

## 2015 Robert Fraser Gordon Memorial Lecture

Lecturer: Professor Rob Gous, Kwa Zulu Natal University

Emeritus Professor Rob Gous retired from the University of KwaZulu-Natal at the end of 2007 but has continued to work at the university research farm since then, writing papers, conducting further research and improving the simulation models that he has developed over the years. During the 37 years in academia before his retirement he built up a strong research culture in poultry and pig nutrition in the Department of Animal and Poultry Science as well as in simulation modelling, and supervised over 50 Masters and 15 PhD students. Many of his postgraduate students have made a significant contribution to the animal feed industries and research institutes both in South Africa and overseas.

His research over the past 25 years has involved the development of simulation models that predict food intake and growth of broilers and pigs. These simulation models, developed with the assistance of Colin Fisher and Gerry Emmans, initially provided answers to "what if" scenarios, but he and his team have moved on from there and the models now optimise the way in which broilers and pigs should be fed to maximize any one of a number of objective functions, such as margin over feed cost or feed conversion efficiency. These models are being used successfully around the world both commercially and in research institutes. The great advantage of modelling is that it identifies areas of research that are useful and usually unique, and as a result he has been able to give his many postgraduate students really interesting projects to work on, and they have benefitted greatly from this.

He is currently developing models to predict food intake in laying hens, laying performance in broiler breeders, and growth and food intake in ostriches, and is collaborating with scientists in Czech who are assisting him to obtain the numbers required to produce a workable model of food intake and growth of turkeys.

Apart from his interest in simulation modelling he has also devoted a great deal of effort to working in the field of lighting. Together with late Dr. Peter Lewis, his research on lighting of broilers and broiler breeders turned on its head the conventional wisdom about the way these birds respond to light and as a result a significant contribution to knowledge in this area has been made.

He has served as one of the five vice-presidents of the World's Poultry Science Association for three four-year terms. He recently relinquished his position as chairman of the South African Branch of the Association, after serving in that position for over 30 years.

As part of his engagement with community, he is a founder member of the KwaZulu-Natal Poultry Institute, whose purpose is to train prospective poultry managers by providing them with the skills needed to manage people, finances, poultry operations and even themselves. The Poultry Institute has impressive training facilities, including accommodation, lecture rooms, computers and a wide range of on-going poultry operations, and these are housed on the University's research and training farm. This institute has been, and continues to be, highly successful in training students and preparing them for life.