 345 Effects of dietary chromium-methionine supplementation on blood metabolites and insulin resistance index in fructose-fed diabetic rats
S E Ghiasi, R Valizadeh, R Rajabian, A A Naserian, A M Tahmasbi, R Jalal
- 346 Microbiological identification in Kundi, an Intermediate Moisture Meat (IMM) product
P O Fakolade, A B Omojola
- 347 Nutritional and digestion characteristics of two forms of preserved lucerne forage fed to mature horses
D G Thomas, LA Tucker

CALF NUTRITION

- 348 Effect of prestarter concentrate feeding system on calf performance
S J Morrison, A F Carson, D J Kilpatrick
- 349 The effects of mannan oligosaccharide and *Streptococcus faecium* addition to milk replacer on calf performance
S J Morrison, A F Carson, D J Kilpatrick
- 350 Effect of a range of concentrate intake thresholds to conclude weaning on the performance of calves fed using computerised milk and concentrate dispensers
S J Morrison, A F Carson, D J Kilpatrick
- 351 Starch processing wastage as a feed for Holstein bulls
A Pirzadeh Naeiny, A A Khadem, M Rezaeian, A Afzalzadeh

Highlight Discussion Sessions Tuesday 13:00 - 13:45

SDH (ADJACENT TO WHITLA HALL)

GENETICS

Session 13:00-13:27

Chair: Dr Mike Coffey

- 13:00 352 Polymorphisms in the growth hormone and insulin-like growth factor 1 genes are associated with milk production, somatic cell count, and survival in Holstein-Friesian dairy cattle
M P Mullen, S M Waters, D J Howard, C O Lynch, M G Diskin, D A Magee, D E MacHugh, L Giblin, D P Berry
- 13:03 353 Functional characterization of the promoter region of bovine Neuropeptide Y (NPY) gene
T Alam, B Bahar, S Waters, M McGee, T Sweeney
- 13:06 354 Associations between SNPs in the bovine GnRH receptor gene and breeding values for fertility traits in dairy cattle
K Derecka, S Ahmad, T C Hodgman, N Hastings, M D Royal, J A Woolliams, A P F Flint
- 13:09 355 Association of PIT1, GH and GHRHR polymorphisms with growth traits in Baluchi sheep
Mojtaba Tahmoorespur, Mehdi Vafaye Valeh, Mazyar Ansary, Davood Ali Saghi
- 13:12 356 Associations between leptin polymorphisms and performance traits in Holstein-Friesian dairy cattle
L Giblin, ST Butler, BM Kearney, SM Waters, DP Berry
- 13:15 357 Associations between single nucleotide polymorphisms in the leptin gene with body measurements and IGF-I in UK dairy heifers
A M Clempson, J S Brickell, N Munce, G E Pollott, D C Wathes
- 13:18 358 Bovine lactoferrin promoter polymorphisms associate with reproductive performance and somatic cell count in Holstein-Friesian cattle in Ireland
F O'Halloran, D P Berry, B Bahar, D J Howard, T Sweeney, L Giblin
- 13:21 359 Economic response that can be achieved from including genomic information to the terminal sire index of beef cattle
C Duthie, R Sawalha, E Navajas, R Roehe, T Roughsedge
- 13:24 360 Changes in the genetic variance of a simulated dairy cattle population in the presence of a major gene
Ghobad Asgari Jaffarabadi

ANIMAL HEALTH

Session 13:00- 13:27

Chair: Dr Spiridoula Athanasiadou

- 13:00 361 Effect of sodium selenite on male Sprague-Dolly rats exposed to sublethal dose of cadmium chloride
F Jabeen, AS Chaudhry
- 13:03 362 An abattoir survey of the incidence of liver fluke disease and Hydatidosis in sheep in Khoy abattoir, West Azarbyjan, Iran
Meysam Mohseni, Naser Emam Jomae Kashan, Mahdi Momen, Ali Mousavi Zadeh
- 3:06 363 Prevalence of tuberculosis in cattle in the highland regions of Cameroon by tuberculin skin test
J Awah Ndukum, A C Kudi , G Bradley

Highlight Discussion Sessions Tuesday 13:00 - 13:45

SDH (ADJACENT TO WHITLA HALL)

- 13:09 364 Bovine tuberculosis: molecular evolution of *Mycobacterium bovis* in the British Isles
A R Allen, J Dale, E Costello, T R Mallon, C McCormick, S V Gordon, R A Skuce, R G Hewinson, N H Smith
- 13:12 365 Dental abnormalities in horses
H V Masey O'Neill, J Keen, L Dumbell
- 13:15 366 Occurrence of Pulmonary Adenomatosis (Jaagsiekte) in sheep of animal research institute
F Amini, A Mahdavi
- 13:18 367 Challenges, problems and solutions encountered when initiating the Yorkshire and Humberside health pig scheme
J K Waters, H Miller
- 13:21 368 Interactions between neonatal lamb vigour and faecal soiling at weaning in three breeds of sheep
S M Matheson, C M Dwyer, L Bünger, J G M Houdjik
- 13:24 369 Use of an ice vest to elicit a cold response in neonatal lambs
R L Hergenhan, G N Hinch, D M Ferguson

MEAT QUALITY

Session 13:00 - 13:24

Chair: Dr Ian Richardson

- 13:00 370 Beef primal cuts expressed as a proportion of overall matured carcass weights (carcass balance) in Aberdeen Angus cross and Limousin cross steers and heifers
J J Hyslop, E A Navajas, D W Ross, A V Fisher, R I Richardson, N R Lambe, R Roehe, G Simm
- 13:03 371 Concentrations of specific unsaturated fatty acids in semitendinosus muscle of early and late maturing heifer calves offered concentrates containing either safflower oil or ruminally-protected fish oil while at pasture
P G Dunne, F J Monahan, K J Shingfield, A P Moloney
- 13:06 372 Effect of sex type, feeding regime and fat cover on eating quality of lamb
O R Oltra, L J Farmer, B Moss, J Birnie
- 13:09 373 Comparison of systems for assuring the eating quality of beef
L J Farmer, D J Devlin, N F S Gault, A W Gordon, B W Moss, E L C Tolland, I J Tollerton
- 13:12 374 Preliminary comparison between two colour measuring instruments of different optical geometries when used to measure bovine adipose and muscle tissue colour
P G Dunne, F J Monahan, B W Moss, A P Moloney
- 13:15 375 The effects of sire breed type (Charolais and Aberdeen Angus) on production and carcass quality from an organic continental cross spring calving herd
E Leavy, B Swan, R J Fallon
- 13:18 376 Qualitative characteristics of the carcass of goats finished in native pasture: effects of the genotype
R C Lucas, M F Cezar, W H Souza, M G G Cunha, J M P Filho, A M A Silva
- 13:21 377 Gene expression profiles of pork samples divergent in intramuscular fat content
O Aslan, T Sweeney, A M Mullen, J V O'Doherty, J McBryan, D Morris, R M Hamill

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