


**British Society of
Animal Production**



Winter meeting

23 - 25 March 1992

Grand Hotel
Scarborough

Programme and summaries

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BRITISH SOCIETY OF ANIMAL PRODUCTION

WINTER MEETING 1992

PROGRAMME

DAY	TIME	THEATRE SESSIONS	POSTER SESSIONS
MONDAY 23 MARCH		Ballroom Palm Court Lounge	<u>Fish</u> Sea View Lounge Session Opens 1410 Authors in attendance 1420-1500 Discussion 1610-1740
	1400	The President	
	1410	<u>Ruminant Nutrition</u> <u>Pig Nutrition 1</u>	<u>Poultry</u> Sea View Lounge Session Opens 1410 Authors in attendance 1420-1500
	1550	TEA	
	1610	<u>Embryo Gene Manipulation in Farm Animals</u> <u>Pig Nutrition 2</u>	<u>Goats</u> Balcony session opens 1410 Authors in attendance 1420-1500
	1900	SCARBOROUGH TOWN COUNCIL RECEPTION	
	1930	ANNUAL DINNER	
TUESDAY 24 MARCH	0900	<u>HAMMOND MEMORIAL LECTURE</u>	
	1010	COFFEE	
	1030	<u>European Lectures - France</u> <u>Sheep Production</u>	<u>Dairy Cow Metabolism & Nutrition</u> Sea View Lounge Session opens 0900 Authors in attendance 1030-1145 Discussion 1145-1230
	1230	LUNCH	
	1340	<u>Pigs and Sows</u> <u>Milk Production: 1</u>	<u>Dairy Production</u> Sea View Lounge Session Opens 0900 Authors in attendance 1030-1145
	1520	TEA	
	1540	<u>Man-Animal Interface</u> <u>Ruminant Reproduction</u>	<u>Pigs</u> Balcony Session opens 0900 Authors in attendance 1030-1230
	1800	ANNUAL GENERAL MEETING	
	1930	DINNER	
	2045	<u>PUBLIC PERCEPTION OF ANIMAL PRODUCTION</u>	
WEDNESDAY 25 MARCH	0900	<u>IMPACT OF BLAXTER - Plenary Session</u>	
	1030	COFFEE	
	1050	<u>Impact of Changes on Milk Marketing in the UK</u> <u>Pig Welfare and Behaviour</u>	<u>Carcass and Meat Quality</u> Sea View Lounge Session opens 0900 Authors in attendance 1050-1145 Discussion 1145-1230
	1230	LUNCH	
	1340	<u>Milk Production: 2</u> <u>Beef Production</u>	<u>Beef</u> Sea View Lounge Session opens 0900 Authors in attendance 1050-1145
	1540	CLOSE OF MEETING	
			<u>Rumen Metabolism</u> Balcony Sessions open 0900 Authors in attendance 1050-1145

Monday 23 March 1992

Theatre Session
Ballroom

RUMINANT NUTRITION

Chairman - Dr J D Oldham

- 1400 Opening Remarks by the BSAP President Prof A J F Webster
- 1410 1 Protein utilisation by the mammary gland in lactating dairy
 cows
 J A Metcalf, D E Beever, J D Sutton & D J Humphries
- 1430 2 Milk protein precursors in lactating goats
 B J Bequette, C Backwell, G E Lobley & J C MacRae
- 1450 3 Effect of protein supplementation on the digestibility of
 urea treated whole crop wheat and on milk production by
 dairy cows
 J Hill & J D Leaver
- 1510 4 The effect of plane of nutrition and forage: concentrate
 ratio on the performance and carcass composition of steers
 R W J Steen
- 1530 5 The effect of dietary nitrogen and energy synchronisation
 on rumen fermentation and microbial protein synthesis in
 sheep
 L A Sinclair, P C Garnsworthy, J R Newbold & P J Buttery
- 1550 TEA

EMBRYO AND GENE MANIPULATION IN FARM
ANIMALS

Chairman - Dr R G Rodway

- 1610 6 The use of embryo transfer in ruminant genetic improvement
 programmes
 G Simm
- 1645 7 Prospects for molecular genetic manipulation of livestock
 I Wilmut
- 1720 8 Future prospects for embryo multiplication by nuclear
 transfer
 C Galli & R M Moor
- 1755 Session Ends
- 1900 SCARBOROUGH TOWN COUNCIL RECEPTION
- 1930 ANNUAL DINNER

Monday 23 March 1992

Theatre Session
Palm Court Lounge

P I G N U T R I T I O N: 1

Chairman - Dr W H Close

- 1410 9 Feed energy evaluation systems and current research on dietary fat for pigs in Europe:
Report of 1991 Braude Scholarship:1
J Powles
- 1430 10 The effect of using fibrous feeds as nutrient diluents on the carcass quality and performance of finishing pigs fed ad libitum
B P Gill, A G Taylor, B Hardy & J G Perrott
- 1450 11 Feed ingredient selection in growing and finishing pigs: Effects on performance and carcass quality
G E Onibi, B P Gill & P R English
- 1510 12 Dietary choices made by growing pigs given feeds that differ in protein content and the inclusion level of rapeseed meal
I Kyriazakis, G C Emmans & A J Taylor
- 1530 13 The activity and straw directed behaviour of pigs offered foods with different crude protein content
M B Jensen, I Kyriazakis & A B Lawrence

1550 TEA

P I G N U T R I T I O N: 2

Chairman - Prof C T Whittemore

- 1610 14 Apparent ileal digestibility of crystalline L-tryptophan in young pig diets
L Bong, D J A Cole & W Haresign
- 1630 15 Effect of extrusion and steam flaking of cereals on growth rate and feed utilisation by weaned pigs
P B Lynch & I Zoccarato
- 1650 16 The relationship between feed composition and the efficiency of protein utilisation in young pigs
I Kyriazakis, G C Emmans & A J Taylor
- 1710 17 Evidence of the ineffectiveness of creep-feeding using a new method for measuring intake by early-weaned piglets
N K Waran & D M Broom
- 1730 Session Ends
- 1900 SCARBOROUGH TOWN COUNCIL RECEPTION
- 1930 ANNUAL DINNER

Tuesday 24 March 1992

Theatre Session
Ballroom

SIR JOHN HAMMOND MEMORIAL LECTURE

Chairman - Prof A J F Webster

0900 Sustainable Husbandry
Jonathan Porritt (Ex-Director, Friends of the Earth)

1010 COFFEE

E U R O P E A N L E C T U R E S - F R A N C E

Chairman - Prof J M Forbes

1030 18 Control of feeding behaviour and feed intake in the dairy
cow
P Faverdin, INRA, France

1055 19 The influence of protozoa in ruminant digestion
J P Jouany, INRA, France
J Bohatier, J Senaud, S Toillon & M Fabre

1120 Discussion

1130 20 Development of thermoregulation and metabolic pathways in
the newborn pig in relation with survival
P Herpin, INRA, France

1155 21 Differentiation and growth of myofibers in the pig.
Factors of variation and consequences on meat quality
L Lefaucheur, INRA, France

1220 Discussion

1230 LUNCH

Tuesday 24 March 1992

Theatre Session
Palm Court Lounge

0900-1010 SIR JOHN HAMMOND MEMORIAL LECTURE
(See Opposite page for details)

1010 COFFEE

S H E E P P R O D U C T I O N

Chairman - Mr C F R Slade

- 1030 22 The effect of fixed effect model and prior estimates on sire ranking in a Suffolk sire referencing scheme
G E Pollott & D R Guy
- 1050 23 The ability of growing sheep to select a diet that meets their protein requirements
I Kyriazakis & J D Oldham
- 1110 24 Effect of malt distillers wet grains on lamb finishing and carcass lipid composition
J E Vipond, M Lewis, J FitzSimons, R C Noble & G Horgan
- 1130 25 Effect of silage quality and frequency of feeding of supplementary concentrates on serum metabolite and insulin-like growth factor 1 (IGF-1) concentrations in the late pregnant ewe
A R G Wylie & D M B Chestnutt
- 1150 26 Litter size effects on intake at pasture and on plasma creatinine and urea concentrations in terminal sire breeds of sheep of similar mature size but different body composition
S A Vulich & J P Hanrahan
- 1210 27 Correlated responses in slaughter and carcass traits of crossbred progeny to selection for carcass lean content in sheep
N D Cameron

1230 LUNCH

Tuesday 24 March 1992

Theatre Session
Ballroom

P I G S A N D S O W S

Chairman - Dr S A Edwards

- 1340 28 The effect of in situ composting on nitrogen, micro-organisms and odour emissions from sawdust beds.
 R M Kay & A T Smith
- 1400 29 The utilisation of plain sugar beet pulp and wheat straw by pregnant sows
 T Yan, A C Longland, W H Close, C E Sharpe & H D Keal
- 1420 30 Lifetime performance of sows given different rearing and pregnancy feeding regimes
 P H Simmins, S A Edwards, H H Spechter & J E Riley
- 1440 * 31 An evaluation of the Duroc breed in cross-breeding programs: 1. Sow productivity, growth and carcass traits
 D B Lowe, C C Warkup & C P Baldwin
- 1500 32 Effect of dietary α -tocopherol on plasma and milk α -tocopherol levels in the sow
 P B Lynch, D J Buckley & P A Morrissey
- 1520 TEA

M A N A N I M A L I N T E R F A C E

Chairman - Dr A B Lawrence

- 1540 33 The biological basis of animals' responses to man
 P H Hemsworth, Victorian Institute of Animal Science, Victoria, Australia
- 1605 34 The practical implications of animals' responses to man (specifically effects on production parameters)
 M F Seabrook, University of Nottingham
 N C Bartle
- 1630 35 Interactions between animals and machines
 C Wathes, Silsoe Research Institute, Silsoe, Bedford
- 1655 Discussion
- 1730 Session Ends

1800 ANNUAL GENERAL MEETING

1930 DINNER

2045 PUBLIC PERCEPTION OF ANIMAL PRODUCTION
(see opposite for details)

- * (Paper No 31, author D B Lowe, should be read in conjunction with paper 184, author C C Warkup, poster session Carcass and Meat Quality)

Tuesday 24 March 1992

Theatre Session
Palm Court Lounge

M I L K P R O D U C T I O N: 1
Chairman - Dr P Rowlinson

- 1340 36 Variation in the milk yield, endocrine and metabolic responses following bovine somatotropin administration to dairy cows
M T Rose, T E C Weekes & P Rowlinson
- 1400 37 The response to thrice-daily milking and its relationship to cisternal storage capacity in dairy cows
R J Dewhurst, C H Knight
- 1420 38 An examination of the effect of type of concentrate and method of concentrate feeding on the milk production of British Friesian dairy cows offered grass silage based diets
K W Agnew & C S Mayne
- 1440 39 Effects of feeding low levels of high protein concentrates differing in protein source on milk production of dairy cows
S Fitzgerald & J Murphy
- 1500 40 The effect of protein content of the supplement on milk production of dairy cattle offered low and high digestibility grass silage ad libitum
C S Mayne

1520 TEA

R U M I N A N T R E P R O D U C T I O N
Chairman - Dr J J Robinson

- 1540 41 The development of in-vitro fertilized (IVF) cattle ova in an oviduct cell co-culture system
C McCaffrey, M G Diskin, K H Lu & J M Sreenan
- 1600 42 Conceptus development following blastocyst transfer to ewes. induced to ovulate at 28 days post-partum
J M Wallace, R P Aitken & M A Cheyne
- 1620 43 Increased ovulation and twin-calving rates in heifers immunized against bovine inhibin peptides
D G Morris, M G Diskin & J M Sreenan
- 1640 44 Divergent selection for ovulation rate in sheep: effect on embryo survival
J P Hanrahan
- 1700 45 Evaluation of crestar for synchronising oestrus in maiden heifers used as embryo transfer recipients
L D Tregaskes, P J Broadbent, D F Dolman & S P Grimmer
- 1720 46 Embryo mortality in maiden Hereford x Friesian heifers following embryo transfer
D Pullar, K F D Brown & A E Wrathall

1740 Session Ends

1800 ANNUAL GENERAL MEETING

1930 Dinner

PUBLIC PERCEPTION OF ANIMAL PRODUCTION
Chairman - Dr M J Ducker

- 2045 47 The view from within
A J Kempster, MLC, Milton Keynes
- 2110 48 The view from without
R Brook, Deputy Chairman, Daniel J Edelman Ltd, London
- 2135 Discussion

Wednesday 25 March 1992

Theatre Session
Ballroom

PLENARY SESSION

- 0900 IMPACT OF BLAXTER
Chairman - Professor D G Armstrong
- 0910 49 Metabolizable Energy Revisited
 D E Beever & J R Macrae
- 0935 50 The Efficiency of energy use in Animal Production
 A J F Webster
- 1000 51 Animal Fats and Human Health
 T Ulbricht
- 1030 COFFEE
- IMPACT OF CHANGES ON MILK MARKETING IN THE UK
Chairman - Dr C Thomas
- 1050 52 The New Market Place
 M Mackie, Mackie's Aberdeen Dairy
- 1115 53 Strategic Issues Facing the European Dairy Industry
 post 1992
 C J Doyle, SAC, Auchincruive
- 1140 54 Manipulation of Milk to Meet Market Needs
 F Harding, MMB, Thames Ditton
- 1205 Discussion
- 1230 LUNCH

Wednesday 25 March 1992

Theatre Session
Palm Court Lounge

0900 IMPACT OF BLAXTER
(See opposite for details)

1030 COFFEE

PIG WELFARE AND BEHAVIOUR

Chairman - Dr C Petherick

- 1050 55 Sow housing, behaviour and productivity are related to opioid receptor densities
A J Zanella, D M Broom & J C Hunter
- 1110 56 Mediation of stress-induced inhibition of oxytocin in farrowing sows by endogenous opioids
A B Lawrence, J C Petherick, K Mclean & C Gilbert
- 1130 57 The effect of the ingestion of food on performance of stereotypies in sows
E M C Terlouw & A B Lawrence
- 1150 58 The efficiency of A1 in pigs: lessons from Australian research - Report of the 1991 Braude Scholarship:2
J H Dunne
- 1210 59 The effect of slaughter handling system on pig welfare and meat quality
C M Weeding, E J Hunter, H J Guise & R H C Penny
- 1230 LUNCH

Wednesday 25 March 1992

Theatre Session
Ballroom

M I L K P R O D U C T I O N : 2

Chairman - Dr D J Roberts

- 1340 60 Prediction of margin over food, health and reproduction costs
R F Veerkamp, G Simm & J Oldham
- 1400 61 The effects of fermentation characteristics of grass silage on the eating behaviour of dairy cows
H F Elizalde & C S Mayne
- 1420 62 A comparison of distillers dark grains with proprietary concentrate for milk production
E McKendrick & J J Hyslop
- 1440 63 Effects of sodium fertilizer application to pasture, or its direct supplementation, on dairy cow production and grazing behaviour
P C Chiy & C J C Phillips
- 1500 64 Whole crop barley as a supplementary feed for grazing dairy cows
A Hargreaves & J D Leaver
- 1520 Session Ends
- 1540 Close of Meeting

B E E F P R O D U C T I O N

Chairman - Dr G E Pollott

- 1340 65 Active immunization of young male calves and post pubertal
bulls against LHRH with various conjugate doses
A F Carson, W J McCaughey & R W J Steen
- 1400 66 The effect of pheromones from cows in oestrus on the duration
of the post-partum anoestrous period in beef cows
I A Wright, S M Rhind, A J Smith & T K Whyte
- 1420 67 Effect of body condition score at calving and suckling
frequency on post-partum interval in suckler cows
M G Diskin, M Grealy & J M Sreenan
- 1440 68 The effect of extended photoperiod on performance, behaviour
and prolactin levels of finishing dairy bred steers and
heifers
P N Johnson, J M Forbes, C J C Phillips, Talal Mustapha Arab
& S M Bettany
- 1500 69 The effects of plane of nutrition and slaughter weight on
performance and carcass composition of beef cattle
R W J Steen
- 1520 70 Rumen in vitro techniques for the investigation of rumen
probiosis - Jerry Hughes Memorial Scholarship for 1991
J A Huntington
- 1540 Close of Meeting

Monday 23 March 1992

Poster Session
Sea View Lounge

Authors in attendance 1420-1500
Discussion 1610-1740
Chairman - Dr J Buchanan

Session Opens 1410

F I S H

- 71 Effects of temperature and feeding level on growth and feed efficiency of farmed rainbow trout
K McCavana & K J McCracken
- 72 Effects of stocking density on growth and feed efficiency of farmed rainbow trout
K McCavana & K J McCracken
- 73 The effect of replacing fishmeal with carbohydrate on the feed intake and growth of turbot (*Scophthalmus maximus* L.)
I E Calcedo
- 74 Feeding behaviour of Atlantic salmon in sea cages
J E Thorpe, F Huntingford, N Metcalf, I Smith, & M Burns
- 75 Feeding rhythms of Atlantic salmon smolts held in sea cages in the summer - C E Rawlings & J E Thorpe
- 76 Appetite and maturation in Atlantic salmon before transfer to sea
A Simpson & J E Thorpe
- 77 Environmental implications of nutrition and metabolism of salmonids
C G Carter, D F Houlihan, I D McCarthy, A I Mitchell & B Buchanan
- 78 The humane slaughter of farmed Atlantic salmon
J L Webster
- 79 The problems of treating salmon in sea cages - G H Rae
- 80 Short periods of continuous light can both advance and delay spawning in the rainbow trout - C F Randall, N R Bromage & J Symes
- 81 The effects of seasonal alterations in ration on fecundity and maturation in rainbow trout (*oncorhynchus mykiss*)
N R Bromage & J Jones

Poster Session
Sea View Lounge

Session Opens 1410

Authors in attendance 1420-1500

P O U L T R Y

- 82 Ascorbic acid: A limiting nutrient affecting performance and physiological response of broiler chicks under heat stress
H R Kutlu & J M Forbes
- 83 WITHDRAWN
- 84 Egg production and quality: Effects of *Vicia faba* in laying hen diets
J R Scaife, A Amare, T Acamovic, W Michie & M Davis
- 85 Diurnal food intake patterns of broiler chickens offered a choice of feed varying in protein content
F Shariatmadari & J M Forbes
- 86 Reduction of intestinal viscosity in barley fed broilers by B-glucanase: Site of action and effect on bird performance
M R Bedford, H L Classen
- 87 Behaviour-environment interactions in hens: implications for housing design
M C Appleby

Monday 23 March 1992

Poster Session

Balcony

Session Opens 1410

Authors in attendance 1420-1500

G O A T S

- 88 WITHDRAWN
- 89 Use of a 'floor' method instead of metabolism crates for collecting
 faeces from goats, for estimating digestibility of dry matter
 J E Velasquez & E Owen
- 90 The effect of genotype on fibre production in Cashmere goats
 M Gallagher & A Waterhouse
- 91 The effect of two feeding patterns on performance of bred doe kids
 in late pregnancy
 S Scanlan & L C Roger
- 92 The effect of nutrition at mating and time of housing and shearing
 on doe performance
 L C Roger, G Gunn, A Waterhouse, S Scanlan, & J Bell
- 93 The use of fibre length measurements and patch sample weights as
 predictors of yield and down weight in a population of Cashmere
 goats
 L C Roger, A Waterhouse & S Scanlan
- 94 The effect of varying protein degradability on mohair fibre
 characteristics and liveweight gain in Angora goats
 S A Austin, D Aliakbar, A Cooper & J Kirk
- 95 Responses of Matebele goats of Zimbabwe to feeding level: late
 pregnancy
 L Majele Sibanda, M J Bryant & L R Ndlovu
- 96 Responses of Matebele goats of Zimbabwe to feeding level:
 lactation
 L Majele Sibanda, M J Bryant & L R Ndlovu
- 97 Milk production, vitamin and immunological status of Cashmere does
 and kids differing in prepartum housing date and buck genotype
 H Galbraith, J Bell, J R Scaife, T Acamovic, D C Macdonald &
 L C Roger

Tuesday 24 March 1992

Poster Session
Sea View Lounge

Authors in attendance 1030-1145
Discussion 1145-1230
Chairman - Mr G Alderman

Session Opens 0900

D A I R Y C O W M E T A B O L I S M A N D N U T R I T I O N

- 98 The relative importance of the amounts of energy and crude protein in the concentrate ration on intake and yields of milk constituents by autumn-calving Holstein-Friesian cows given grass silage ad libitum
K Aston, J D Sutton, R D Baker & W J Fisher
- 99 The influence of carbohydrate source and concentration of crude protein in a concentrate given with grass silage ad libitum on the performance of autumn-calving Holstein-Friesian cows
K Aston, C Thomas, R D Baker, P M Hughes & S R Daley
- 100 Body composition and performance of autumn-calving Holstein-Friesian dairy cows during lactation: Food intake, milk constituent output and liveweight
J D Sutton, K Aston, D E Beever & W J Fisher
- 101 Body composition and performance of autumn-calving Holstein-Friesian dairy cows during lactation: non-carcass component weights
M J Gibb, W E Ivings & J D Sutton
- 102 Body composition and performance of autumn-calving Holstein-Friesian dairy cows during lactation: chemical composition of the body
M J Gibb, W E Ivings & J D Sutton
- 103 Body composition and performance of autumn-calving Holstein-Friesian dairy cows during lactation: velocity of ultrasound measurements
W E Ivings, M J Gibb & M S Dhanoa
- 104 Body composition and performance of autumn-calving Holstein-Friesian dairy cows during lactation: metabolic activity in vitro of subcutaneous adipose tissue
A Walsh, J D Sutton & D E Beever
- 105 Body composition and performance of autumn-calving Holstein-Friesian dairy cows during lactation: energy partition
S B Cammell, D E Beever, J D Sutton, M C Spooner & M J Haines

Tuesday 24 March 1992

Poster Session
Sea View Lounge

Session Opens 0900

Authors in attendance 1030-1145

D A I R Y P R O D U C T I O N

- 106 Effect of energy status on milk production responses to dietary addition of fat in cows
P A Martin, D G Chamberlain, J J Choung & S Robertson
- 107 The effect of pattern of feeding on the freezing point depression of milk - I Barclay, D J Roberts
- 108 Effect of fishmeal and wheat bran diet on the performance of local lactating cows in Bangladesh
M A S Khan, M A Akbar and J H Topps
- 109 The responses of lactating dairy cows to feeding of high molasses levels
T Yan & D J Roberts
- 110 Relationship between cisternal storage capacity and tolerance of once-daily milking in dairy cows - C H Knight & R J Dewhurst
- 111 The effect of level and source of starch and method of processing cereals on milk production of dairy cows - F O'Mara, J J Murphy & M Rath
- 112 The fat soluble vitamin and fatty acid composition of colostrum, milk and fatty acid composition of erythrocyte membranes in calves supplemented with vitamin E and linoleic acid
J R Scaife, M Khombe, F Paton, T Acamovic & D C MacDonald
- 113 The performance of dairy cows fed concentrate and grass silage diets containing moderate and high proportions of concentrate
J A Rooke, A M Bahman & J H Topps
- 114 The influence of varying levels of concentrate and type and level of supplementary feed on dairy cow performance
P Rowlinson, B Milner, D G Armstrong, J D Oldham & S Marsden
- 115 Effect of protein realimentation on lactational performance in rats - A P Pine, N S Jessop & J D Oldham
- 116 Standard values for dairy herd fertility parameters
R J Esslemont, R Schutte & A T Chamberlain
- 117 A new technique for use in the study of lameness in dairy cows
D N Logue, J E Offer, S A Kempson, J A Bax & H Bradley
- 118 Subclinical mastitis in problem herds in Scotland
D N Logue, J Gunn, D Fenlon & D Arnot
- 119 Use of a norgestomet implant to reduce embryonic loss and resynchronise oestrus in dairy heifers
D N Logue, J A Bax, J P Renton & J McNally
- 120 Variations in dairy cattle somatic cell counts during lactation
E Mohammedi, A Sword & D J Roberts
- 121 The effect of lameness on milk production in Friesian-Holstein cows
J B Merritt, F J Manson, W B Russell & D Y Downham
- 122 Genetic parameters and trends for production traits in Jersey island heifers - R A Mrode, G J T Swanson & H J Bellamy
- 123 Computing connectedness among management groups under an animal model - R A Mrode, G J T Swanson
- 124 From where do dairy farmers get their information?
T Shimoda, M H Heine, R G Woodhouse & P Rowlinson
- 125 Estimation of genetic parameters for conformation traits assessed on a linear scale in Ayrshire cattle
H J Bellamy, R A Mrode & G J T Swanson

Tuesday 24 March 1992

Poster Session

Balcony

Session Opens 0900

Authors in attendance 1030-1230

P I G S

- 126 Response of finishing pigs (50 to 90 KG) to dietary ideal protein
B P Gill, V R Fowler, A G Taylor & P R English
- 127 The effect of increasing workload to obtain feed ad libitum on
performance and behaviour of finishing pigs - A T S Morrow & N Walker
- 128 A study of the timing and duration of oestrus in sows post-weaning and
of problems at mating - W Y Huang, J Behan, L Beveridge, C Rodrigo,
J H Dunne, J S M Hutchinson, O Macpherson, J A Roden & P R English
- 129 Influence of variety and site of cultivation on the nutritive value of
rapeseed meal for growing pigs - R J Lambert, M Ellis, R Smithard & M Davis
- 130 Influence of glucosinolate content of rapeseed meal diets on the growth
performance of newly weaned pigs
R J Lambert, M Davis, M Ellis, & R Smithard
- 131 Time taken by growing pigs to consume meals from different varieties of
rapeseed - R J Lambert, C G Hawkins & M Ellis
- 132 Performance of growing/finishing pigs fed diets based on manitou (6-row
barley) - B Hardy & K Benford
- 133 Dietary protein selection by Chinese and European growing pigs given choice
feeding - J M Vidal, F Brouns, S A Edwards, P R English,
O MacPherson, A G Taylor & C S Haley
- 134 Effects of environmental enrichment on growing pigs - I Horrell
- 135 Enzyme supplementation of wheat, barley or sugar beet pulp based diets
for early weaned piglets: effects on performance and faecal nutrient
digestibility - J Mellange, J Inbarr & B P Gill
- 136 Automated wet feeding of weaner pigs versus conventional dry diet
feeding - effects on growth rate and feed consumption
G G Partridge, J Fisher, H Gregory & S G Prior
- 137 The performance of three consecutive groups of pigs finished on in situ
composting sawdust beds - R M Kay & A T Smith
- 138 The effect of a slurry additive on odour and ammonia emissions from pig
buildings - R M Kay, B F Pain, C R Clarkson & T H Misselbrook
- 139 Reproductive performance of sows mixed into dynamic groups in early
pregnancy - P H Simmins
- 140 The influence of a barrier on the behaviour and growth of early-weaned
piglets - N K Waran & D M Broom
- 141 The effect of dietary electrolyte balance on the performance of growing
pigs - D J A Cole, J Wiseman, J Davies, G Partridge & A Reeve
- 142 An evaluation of two indirect methods of determining the water intake
of growing pigs - J Barber, P H Brooks & J L Carpenter
- 143 Effect of added dietary nitrogen from different sources on intake and
digestibility by pregnant gilts of diets containing unmolassed sugarbeet
pulp - E Abreu, F Brouns, S A Edwards, V R Fowler & R I Smart
- 144 Voluntary intake & digestibility of distillery products for dry sows
S A Edwards, C Marconnet, A G Taylor & A Cadenhead
- 145 Dominance hierarchies in sows and the consequence for liveweight gain in
competitive and non-competitive feeding systems
F Brouns, F MacMenemey & S A Edwards
- 146 Feeding motivation of sows fed a sugarbeet pulp diet
F Brouns, S A Edwards & P R English
- 147 Effects of unmolassed sugarbeet pulp on regulation of voluntary food intake
in pigs - F Brouns, S A Edwards & P R English

Tuesday 24 March 1992

Poster Session
Sea View Lounge

Authors in attendance 1400-1520
Discussion 1540-1640
Chairman - Dr C S Mayne

Session Opens 1340

S I L A G E A D D I T I V E S

- 148 The effects of maxgrass treatment of bale silage on the performance of beef cattle
 J R Weddell
- 149 The effect of different additives on proteolysis during the ensilage of ryegrass
 A P Williams, R J Merry, J K S Tweed & D K Leemans
- 150 Growth and rumen fermentation in cattle fed silages made using organic acids
 P O'Kiely & A P Moloney
- 151 WITHDRAWN
- 152 The performance of dairy cows fed maxgrass and formic acid treated silages
 J J Murphy
- 153 An evaluation of the concentrate sparing effect of four silage additives
 C S Mayne
- 154 The effect of maxgrass silage additive and level of concentrate supplementation on silage intake, animal performance and carcass characteristics of finishing beef cattle
 R E Poots, M T Carson & S J Kennedy
- 155 Epiphytic lactic acid bacteria succession during the pre-ensiling and ensiling periods of alfalfa and maize
 Chunjian Lin, K K Bolsen, B E Brent, D Y C Fung & W R Aimutis
- 156 Effect of silage additives on the microbial succession and the fermentation process of alfalfa and whole-plant maize silages
 K K Bolsen, B E Brent & Chunjian Lin
- 157 Effects of the chemical composition of silage and of supplementary concentrates on rumen fermentation in sheep
 P A Martin, D G Chamberlain & S Robertson
- 158 The effect of formaldehyde and formic acid as silage additives on the ruminal degradation of a grass-legume silage
 S Lopez, M D Carro, C Carpintero & J S Gonzalez
- 159 The effect of an additive on the aerobic stability and subsequent intake of grass silages
 O D Davies
- 160 The effect of silage additive and concentrate supplementation on lamb silage intake and performance
 G Flores, M R Cropper & A G Arraez

Tuesday 24 March 1992

Session Opens 1340

Poster Session
Sea View Lounge

Authors in attendance 1400-1520

S H E E P

- 161 The effect of pre-mating shearing on lambing rate in ewe lambs and subsequent lamb performance
N Pickard & P N Johnson
- 162 The effect of providing a creep feed with or without a coccidiostat to March born lambs kept at high stocking rates
D C Brown & E M Thomas
- 163 Effect of flat rate feeding in late pregnancy on colostrum and lamb production of prolific ewes
S E Pattinson, D A R Davies & A C Winter
- 164 Effects of fishmeal supplementation of baled grass and clover silages fed ad libitum to lambs
J E Vipond, D H Anderson & G Horgan
- 165 Strategies to avoid parasitic gastroenteritis in an intensive organic hill sheep system
A Waterhouse, G Halliday, J T Wyllie & S Horbury
- 166 The effect of ambient temperature on feed intake and diet selection in growing lambs
M R Cropper & D P Poppi
- 167 Measurement of 'reach' in stall-fed sheep and goats
V R M Muhikambele, E Owen & J E Owen
- 168 The effect of seaweed meal supplementation on the mineral status and fertility of summer lambing ewes on an organic management system
L M Mitchell, M E King, G Halliday & D Younie
- 169 Offering barley straw to lambs near weaning as a means of increasing their subsequent readiness to eat straw
F N A Odoi & E Owen
- 170 Strategies to minimise helminth challenge to summer born lambs grazing clover rich swards on an organic management system
L M Mitchell, M E King, G Halliday & D Younie
- 171 Evaluation of pasture sampling procedures for the estimation of herbage n-alkanes
S A Vulich, J P Hanrahan & E G O'Riordan
- 172 Enhancement of teaser ram activity using exogenous melatonin
M E King, S McCombes, J S M Hutchinson, M Donald & L M Mitchell
- 173 Distillers draff and forage rape as supplements for store lambs grazing swedes in situ
L M Mitchell & M E King
- 174 Growth of lambs given different allowances of digestible crude protein and metabolisable energy
M R Cropper, D P Poppi & A M Nicol
- 175 Suckling behaviour and the transfer of immunoglobulins in neonatal lambs
W Haresign, J L Metheringham & A J Griffiths
- 176 An evaluation of pure-bred and cross-bred dairy ewes in a commercial sheep milking operation
N J Brown, P R English, J A Roden & G Burgess

Wednesday 25 March 1992

Poster Session
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Authors in attendance 1050-1145
Discussion 1145-1230
Chairman - J D Wood

Session Opens 0900

C A R C A S S A N D M E A T Q U A L I T Y

- 177 Eating quality evaluation of meat from the crossbred lamb progeny of three terminal sire breeds
 M Ellis, G M Webster, I Brown & B G Merrell
- 178 The genetics of lean meat estimators in a Suffolk sire referencing scheme
 G E Pollott & D R Guy
- 179 Mature body composition of the Gallego sheep breed of Galicia (north-west Spain)
 M R Cropper & N Diaz
- 180 Effect of breed on lipid metabolism in growing-fattening bulls:
 1 Plasma lipid metabolites
 A Clinquart C Van Eenaeme, L Istasse, I Dufrasne, M Gielen & J M Bienfait
- 181 A model for predicting chemical composition of pigmeat, beef and sheepmeat from carcasses of different classifications
 G L Cook & A J Kempster
- 182 The effect of haulage distance on the performance and welfare of beef bulls and the eating quality of the beef
 K D Sinclair, C Jessiman & A M Clark
- 183 Effect of breed on lipid metabolism in growing-fattening bulls.
 2. Fatty acid composition in the carcasses
 A Clinquart, C Van Eenaeme, L Istasse, N Korsak, P Baldwin & J M Bienfait
- 184 * An evaluation of the Duroc breed as a component of cross-breeding programmes 2. meat quality traits
 C C Warkup, D B Lowe & P D Warriss
- 185 The influence of changes in dietary oil content on the fatty acid profile of backfat in pigs
 J Wiseman, J A Agunbiade & D J A Cole
- 186 Effect of hot chining beef carcasses on tenderness of the eye muscle
 N G Gregory & P J Murray
- 187 A comparison of the carcass and meat quality characteristics of Piemontese and Charolais-cross cattle at the same subcutaneous fat proportion
 A V Fisher, G R Nute & M H Davies
- 188 A consumer study into the acceptability of beef from young bulls
 D J Gair, K D Sinclair, M Hamilton & O MacPherson
- 189 Productivity and carcass characteristics of steer progeny from Friesian, Canadian Hereford and Simmental bulls and Friesian cows
 M G Keane & G J More O'Ferrall

* (Paper No 184, C C Warkup, should be read in conjunction with paper 31, author D Lowe, theatre session Pigs and Sows)

Wednesday 25 March 1992

Session Opens 0900

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Authors in attendance 1050-1145

B E E F

- 190 Influence of organic and conventional pasture management on the beta-carotene, retinol and alpha-tocopherol status of steers
T Acamovic, N Tolla, J R Scaife & D Younie
- 191 The feeding of treated straw and grass silage in combination to growing beef cattle
P Rowlinson & S H Raza
- 192 Respiratory problems and performances in growing fattening bulls
N Korsak, L Istasse, P Baldwin, A Clinquart, M Diez & J M Bienfait
- 193 Effect of cow breed type and winter feeding level on performance of spring calving suckler cows and their progeny
M J Drennan & M G Diskin
- 194 Evaluation of Piemontese-cross Friesian steers and heifers on silage-based diets
M H Davies, H F Grundy & S Page
- 195 The feeding of untreated or treated cereal straw and grass silage in combination to growing cattle
S H Raza & P Rowlinson
- 196 Effect of GnRH pulse infusion on LH profiles and ovarian follicle populations at 7 weeks post-partum in beef cows in different body conditions
L P Andrade, S M Rhind, I A Wright, S R McMillen & T K Whyte
- 197 Feeding sorghum stover to Ethiopian, yearling cattle: effects of amount of stover offered and cottonseed cake supplement on intake and growth
E L K Osafo, E Owen, A N Said, M Gill, A B McAllan & J Sherrington
- 198 Response of beef steers to diets based on big-bale silage supplemented with molassed sugar beet feed and two levels of fishmeal
Y Rouzbehan, J H Topps, H Galbraith & J A Rooke
- 199 Intake of forage and of molasses blocks by Zebu bulls offered fresh forage during the day or night
A J Ayala & G A Quijano
- 200 A new genetic evaluation system for pedigree beef cattle in Great Britain
J G E Bryan, N R Wray, R Crump, D G Nicholson & R Thompson

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Balcony

Session Opens 0900

Authors in attendance 1050-1145

R U M E N M E T A B O L I S M

- 201 * Effects of abomasal infusions of casein, soya-protein isolate and a water-extract of fish meal on the utilization of nitrogen in dairy cows receiving a silage-based diet
J J Choung & D G Chamberlain
- 202 * The effects of postruminal supplements of casein and of soya-protein isolate with or without additional amino acids on silage intake and milk production in dairy cows
J J Choung & D G Chamberlain
- 203 The proximate and flavanol contents of some fodder tree leaves.
T Acamovic & H B Gurung, & C S Stewart
- 204 Methane production by sheep when fed either untreated, ammonia treated or sodium hydroxide treated straw
A R Moss & D I Givens
- 205 Effect of urea on the rumen digestion in sheep of straw and grain fractions from whole crop wheat
D I Givens, A R Moss, A H Adamson & A Reeve
- 206 Effect of hay cell-wall characteristics on its rumen retention time in sheep
M D Carro, S Lopez, J S Gonzalez & F J Ovejero
- 207 Comparison of rice polishing and a urea/sugar cane molasses mixture as supplements for low quality forage diets for ruminants
D Cardenas, C J Newbold, H Galbraith, J H Topps & J A Rooke
- 208 Influence of the continuous infusion of peptides, amino acids or urea on rumen microbial activity in sheep receiving grass hay
R C Soto, C J Newbold & R J Wallace
- 209 Evaluation of feed proteins for ruminants by solubility and electrophoresis
A S Chaudhry, A J F Webster & S Marsden
- 210 The effect of yeast and distillery by-products on the fermentation in the rumen simulation technique (rusitec)
C J Newbold & R J Wallace
- 211 Effects of yeast culture on rumen fermentation and liveweight gain in bulls fed isonitrogenous diets of barley/urea or barley/soya
S M El Hassan, R J Wallace, C J Newbold, X B Chen, I E Edwards & J H Topps
- 212 Effect of dilute-acid-hydrolysis treatments on the utilization of wheat straw by rumen bacteria and free enzymes
F B de Castro, E R Orskov & P M Hotten
- 213 Effects of monensin and/or yeast culture fed in the diet or infused into the abomasum on rumen fermentation and concentrations of glucose, urea, insulin, gastrin and cholecystokinin in blood of sheep
P P Frumholtz, C J Newbold, E R Orskov & R J Wallace
- 214 Purine derivatives excretion and urinary nitrogen losses as influenced by the source of dietary carbohydrate supplementation
J Balcells, M Fondevila, J A Guada & J A Carriedo
- 215 Rumen microbial protein supply to sheep given diets containing either urea or casein as the main N source
X B Chen, C X Gu, W X Zhang & E R Orskov
- 216 The effect of supplementing ammonia-treated straw with sugar beet pulp or barley on rumen kinetics and microbial protein production
S A Abdulrazak, X B Chen & E R Orskov
- 217 Effect of different drying processes on speed of drying and acid detergent insoluble nitrogen content of grass
H Gonzales Morel & A T Chamberlain

- 218 The nutritive value of varieties of wheat and barley straw
M J Hart, M Kay & E R Orskov
- 219 Effects of processing on rumen degradabilities of soyabean meal, and low and high glucosinolate rapeseed meals in cattle
A M Subuh & T G Rowan
- 220 Effects of processing on rumen degradabilities and intestinal digestibilities of soyabean meal, and low and high glucosinolate rapeseed meals in cattle
A M Subuh & T G Rowan
- 221 The use of near infra-red reflectance spectroscopy (NIRS) for the evaluation of forages. The application to undried silages
C W Baker & D I Givens
- 222 Effects of sodium fertilizer application to pasture on feed and water intakes and rumen digestion
P C Chiy, C J C Phillips & H M Omed

* Now in 'Dairy Production' Tuesday 24 March, Sea View Lounge