



## WPSA (UK Branch) ANNUAL MEETING

10<sup>th</sup>/11<sup>th</sup> April 2019  
EICC, Edinburgh, Scotland

### Tuesday 9th April 2019

8:00 – 18:00 Registration

### Wednesday 10th April 2019

#### Lomond Theatre

9:00-10:00 Hammond Lecture (BSAS – WPSA delegates welcome to attend)

10:00 Tea/coffee – Cromdale – lower ground floor

### Wednesday 10th April 2019

#### Carrick Theatre

10:30 **OPENING WPSA ANNUAL MEETING**

10:40-11:50 **Session 1: Invited Speaker session: Alternative proteins: technological advances**  
**Chair: Emily Burton**

10:40 1 Prof Peter Williams (Fluidquip, USA)  
Long in energy – short in protein, a role for the bioethanol industry

11:20 2 Dr Henry Barber (KWS UK Ltd)  
Wheat breeding for protein and yield: Current and future challenges

12.00-12.20 **Session 2: Original Communications (short oral – Nutrition – to a selection of poster presentations) (3 min)**  
**Chair: Dawn Scholey**

12.00 3 Effect of turmeric supplementation on haematochemical parameters of broiler chickens under a hot, humid, tropical condition  
E Oke, M Abioja, F Oke, O Iyasere, T Lawal, J Abiona, J Daramola, T Williams

12.03 4 Effect of the duration of collection period on the estimate of dietary metabolisable energy and nutrient retention in broiler chicken  
D Stanèc, I Vrabec, S P Rose, V Pirgozliev

12.06 5 Nutritional evaluation of blanched *Anthonotha macrophylla* seed meal in the diet of broilers  
A H Akinmutimi, U E Ekpo

12.09 6 Response of improved Nigerian indigenous chicken to diets containing black soldier fly meal  
O A Osinowo, A O Fafiolu, O O Adeleye, O O Oluwatosin, A A Ayoola, V Pirgozliev

12.12 7 Efficacy of a novel xylo-oligosaccharide in supporting the performance and gut health of broilers  
A Desbruslais, D Scholey, H Masey-O'Neill, E Burton

12:15 8 Determining the most appropriate bones for measuring skeletal development and integrity  
A Kemp, D Scholey, E Burton

12:30-13:30 Lunch, Cromdale – lower ground floor

**13:30-14:40 Session 3: Original communications (Feed and Nutrition) (14 mins)**

**Chair: Steve Wilson**

- 13:30 9 Effect of two rapeseed meals with and without exogenous phytase and/or xylanase on growth performance, metabolisable energy and nutrient retention when fed to broiler chickens  
T Kendal, E Watts, S P Rose, M R Bedford, V Pirgozliev
- 13:44 10 Xylanase,  $\beta$ -glucanase or xylo-oligosaccharide supplementation may improve the utilisation of carbohydrate fractions in the ileum of broilers challenged with sub-clinical coccidiosis  
A Craig, F Khattak, P Hastie, M Bedford, O Olukosi
- 13:58 11 The rate of starch digestion in broilers fed wheat based diets  
R Azhar, S P Rose, S C Mansbridge, M R Bedford, V Pirgozliev
- 14:12 12 Effect of graded levels of dietary *myo*-inositol and phytase supplementation on growth performance and plasma *myo*-inositol concentrations in broilers  
C Arthur, V Pirgozliev, S P Rose, S Mansbridge, C Brearley, I Kühn, M Bedford
- 14:26 13 Sensitivity of resilience to amino acid nutrition: reassessing the ideal protein concept?  
M A Hussein, F Khattak, L Vervelde, S Athanasiadou, J G M Houdijk

**14:40 – 15:00 Short oral introductions to a selection of poster presentations (3 min)**

**Chair: Patrick Garland**

- 14:40 14 Comparison of genetic and feed induced differences in growth rate on the expression of growth hormone and thyroid stimulating hormone beta genes in the chicken pituitary  
L Ng, P Wilson, S Caughey, I Dunn
- 14:43 15 Relationship between dietary wheat characteristics and jejunal gene expression in broilers  
R Azhar, S P Rose, S C Mansbridge, M R Bedford, V R Pirgozliev
- 14:46 16 Is pathogen induced anorexia in *Eimeria maxima* infected broilers influenced by dietary crude protein content?  
J Taylor, P Sakkas, D Blake, I Kyriazakis
- 14:49 17 Impact of *Salmonella* Typhimurium exposure on growth performance of male Ross 308 broilers  
S A Haberecht, S J Wilkinson, J R Roberts, S B Wu, R A Swick

**15:00 Cromdale Exhibition Area**

**Tea and poster viewing - Authors in attendance**

**16:00-16:42 Session 4 (14 min) Original Communications (Husbandry)**

**Chair: Nick Sparks**

- 16:00 18 Industry-level training-programme design requires inputs from research findings that deliver both novel technologies and innovative husbandry approaches  
M E Longley
- 16:14 19 Is there a difference in the brain centres controlling feed intake between qualitative and quantitative feed restriction in the broiler breeder?  
P W Wilson, L M Dixon, S D Caughey, S Brocklehurst, V Sandilands, R B D'Eath, T Boswell, I C Dunn
- 16:28 20 Phytogetic benefits on growth performance on clean and re-used litter for broilers  
J G M Houdijk, F Khattak

### Tinto/Moorfoot Theatre

- 17:00 RF GORDON MEMORIAL LECTURE**  
Prof Paul Barrow (Nottingham Vet School)
- 18:00 RF Gordon Memorial Reception – Strathblane Hall
- 19:30 WPSA ANNUAL DINNER – Sheraton Stirling suite

Thursday 11th April 2019

### Carrick Theatre

**9:00-10:30 Joint WPSA/BSAS Industry Session: Precision Farming**  
**Chair: Vicky Sandilands**

- 9:00 21 Prof Lisa Collins  
Smarter systems for livestock production: challenges and opportunities  
for integrating technology into practice
- 9:25 Julian Sparrey  
Development of a precision cervical dislocation tool for poultry from Science to Practice

### BSAS Submitted Presentations

- 09:50 Automatic detection and tracking of individual pigs in a pen  
H E Gray, L Zhang, X Ye, N Allinson, L M Collins
- 10:00 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 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 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
- 10:30-11:00 Cromdale Exhibition Area**  
**Tea and poster viewing, Authors in attendance**

### Carrick Theatre

**11:00-11:45 Session 5: Original Communications (Laying hens) (14 min)**  
**Chair: Maureen Bain**

- 11:00 22 Single- and multi-tier housing systems for free-range laying hens: effects on  
production and welfare  
V Sandilands, L Baker
- 11:14 23 Associations between production traits and egg quality of individually caged  
ISA brown hens  
D O Anene, Y Akter, C J O'Shea
- 11:28 24 Selenium and  $\alpha$ -tocopherol deposition in eggs of laying hens fed  
supplemental selenium and  $\alpha$ -tocopherol  
F O Jemiseye, O A Ogunwole, A O Mosuro, B S Adedeji
- 11:45-11:55 Presentation of president's prizes**

**12:00-12:30 WPSA AGM**

## Posters

- 25 The effect of high levels of whole wheat with enzyme supplementation on laying hen performance  
F Farhmand, F Shariatmadari, M A Karimi Torshizi
- 26 Effect of different feeding program on performance, carcass and skin quality of Broilers  
H Ghasemi, F Shariatmadari, H Ahmadi
- 27 Assessment of residual feed intake in two varieties of Japanese quail (*Coturnix coturnix japonica*) under high environmental temperature  
M Fathi, I Al-Homidan, T Ebeid, A Galal, O Abou-Emera
- 28 Antioxidant status and gut microbial population of broilers fed different dietary levels of ginger root powder (*Zingiber officinale*)  
I Al-Homidan, M Fathi, T Ebeid, O Abou-Emera
- 29 Enzyme supplementation of diets having palm kernel cake on performance and intestinal morphometry of 42 days old broiler  
I D Dada, A O Fafiolu, J O Alabi, O O Oluwatosin, O P Sobukola
- 30 Application of a high density distiller's protein product in turkey poult diets from 0-42 days of age  
D Scholey, E Burton, P Williams
- 31 Dietary means to improve the antioxidant status of broiler chickens grown in high temperature conditions  
C Westbrook, S Woods, S P Rose, M R Karagecili, F Karadas, D G Yovchev, V Pirgozliev
- 32 The effect of different selenium sources on the growth performance and antioxidant status of broiler chickens reared in two different temperatures  
S Woods, S P Rose, I M Whiting, C Ionescu, D Bravo, V Pirgozliev
- 33 Studies on broiler growth and economics in response to steroid supplementation  
J Hussain, A Mahmud, S Mehmood, M Hayat Jaspal, F Hussnain, S Bakhtiar
- 34 In vitro antibacterial activity of botanicals against *Campylobacter jejuni*, *Listeria monocytogenes*, *Escherichia coli* and *Salmonella enterica*  
R McMurray, C Situ, E Ball, M Tunney, N Corcionivoschi
- 35 Performance characteristics of laying hens fed diets supplemented with inorganic or chelated blends of copper, zinc and manganese in late lay  
O W Ariyo, O O Oluwatosin, A O Fafiolu, A V Jegede, L T Egbeyale, A A Ayoola, M K Manangi, V Pirgozliev
- 36 Growth performance and nutrient digestibility of Japanese quails fed diets containing graded levels of sundried cassava peel meal supplemented with molasses as replacement for maize  
S Adio, A T Ijaiya, S S A Egena, H W Olalere, F Afolabi
- 37 Discovering genes and pathways in the shell gland which may be involved in egg cuticle formation by gland shell RNA-Seq data analyses  
S Poyatos Pertíñez, P W Wilson, I C Dunn
- 38 Feeding next generation xylanase to young broiler chickens  
K Dimitrova, S P Rose, S C Mansbridge, G Gonzalez-Ortiz, M R Bedford, V R Pirgozliev
- 39 Re-used litter impacts on post-hatch broiler performance, litter quality and caecal morphology  
F Khattak, G Kanbur, J G M Houdijk

- 40 Comparative investigation of the phytate susceptibility of feed ingredients from Australia and the UK  
K Wilshaw, D Scholey, N Morgan, E Burton
- 41 Use of a bio-emulsifier mitigates the detrimental effect of feeding lecithin oil in young broilers  
D Scholey, A Wealleans, J Shaw, S Pritchard, E Burton
- 42 The effect of the host nutritional status and coccidiosis infection on chicken productivity  
I Akinci, F Khattak, N Sparks, O Hanotte
- 43 In-feed larvacide produces toxic histopathological effect on liver and kidney of broiler chickens  
O O Adeleye, O O Oluwatosin, A V Jegede, A O Fafiolu, O O Adeleye, O T Sigbeku