

**BRITISH SOCIETY
OF
ANIMAL PRODUCTION**

WINTER MEETING

17 - 19 March 1986

**GRAND HOTEL
SCARBOROUGH**

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BRITISH SOCIETY OF ANIMAL PRODUCTION

WINTER MEETING 1986

PROGRAMME

Day	Time	THEATRE SESSIONS		POSTER SESSIONS
MONDAY 17 MARCH		Ballroom	South Lounge	Session opens 14.30 Authors in attendance 16.00 -17.30 Sheep Production Herbage Intake Consumer Attitudes and Meat Composition
	14.30	The President		
	14.40	New Approaches to Growth Manipulation	Straw Processing and Feeding	
	16.00	T E A		
	16.20	Dairy Cow Feeding	Pig Production	
	19.00 19.45	SCARBOROUGH TOWN COUNCIL RECEPTION ANNUAL DINNER		
TUESDAY 18 MARCH	09.00	The Future Prospects for Research and Extension in Animal Production		Session opens 09.00 Authors in attendance 14.00 -15.30 Dairy and Beef Feeding Pig Production
	10.30	C O F F E E		
	10.50	Beef Production	Animal Breeding	
	12.30	L U N C H		
	13.50	Sheep Reproduction	Carcass Quality	
	15.50	T E A		
	16.10	PLENARY SESSION Animal Fats and Health		
	17.45 19.30	ANNUAL GENERAL MEETING D I N N E R		
WEDNESDAY 19 MARCH	09.00	SIR JOHN HAMMOND MEMORIAL LECTURE Prospects for Gene Transfer in Farm Livestock		Session opens 09.00 Authors in attendance 10.30 -12.00
	10.10	C O F F E E		
	10.30	Avoiding Pollution from Cattle Units	Manipulation of Reproduction	Sea View Lounge Herbage Intake
	12.10	L U N C H		Ruminant Nutrition
	13.30	Improvements in Sow Productivity	Ruminant Feeding	
	15.10	CLOSE OF MEETING		

NEW APPROACHES TO GROWTH MANIPULATION

CHAIRMAN - DR. J. D. OLDHAM

- 14.30 Meeting opened by Dr. J. A. Craven, BSAP President
- 14.40 1 Effect of naturally occurring and synthetic androgens on growth, body composition and muscle glucocorticoid receptors in wether lambs
H Galbraith, A D Berry, G D Henderson and C Jessiman
- 15.00 2 The effects of dose and method of administration of recombinant bovine somatotropin on fleece growth and body composition in young, fattening lambs
I D Johnsson, B W Butler-Hogg, D J Hathorn and R Wilde
- 15.20 3 Recombinant bovine somatotropin is growth promoting and lipolytic in fattening lambs
R A Pullar, I D Johnsson, P M C Chadwick and I C Hart
- 15.40 4 The effect of the B agonist clenbuterol on the composition of body gain of veal calves
P E V Williams, L Paglioni, G M Innes and K Pennie
- 16.00 T E A

DAIRY COW FEEDING

CHAIRMAN - DR. B. R. COTTRILL

- 16.20 5 The effect of system of harvesting grass for silage on in-field and in-silo losses and milk output per hectare
J Small and F J Gordon
- 16.40 6 The influence of concentrate energy source on dairy cow performance
B K Sloan, P Rowlinson and D G Armstrong
- 17.00 7 The effect of silage preference on the performance of dairy cows
R F Weller and R H Phipps
- 17.20 8 The response of January/February calving British Friesian cows to level of protein supplementation
A Reeve, R D Baker and R G Hodson
- 17.40 9 The effect of fish meal and soyabean meal supplements on milk production of autumn calving cows given ad libitum access to ryegrass silage
R C Rae, A J Golightly, D R Marshall and C Thomas
- 18.00 Session Ends
- 19.00 SCARBOROUGH TOWN COUNCIL RECEPTION
- 19.45 ANNUAL DINNER

STRAW PROCESSING AND FEEDING

CHAIRMAN - DR. E. OWEN

- 14.40 10 The AGRI-AM process. Stack-ammoniation of mature forages using ammonium salts
V C Mason, J E Cook, T Smith, J W Siviter, A S Keene and R D Hartley
- 15.00 11 The comparative effectiveness of urea and ammonia for improvement of nutritive
value of straw
R P Sherwood and E Owen
- 15.20 12 Fractionation of barley plant components other than grain and their evaluation in
vivo and in sacco
M Davis, J F D Greenhalgh, J E L Boyd and J G Shiach
- 15.40 13 Nutrient supply in growing cattle offered straw diets supplemented with barley or
fishmeal
I Ortigues, T Smith, J D Oldham, M B de Courtenay and J W Siviter
- 16.00 T E A

P I G P R O D U C T I O N

CHAIRMAN - DR. B. HARDY

- 16.20 14 The influence of dietary energy and lysine on voluntary feed intake in the
growing pig
M Ballard, D J A Cole and D Lewis
- 16.40 15 Fat young pigs: their performance and body composition on feeds with different
nutrient:energy ratio
C P Stamataris, G C Emmans, G M Hillyer and C T Whittemore
- 17.00 16 The partition and utilisation of energy in the pregnant sow
W H Close
- 17.20 17 Effect of pattern of energy intake during pregnancy and lactation on sow
performance and productivity
P A Lee and W H Close
- 17.40 18 Behavioural processes underlying retardation of growth in fostered piglets
I Horrell and J Hodgson
- 18.00 19 Stereotypies and responsiveness as welfare indicators in stall-housed sows
D M Broom
- 18.20 Session Ends
- 19.00 SCARBOROUGH TOWN COUNCIL RECEPTION
- 19.45 ANNUAL DINNER

**THE FUTURE PROSPECTS FOR RESEARCH AND
EXTENSION IN ANIMAL PRODUCTION**

CHAIRMAN - PROF. J. F. D. GREENHALGH

- 09.00 The future of industry-funded research
 Maitland Mackie Jnr - Mackie Dairies Ltd
- 09.25 Government-funded research
 J A F Rook - Agricultural and Food Research Council
- 09.50 Development and extension work
 P N Wilson - Edinburgh School of Agriculture
- 10.15 Discussion
- 10.30 C O F F E E

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

CHAIRMAN - MR. A. W. SPEDDING

- 10.50 20 A comparison of three sources of protein for yearling cattle offered silage-based diets
 R W J Steen
- 11.10 21 Effects of protein supplementation of silage-based diets on the intake, performance and carcass composition of finishing beef cattle
 R W J Steen
- 11.30 22 Carcass compositional changes in beef cattle during the grazing season
 C E Hinks, E A Hunter, B G Lowman and D R Neilson
- 11.50 23 Growth and carcass composition of implanted and non-implanted heifers and steers reared together
 M G Keane and M J Drennan
- 12.10 24 Effect of oestradiol-17B implantation on responses of Friesian steers to dietary UDP concentration
 J R Newbold, P J Buttery, D J A Cole, P C Garnsworthy and W Haresign
- 12.30 L U N C H

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

CHAIRMAN - DR. J. J. ROBINSON

- 13.50 30 Lambing response in lowland ewes on commercial farms to active immunisation against androstenedione
 J E Vipond, B Keeling and E A Hunter
- 14.10 31 Lamb production in mature Scottish Blackface ewes treated with Fecundin and Veramix sponges
 T H McClelland, A Waterhouse and D N Logue
- 14.30 32 The effect on fertility of Fecundin used together with PMSG and progestagen in early lambing mule ewes
 D N Logue, A Gill and T H McClelland
- 14.50 33 Active immunisation against androstenedione in a synchronised early lambing flock
 B J Keeling, M E King and G J Gunn
- 15.10 34 Concentrates versus Fecundin for flushing upland ewes
 W S Dingwall, J Fitzsimons and P Phillips
- 15.30 35 The effect of supplementation on the reproductive performance of ewes grazing perennial ryegrass swards in the autumn
 J A Milne, R G Gunn and A M Sibbald
- 15.50 T E A

P L E N A R Y S E S S I O N

A N I M A L F A T S A N D H E A L T H

CHAIRMAN - PROF. P. N. WILSON

- 16.10 36 Animal fats and health
 W P T James - Rowett Research Institute
- 16.55 Discussion
- 17.25 Session Ends
- 17.45 ANNUAL GENERAL MEETING
- 19.30 DINNER
onwards

C A R C A S S Q U A L I T Y

CHAIRMAN - DR. J. D. WOOD

- 13.50 37 National estimates of the body composition of British cattle, sheep and pigs with special reference to trends in fatness
 A J Kempster, G L Cook and M Grantley-Smith
- 14.10 38 Prediction of the proportion of lean from measurement of the speed of ultrasound in hot beef and lamb carcasses
 A V Fisher and S J Page
- 14.30 39 A comparison of the Hennessy Lamb Probe, ruler probe and visual fat scores for use in sheep carcass classification
 J P Chadwick, A J Kempster and D L M Homer
- 14.50 40 How well do bacon grade schedules reflect carcass composition?
 A J Kempster and A S Monk
- 15.10 41 Producing firm yet thin bacon fat
 A J Brown, J D Wood and J Chambers
- 15.30 42 The effect of growth promoters on the composition, rate of cooling and eating quality of beef carcasses
 B G Lowman, D R Neilson, N A Scott and E A Hunter
- 15.50 T E A

16.00 - 17.25

Ballroom

P L E N A R Y S E S S I O N

A N I M A L F A T S A N D H E A L T H

See opposite page for details

17.45 ANNUAL GENERAL MEETING

19.30 DINNER
onwards

SIR JOHN HAMMOND MEMORIAL SESSION

CHAIRMAN - DR. J. A. CRAVEN

09.00 Prospects for gene transfer in farm livestock
 T E Wagner - Ohio University, USA

10.10 C O F F E E

AVOIDING POLLUTION FROM CATTLE UNITS

CHAIRMAN - MR. J. R. MULHOLLAND

10.30 43 Effects of gross organic discharges to fresh waters
 J Solbe - Water Research Council

44 Avoiding pollution from cattle units
 J K Grundey - ADAS, Leeds

45 Nitrogen cycling on the livestock farm
 R J Unwin - ADAS, Bristol

46 Silage: pollution problems and their avoidance
 M E Castle

11.30 Discussion

12.00 Session Ends

Sea View Lounge

HERBAGE INTAKE

CHAIRMAN - DR. J. HODGSON

10.30 47 Animal-based estimates of intake
 J A Milne - Hill Farming Research Organisation

48 Grazing behaviour
 P D Penning - Animal and Grassland Research Institute

49 Estimation of intake from energy standards
 T T Treacher - Animal and Grassland Research Institute

50 Nutrient intake and metabolism in grazing ruminants
 D E Beever - Animal and Grassland Research Institute

11.30 Discussion

12.00 Session Ends

12.10 L U N C H

Wednesday 19th March 1986

Theatre Session

09.00 - 10.00

Ballroom

SIR JOHN HAMMOND MEMORIAL SESSION

See opposite page for details.

10.10 C O F F E E

South Lounge

MANIPULATION OF REPRODUCTION

CHAIRMAN - DR. A. J. F. RUSSEL

- 10.30 51 The use of allyl-trenbolone or a combination of PMSG and HCG to control oestrus and ovulation in groups of peri-pubertal gilts
M A Varley, P R English, O MacPherson, P Pawley and F M Davidson
- 10.50 52 The use of vaginally administered melatonin in the manipulation of the breeding season in ewes
R G Rodway, R R Rajkumar, R Nowak, S J Ward and C M Argo
- 11.10 53 The effect of the oral administration of melatonin at two times of the year on ovarian activity in ewes
S Wigzell, J J Robinson, R P Aitken and W A C McKelvey
- 11.30 54 Reproductive performance of Scottish Blackface gimmers trained to eat supplements as ewe hogs and offered feedblocks during mating
A Waterhouse
- 11.50 55 The effects of improved management based on ultrasound scanning of Scottish Blackface ewes from a high hill flock
M Parker and A Waterhouse
- 12.10 L U N C H

10.30 - 12.00

Sea View Lounge

HERBAGE INTAKE

See opposite page for details

Wednesday 19th March 1986

Theatre Session
Ballroom

I M P R O V E M E N T S I N S O W P R O D U C T I V I T Y

CHAIRMAN - DR. W. H. CLOSE

- 13.30 56 Reproductive problems and targets in commercial pig breeding units
 J E Riley - ADAS, Cambridge
- 57 Opportunities for the genetic manipulation of pig reproduction
 C J Polge - Institute of Animal Physiology
- 58 The nutritional manipulation of fertility and fecundity
 D J A Cole - University of Nottingham and W H Close - Animal and Grassland
 Research Institute
- 59 Performance characteristics, body reserves and reproductive efficiency in sows
 V R Fowler - Rowett Research Institute
- 14.30 Discussion
- 15.00 Session Ends
-
- 15.10 CLOSE OF MEETING

Wednesday 19th March 1986

Theatre Session
South Lounge

RUMINANT FEEDING

CHAIRMAN - DR. C. THOMAS

- 13.30 60 The ME system : the biological basis
D J Thomson, M J Haines, S B Cammell and M S Dhanoa
- 13.50 61 Growth of lambs offered a fixed amount of roughage and concentrate by two feeding strategies
R G Wilkinson and J F D Greenhalgh
- 14.10 62 Effect of hoof trimming and protein level on lameness in dairy cows
F J Manson and J D Leaver
- 14.30 63 A comparison of three energy levels in straw mixes used for partial storage feeding of dairy cows
D J Roberts
- 14.50 64 The effect of level of protein in the concentrates on hay intake and milk production by Saanen goats
M S Badamana, J D Sutton, A Mowlem and J D Oldham
- 15.10 CLOSE OF MEETING

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

- 65 Conception rates following cervical and intrauterine insemination in the ewe
 W Haresign, R M Curnock and H C B Reed
- 66 Laparoscopy for insemination, embryo recovery and embryo transfer in ewes
 W A C McKelvey, J J Robinson and R P Aitken
- 67 Breeding ewes using natural service or artificial insemination
 M E King and B J Keeling
- 68 Breeding ewes - an evaluation of the use of Fecundin under field conditions
 B A Maund
- 69 British rapeseed meals (RSM) in the diets of pregnant and lactating mature Suffolk-mule
 ewes
 I C Vincent, R Hill and H L I Williams
- 70 The nutrition and performance of lambs on rape and hybrid turnip (cv Typhon) leaf crops
 F Burnett and J A Milne
- 71 Nutritional manipulation of lamb growth and its effect on body composition and carcase
 quality
 M Cropper, M Lloyd, G C Emmans and C E Hinks
- 72 Choice feeding as a method of determining lamb nutrient requirements and growth
 potential
 M Cropper, M Lloyd, G C Emmans and C E Hinks
- 73 The effect of supplementing silage with fish meal for finishing store lambs
 G J Hughes and R J Mansbridge
- 74 An evaluation of four ultrasonic pregnancy detection methods currently used commercially
 for sheep
 P N Hooper and C M Minter
- 75 Energy and protein supplementation for shorn housed pregnant ewes fed silage
 C Stone and M Appleton
- 76 The effect of dietary supplements of protected fat on the yield and fat content of ewe's
 milk and on lamb growth rate
 M Perez Hernandez, J J Robinson, R P Aitken and C Fraser

Monday 17th March 1986

Poster Session

Session opens 14.30

Authors in attendance 16.00 - 17.30

S H E E P P R O D U C T I O N
(cont.)

- 77 The effect of winter shearing Welsh Mountain ewes in the hill environment
 J R D Glanville and C J C Phillips
- 78 Breed of ewe effects on the utilisation of pasture maintained at two sward heights
 J M Doney, A D M Smith, D A Sim and I R White
- 79 Discrimination by sheep between swards of differing white clover content
 D A Clark and J Hodgson
- 80 Sward height controlled by ewe and lamb grazing
 M S Griffiths and C James
- 81 Ewe and lamb grazing techniques when aftermaths are not available
 D C Brown

H E R B A G E I N T A K E

- 82 Determination of herbage intake of suckling lambs using long-chain n-alkanes as markers
 R W Mayes, C S Lamb and P M Colgrove
- 83 The use of long-chain n-alkanes as markers for estimating intake and digestibility of
 herbage in cattle
 R W Mayes, I A Wright, C S Lamb and A McBean
- 84 A comparison of two methods for the estimation of herbage intake by lactating dairy cows
 A J Clements, C S Mayne and S C F Woodcock
- 85 A method for the automatic recording of the eating behaviour, intake and liveweight of
 individual cows housed in groups
 C P Rees

CONSUMER ATTITUDES AND MEAT COMPOSITION

- 86 Consumer responses to beef of different fatness levels and the effect of electrical stimulation
G L Cook, L E Hardham, A W Dilworth and G Harrington
- 87 Consumer perception of saltiness in bacon
T W Griffiths and C Cowan
- 88 A study of consumer attitude to fat in meat
J Shearer, G Burgess and P R English
- 89 Attitudes to dietary fats and health: implications for animal production
S J Fallows
- 90 Manipulation of milk fat composition to meet market needs
J V Wheelock and P C Thomas
- 91 The effect of dietary protein level and creep feeding on carcass composition at slaughter in the pig
B Miller, A J Brown, A Lightfoot and F J Bourne
- 92 The effect of oestradiol 17B on liveweight gain and carcass composition of intensively reared cereal beef bulls
M Grantley-Smith, J R Southgate, D W Jones, A R Peters and M Dobson
- 93 Effect of oestradiol 17B and zeranol at turnout and yarding with and without trenbolone at yarding on liveweight gain and carcass composition on 18 month beef steers
J R Southgate, A R Peters, M Grantley-Smith, D W Jones, S N Dixon and C B Mallinson
- 94 The effects of zeranol on performance and carcass characteristics of young bulls
B M Scott, A V Fisher, R A Cooper and J A Kirk
- 95 A comparison of Compudose 200 with short acting implants in calves, growing and finishing steers
M G Keane and J Sherington
- 96 Preliminary assessment of muscle quality in spring and hogget lamb
B W Butler-Hogg and P J Buxton*
- 97 Carcass quality of dairy sheep
B W Butler-Hogg, O P Whelehan* and P Mummery

* - author to present paper

Tuesday 18th March 1986

Poster Session

Session opens 09.00

Authors in attendance 14.00 - 15.30

DAIRY AND BEEF FEEDING

- 98 The use of an on-farm milk progesterone test for the early identification of non-pregnant cows
B Drew, J A Foulkes and P Lane
- 99 Effect of some management factors on dairy herd fertility in England and Wales 1984-5
A H Poole and S J Mabey
- 100 A further trial of the use of fishmeal together with reduced concentrates in a commercial dairy herd
I H Pike and E L Miller
- 101 Supplementary feeding of forage and concentrate to dairy cows at pasture
A Kibon and W Holmes
- 102 The effect of dam's parity on the first lactation performance of dairy heifers
S J Furniss, A Stroud, H Barrington, S P J Kirby, J P Wray and P Dakin
- 103 Sodium hydroxide (NaOH) treated winter wheat straw in complete diets for early lactation dairy cows
S J Furniss, J B Kilpatrick, A Stroud, S P J Kirby and C F R Slade
- 104 The use of alkali treated straw, molasses and soya bean meal to replace some silage in a cow diet
D A Poole
- 105 The response of spring calving beef cows and their calves to sward height
I A Wright and A J F Russel
- 106 Influence of different levels of dietary energy on performance of double suckled cows and calves
M A S Khan, J H Topps and P J Broadbent
- 107 Development of behaviour in beef bulls: sexual behaviour causes more problems than aggression
M C Appleby and D G M Wood-Gush
- 108 The effect of milk substitute input on the lifetime performance of calves reared for beef production
R W J Steen
- 109 The effect upon the intake of grazing calves of infection with the gastrointestinal nematode ostertagia ostertagi
S L Bell, A I Frost, Y Jeffrey and R J Thomas

Tuesday 18th March 1986

Poster Session

Session opens 09.00

Authors in attendance 14.00 - 15.30

**DAIRY AND BEEF FEEDING
(cont.)**

- 110 Performance of Friesian bulls fed intensively with compound feeds
J S Blake, W S Thickett and T D A Brigstocke
- 111 Evaluation of monensin sodium released from a ruminal delivery device as a growth promoter for pastured fattening cattle
A G Buchanan and M B Dobson
- 112 Feed additives for fattening cattle
M Kay, P J Broadbent and E A Hunter
- 113 Timing of fish meal supplementation for finishing beef cattle offered grass silage
P S Kirby, N A Watson, D G Rennie and T O Jones
- 114 Feed additives and fishmeal for growing cattle
S Thomas, C K Mackie and E A Hunter

PIG PRODUCTION

- 115 A luxury creep heating technique for new born piglets
P Smith, N P Barraud and H H Spechter
- 116 An alternative to stalls and tethers, a straw-based housing system for dry sows using a computerised sow feeder
P Smith, N Gorman and J Payne
- 117 The influence of dietary energy on carcass fat in sows and the relationship of fat content to P2 measurement
P A Lee
- 118 Effects of level of feeding after mating in 'fat' and 'thin' sows
N Walker
- 119 Electronic identification and individual feeding of sows in a very large group
M P Beckett, S A Edwards, P H Simmins and A G Walker

PIG PRODUCTION
(cont.)

- 120 An assessment of an electronic feeding system and 'dynamic' grouping in loose-housed sows
R J Lambert, M Ellis and P Rowlinson
- 121 The use of an electronically controlled sow feeder to supply balancer compound to sows grazing fodder beet
J Chambers, B Hardy and O Pugh
- 122 The effect of boar contact on the maintenance of cyclic activity in gilts after the hormonal induction of puberty
P J Burnett and N Walker
- 123 Effect of using vasectomised boars for additional matings on sow reproductive performance
O D Davies
- 124 The use of whey and whey products in piglet creep rations
O D Davies
- 125 The water intake of weaned pigs from 3 to 6 weeks of age
B P Gill, P H Brooks and J L Carpenter
- 126 An analysis of piglet mortality with behavioural observations
S A Edwards, S J Malkin and H H Spechter
- 127 An evaluation of split litter suckling as a method of reducing pre-weaning mortality in pigs
S R Furniss, B Sutton and S J Furniss
- 128 Methods of feeding growing pigs to maximise feed intake
A L Lightfoot, A W Armsby and C F Widdows
- 129 A model of the feed intake, growth and body composition of pigs fed ad libitum
G C Emmans
- 130 Winter performance of a cross-flow automatically controlled naturally ventilated (ACNV) pig finishing house
A T Smith and I A Barrie

RUMINANT NUTRITION

- 131 Rumen outflow rate estimated from the decline of chromium concentration in faecal and rumen samples after the dosage of sodium dichromate fish meal
J A Guada Vallepuga, C Castrillo Gonzalez, A Vega Garcia and J Gaso Gaso
- 132 The effect of lucerne supplementation on the intake of straw and the digestion kinetics of straw and lucerne
D Gonzalez-Vargas, M Lewis and P N Wilson
- 133 The efficacy of soluble glass boluses (Cosecure) in grazing cattle
P M Driver, G M Carlos, C Eames and S B Telfer
- 134 The effect of branched chain fatty acids and fishmeal on voluntary intake by young cattle offered grass silage
M Gill, P J Buttery, P England, J M Dawson and D E Beever
- 135 The effect of a flavour compound on the intake of silage by wether lambs
A R Henderson, D A Baines, D H Anderson and P Philips
- 136 The effect of method of alkali treatment on straw digestion by cattle
H M Ferreiro, J D Sutton, A Boodoo and D J Napper
- 137 The effect of amount offered on selection and intake of barley straw by goats
R A Wahed and E Owen
- 138 Grape juice concentrate as a feed for beef cattle
C L Hemsley, P Rowlinson and M Ellis
- 139 Grape juice concentrate as a feed for growing pigs
C L Hemsley, M Ellis and P Rowlinson
- 140 The effects of liveweight at weaning, date of weaning and winter nutrition on the subsequent performance of red deer
J A Milne and A M Sibbald

Summaries for the following papers were not received in time for printing:-
14, 57, 59, 96, 97.