



THE UNIVERSITY OF
SYDNEY

2012 AUSTRALIAN POULTRY SCIENCE SYMPOSIUM

February 19th – 22nd 2012

In conjunction with



**VETERINARY SCIENCE CONFERENCE
CENTRE**
Webster Theatre
Camperdown Campus
University of Sydney

Sunday 19 February 2012

17:30 - **Pre Registration & Informal Avian Science Forum**

20:30 **Bligh Room - Rydges Camperdown**

**Guest Speakers: Mamduh Sifri – ADM and
Nan-Dirk Mulder Rabobank**

Save the rush on Monday, register, pickup your satchel and name badge and enjoy two informal sessions with our special guest speakers; Dr. Mamduh Sifri updating us on “Future Challenges in the Poultry Industry: Biological and Nutritional Response Limits” and Nan-Dirk Mulder “Crossroads for Growth: Changing commodity markets urge Poultry Industry to change”.

Open bar, finger food and light buffet dinner included \$ 15/person.

Please register as an additional function on the conference registration form online if you would like to attend for catering purposes.

Monday 20 February 2012

8:00 – **Registration and Morning Tea**

9:30

9:30 – **Opening of Symposium**

9:45

- **Judith O’Keeffe - President, Poultry Research Foundation**
- **Aaron Cowieson - Director, Poultry Research Foundation**

FREE-RANGE COMPARED WITH CONVENTIONAL POULTRY PRODUCTION

Chair: Bob Hughes - SARDI

9:45 – GASTROINTESTINAL TRACT DEVELOPMENT: IMPLICATIONS FOR FREE-RANGE AND
10:30 CONVENTIONAL PRODUCTION

Birger Svihus - Norwegian University of Life Sciences, Norway

10:30 – NUTRITIONAL IMMUNITY: POSSIBLE CHALLENGES IN FREE RANGE PRODUCTION

11:15 *Eugeni Roura on behalf of Brooke Humphrey – Cargill Animal Nutrition, USA*

11:15 – INFLUENCE OF WHOLE WHEAT INCLUSION AND PELLET DIAMETER ON THE

11:30 PERFORMANCE AND GIZZARD DEVELOPMENT OF BROILERS

Don Thomas – Massey University, New Zealand

11:30 – THE EFFECT OF INSOLUBLE FIBRE AND INTERMITTENT FEEDING ON GIZZARD
11:45 DEVELOPMENT, GUT MOTILITY, AND PERFORMANCE IN BROILER CHICKENS
Adam Sacranie – Nutreco, Spain

11:45- COMPARISON OF PERFORMANCE OF COMMERCIAL CONVENTIONAL AND FREE RANGE
12:00 BROILERS
Tugrul Durali – University of Sydney, Australia

12:00- **Lunch & Poster Viewing**
13:00

**FREE-RANGE COMPARED WITH CONVENTIONAL POULTRY
PRODUCTION (cont)**

Chair: Paul Iji – University of New England

13:00 – DOES THE COMPOSITION OF INTESTINAL MICROBIOTA DETERMINE OR REFLECT FEED
13:45 CONVERSION EFFICIENCY?
Juha Apajalahti – Alimetrics, Finland

13:45- EFFECT OF LITTER MATERIAL AND DIETARY FIBRE ON GUT DEVELOPMENT, GUT
14:00 MICROFLORA AND PERFORMANCE IN BROILERS
Robert Swick – University of New England, Australia

14:00 – SEMDURAMICIN AND NUTRITIONAL RESPONSES: THE EFFECTS OF PROTEIN SOURCE AND
14:15 CONCENTRATION
Ken Bafundo – Phibro Animal Health, USA

14:15- EXPLOITING THE CALCIUM SPECIFIC APPETITE OF BROILERS
14:30 *Stuart Wilkinson – University of Sydney, Australia*

14:30- SMALL SCALE POULTRY PRODUCTION IN TIMOR-LESTE
14:45 *Eduardo Serrao – University of Queensland, Australia*

14:45 – **Afternoon Tea & Poster Viewing**
15:30

15:30- **SHORT COMMUNICATION SESSION 1 : NUTRITION**
16:40 **(5 Minute Presentations)**

Chair: Wayne Bryden – University of Queensland

EFFECT OF DIFFERENT ENZYME PREPARATIONS ON *IN VITRO* VISCOSITY OF WHEAT
Alex Wu – University of New England, Australia

ASSESSING AME AND DIGESTIBLE AMINO ACIDS OF DIFFERENT SOYBEAN MEALS BY NIRS
AND BROILER PERFORMANCE
Kevin Liu – Adisseo Asia Pacific, Singapore

NUTRIENT DIGESTIBILITY OF SORGHUM AND WHEAT BY BROILERS: EFFECT OF AN
ENZYME COCKTAIL
Shokri Oramary – University of Queensland, Australia

THE EFFECT OF DIGESTA VISCOSITY ON TRANSIT TIMES AND GUT MOTILITY IN BROILER CHICKENS

Adam Sacranie – Nutreco, Spain

USE OF PROTEASE AND XYLANASE IN BROILER DIETS CONTAINING DISTILLERS' DRIED GRAINS WITH SOLUABLES

Reza Barekattain – University of New England, Australia

BETAINE HCL IMPROVES CARCASS YIELD IN BROILERS

David Creswell – Creswell Nutrition, Australia

PHYTASE SUPPLEMENTATION OF SORGHUM-BASED BROILER DIETS WITH REDUCED PHOSPHORUS LEVELS

Peter Selle – University of Sydney, Australia

PROBIOTIC AGENTS TO PREVENT REPRODUCTIVE TRACT INFECTIONS IN FREE-RANGE HENS

Shaniko Shini – University of Queensland, Australia

A SYSTEMATIC GEOMETRIC APPROACH TO THE PREDICTION OF FEED ENZYME EFFICACY IN BROILERS

Yumin Bao – University of Sydney, Australia

PREDICTION OF *IN VIVO* STARCH DIGESTIBILITY RESPONSES TO PHYTASE SUPPLEMENTATION BY *IN VITRO* STARCH HYDROLYSIS

Sonia Yun Liu – University of Sydney, Australia

FURTHER IMPROVEMENT OF THE UNE NECROTIC ENTERITIS CHALLENGE MODEL IN BROILER CHICKENS

Shubiao Wu – University of New England, Australia

THE INTERACTIVE EFFECTS OF VITAMIN D, PHYTASE, CALCIUM, AND PHOSPHORUS IN BROILER PERFORMANCE AND SKELETAL INTEGRITY

Linda Browning – University of Sydney, Australia

THE EFFECT OF A MARINE CALCIUM SOURCE ON BROILER LEG INTEGRITY

Emma Bradbury – University of Sydney, Australia

EFFECT OF DRINKING WATER ACIDIFICATION ON BROILER PERFORMANCE

Javad Hayat – Kemira Asia Pacific, Singapore

INTERACTION BETWEEN GRAIN CHARACTERISTICS AND XYLANASE SUPPLEMENTATION IN WHEAT-BASED DIETS FOR BROILERS

Alexandre Peron – Danisco, Singapore

16:45- THE AVIAN TASTE SYSTEM: AN UPDATE

17:10 *Eugeni Roura – University of Queensland, Australia*

17:15- **Gourmet BBQ - Welcome Reception, Post Graduate and Masters Students**
19:30 **Introductions sponsored by the Poultry CRC**

Tuesday 21 February 2012

Times

Papers

FEED ADDITIVES: MYTHBUSTERS

Chair: Aaron Cowieson – University of Sydney

9:00 – FEED ADDITIVE MYTHBUSTERS: HOW SHOULD WE FEED SYNTHETIC AMINO ACIDS?
9:45 *Michael Kidd – University of Arkansas, USA*

9:45 – MYTHBUSTERS – ENZYMES IN THE SPOTLIGHT
10:30 *Michael Bedford – AB Vista, UK*

10:30 – **Morning Tea & Poster Viewing**
11:00

FEED ADDITIVES: MYTHBUSTERS (cont)

Chair: Pietro Celi – University of Sydney

11:00- MODERN PROBIOLOGY - DIRECT FED MICROBIALS AND THE AVIAN GUT MICROBIOTA
11:45 *Greg Siragusa – Danisco, USA*

11:45 – EFFECTS OF PROTEASE SUPPLEMENTATION ON BROILER PERFORMANCE AND *IN VITRO*
12:00 PROTEIN DIGESTIBILITY
Nasser Odetallah – Novus International, USA

12:00 – INFLUENCE OF PRE-PELLETING INCLUSION OF WHOLE MAIZE ON PERFORMANCE,
12:15 GIZZARD WEIGHT AND ENERGY UTILISATION OF YOUNG BROILERS
Yashpal Singh – Massey University, New Zealand

12:15 – ENVIRONMENTAL IMPLICATIONS OF AMINO ACIDS IN BROILER FEED
12:40 *Manfred Peisker – ADM Specialty Ingredients, The Netherlands*

12:40 - CEREAL TYPE AND LIPID SOURCE INTERACTIONS IN BROILERS STARTER DIETS
12:55 *Piyamas Tancharoenrat – Massey University, New Zealand*

12:55- THE USE OF HIGH EFFICIENCY JUNCEA CANOLA MEAL AND FULL FAT JUNCEA
13:10 CANOLA MEAL IN BROILER FEEDING
Soon Bin Neoh – Soon Soon Oilmills, Malaysia

13:10 – **Lunch & Poster Viewing**
14:00

POULTRY AND VET SCIENCE ASSOCIATION GLOBAL ADDRESSES

Chair: Julie Roberts – University of New England

14:00 - ENHANCING POULTRY PRODUCTION: THE WORLD VETERINARY POULTRY
14:30 ASSOCIATION (WVPA) AND AUSTRALIA TO PRESENT AND TOWARDS 2020
Trevor Bagust – Global President WVPA

14:30 - WPSA: 100 YEARS OF SERVICE TO THE WORLDWIDE POULTRY INDUSTRY
15:00 *Robert Pym – Global President WPSA*

15:00 – **Afternoon Tea & Poster Viewing**
15:45

15:45 – **SHORT COMMUNICATION SESSION 2 : HEALTH & WELFARE**
16:55 **(5 Minute Presentations)**

Chair: Wayne Bryden – University of Queensland

THE RELATIONSHIP BETWEEN PRE-LAYING AND CORTICOSTERONE CONCENTRATIONS AND THE INTERPRETATION FOR LAYING HEN WELFARE
Greg Cronin – University of Sydney, Australia

SERUM ANTIBODY RESPONSES FOLLOWING *SALMONELLA* VACCINATION AND CHALLENGE WITH *SALMONELLA* TYPHIMURIUM
Sue Sharpe – Birling Avian Laboratories, Australia

EFFECT OF *SALMONELLA* VACCINES IN COMMERCIAL LAYER CHICKENS AGAINST VARIOUS *SALMONELLA* SEROVARS
Sue Sharpe – Birling Avian Laboratories, Australia

OVIPOSITION FEEDING COMPARED TO NORMAL FEEDING: EFFECT ON PERFORMANCE AND EGG SHELL QUALITY
Adam Sacranie – Nutreco, Spain

DETERMINATION OF THE VIRULENCE AND PATHOGENICITY OF AUSTRALIAN FOWL ADENOVIRUS FIELD STRAINS IN CHICKENS AT TWO DIFFERENT AGES
Penelope Steer – University of Melbourne, Australia

SEROLOGICAL SURVEY OF *ERYSIPELOTHRIX RHUSIOPATHIAE* EXPOSURE IN NEW ZEALAND POULTRY
Eric Neumann – Massey University, New Zealand

EFFECTS OF BLOOD SAMPLE MISHANDLING ON ELISA TEST RESULTS FOR INFECTIOUS BRONCHITIS VIRUS, AVIAN ENCEPHALOMYELITIS VIRUS AND CHICKEN ANAEMIA VIRUS
Eric Neumann – Massey University, New Zealand

ROLE OF INFLAMMATION IN THE PATHOGENESIS OF FATTY LIVER HAEMORRHAGIC SYNDROME IN LAYING HENS
Jim Shini – University of Queensland, Australia

EFFECT OF AGE ON FERTILITY IN THE JAPANESE QUAIL (*COTURNIX JAPONICA*)
Umar Farooq – University of Western Australia, Australia

THE QUALITY OF THE PEKIN DUCK (*ANAS PLATYRHYNCHOS DOMESTICA*) EJACULATES
Sungbo Cho – University of Western Australia, Australia

META-COMPARISON OF THE WELFARE OF LAYING HENS IN CONVENTIONAL CAGES AND ALTERNATIVE SYSTEMS
Raf Freire – Charles Stuart University, Australia

PREVALENCE OF *MYCOPLASMA SYNOVIAE* IN EGGS FROM LAYING HENS USING ELISA
Vaibhav Gole – University of Adelaide, Australia

IDENTIFICATION AND CHARACTERISATION OF FLOCK PERFORMANCE ISSUES IN
LAYING HENS USING LOGIC SOFTWARE
Santiago Ramirez – Fractal Solutions, Australia

18:00 Sharp Bus Departs Rydges for King Street Wharf 4

18:45 – **Symposium Dinner – “Star Ship Sydney” Dinner Cruise**
22:00

Wednesday 22 February 2012

Times Papers

8:00 – **WPSA ANNUAL GENERAL MEETING – Webster Theatre**
09:00

HOT TOPIC 1 – LAYING HENS: CURRENT ISSUES AND OPPORTUNITIES

Chair: Robert Swick – University of New England

9:15 – MAJOR STRATEGIES AND CHALLENGES WITHIN AECL
10:00 ***James Kellaway – Australian Egg Corporation Limited, Australia***

10:00 – NEW CONCEPTS IN LAYER NUTRITION
10:45 ***Michael Elliot – A & E Nutrition Services, USA***

10:45 - **Morning Tea & Poster Viewing**
11:15

LAYING HENS: CURRENT ISSUES AND OPPORTUNITIES (cont)

Chair: Robert Swick – University of New England

11:15 – CASE REPORT: ADVERSE REACTIONS FOLLOWING PARENTERAL ADMINISTRATION OF
11:30 LIVE ATTENUATED SALMONELLA VACCINE IN A STRAIN OF LAYER CHICKENS
Peter Groves – University of Sydney, Australia

11:30 – RECOVERY OF ENTEROBACTERIZCEAE FROM SHELL SURFACE AND SHELL IN EARLY,
11:45 MID AND LATE LAY
Kapil Chousalkar – University of Adelaide, Australia

11:45 – COMPARISON OF OMEGA-3 LEVELS IN TWO STRAINS OF BROILERS AND LAYERS FED
12:00 HIGH ALPHA LINOLENIC ACID DIETS
Mark Geier – SARDI, University of Adelaide, Australia

12:00 – EGG QUALITY AND FOOD SAFETY OF TABLE EGGS: EGG QUALITY AND AGE OF FLOCK –
12:15 A HORIZONTAL STUDY
Juliet Roberts – University of New England, Australia

12:15- EGG QUALITY AND FOOD SAFETY OF TABLE EGGS: EGG QUALITY AND AGE OF FLOCK –
12:30 A LONGITUDINAL STUDY
Sami Samiullah – University of New England, Australia

12:30 – **Lunch**
13:20

13:20- ***Best Presentation by a Student – awarded by the Poultry CRC***
13:30

HOT TOPIC 2 – RETAILER PRESSURE AND GLOBAL COMMODITY MARKETS – A TICKING TIME BOMB?

Chair: Peter Groves – University of Sydney

- 13:30 – EFFECTS OF RETAILER PRESSURE ON THE EFFICIENCY OF AGRICULTURAL INDUSTRIES
14:00 *Ian Lean - SBScibus, Australia*
- 14:00 – CROSSROADS FOR GROWTH: CHANGING COMMODITY MARKETS URGE POULTRY
14:45 INDUSTRY TO CHANGE – FEED GRAINS OUTLOOK
Dean Smith – Rabobank Australia
- 14:45 – EVALUATION OF NEW HIGH YIELDING TRITICALE CULTIVARS FOR INCREASED BROILER
15:00 PRODUCTION
Annette Tredrea – University of Sydney, Australia
- 15:00 – THE ROLE OF GASTROINTESTINAL TRACT MICROBIOTA IN CHICKEN PRODUCTIVITY
15:15 *Dana Stanley - CSIRO, Australia*
- 15:15- RESPONSIVENESS OF SORGHUM AND TRITICALE GRAINS TO SEPARATE BLENDS OF
15:30 XYLANASE AND PHYTASE ENZYME PRODUCTS
Robert Hughes - SARDI, Australia

ELECTRONIC POSTERS

Two Plasma TV Screens with display electronic posters on a 5 minute rotational basis throughout the conference. They will be situated in the WP Young Room for convenience of viewing during meal breaks.

- 1 AUSTRALIAN WHEATS: DEGRADABILITY AND ENZYME RESPONSE
Kevin Liu – Adiesso Asia Pacific, Singapore
- 2 MICROBIAL PHYTASE INFLUENCES KINETICS OF STARCH-PROTEIN DIGESTION IN
BROILER CHICKENS
Sonia Yun Liu – University of Sydney, Australia
- 3 MAXIMISING THE ENERGY VALUE OF CASSAVA PRODUCTS IN DIETS FOR BROILER
CHICKENS
Momen Bhuiyan – University of New England, Australia
- 4 ENERGY UTILISATION AND GROWTH RESPONSES OF BROILER CHICKENS ON
VEGETABLE PROTEIN DIETS
Mohammad Hossain – University of New England, Australia
- 5 COMPARING A THERMOTOLERANT XYLANASE WITH A MULTI-ENZYME BLEND IN
WHEAT-BASED BROILER DIETS
Helen Masey O'Neill – AB Vista, UK
- 6 OVIPOSITION FEEDING: EFFECT OF REDUCED ENERGY AND PROTEIN LEVELS ON
PERFORMANCE OF LAYING HENS
Adam Sacranie – Nutreco, Spain

- 7 EFFECT OF MULTI-NSP ENZYMES AND PHYTASE COMBINATION ON GROWTH PERFORMANCE OF BROILER CHICKENS FED WITH DIFFERENT QUALITY GRADES OF INGREDIENTS
Kevin Liu – Adisseo Asia Pacific, Singapore
- 8 EFFECT OF DIFFERENT CONCENTRATIONS OF LYSINE AND METHIONINE ON PERFORMANCE OF WHITE LEGHORN LAYERS FED DIETS WITH SUB-OPTIMAL CONCENTRATIONS OF PROTEIN
Savaram Venkata Ramo Rao – Project Directorate on Poultry, India
- 9 MULTISUBSTRATE ENZYME IMPROVES THE APPARENT METABOLISABLE ENERGY (AME) OF BROILER DIETS
Bindhu Vasanthakumari – Kemin Agrifoods Asia, Singapore
- 10 IMPROVED BROILER PERFORMANCE FOLLOWING THE EARLY ADMINISTRATION OF PROTEIN FRACTIONS EXTRACTED FROM MEAT AND BONE MEAL
Wendy Muir – University of Sydney, Australia
- 11 EVALUATING THE EFFICIENCY OF A PREBIOTIC (ASPERGILLUS MEAL) ON BROILER PERFORMANCE
Ali Chegeni – Razi University, Iran
- 12 THE EFFECT OF A SYNBIOTIC – A COCKTAIL OF PRE AND PROBIOTIC – ON BROILER PERFORMANCE AND LITTER QUALITY
Ali Chegeni – Razi University, Iran
- 13 BETAINE AS AN OSMOLYTE
Arpad Phillip – Phillip Associates, Australia
- 14 ENHANCING EGG PRODUCTION PERFORMANCE IN COMMERCIAL PHEASANTS USING PHOTOPERIOD
Irek Malecki – University of Western Australia, Australia
- 15 NUTRITIONAL STRATEGIES TO ALLEVIATE POOR GROWTH PERFORMANCE OF COMMERCIAL DUCKS UNDER HIGH TEMPERATURE
Jeff Downing – University of Sydney, Australia
- 16 EFFECT OF A PROTECTED COMBINATION OF SODIUM BUTYRATE AND ESSENTIAL OILS (NATESSE) ON BROILER PERFORMANCE AND JEJUNUM EPITHELIUM DEVELOPMENT
Juan Jose Mallo – Norel Animal Nutrition, Spain