

Issued: 9th November 2006

Press Release

Cheltenham seminar goes from strength to strength

This year's highly regarded Thoroughbred Racing & Breeding Seminar was held at Cheltenham Racecourse on Thursday 9th November. A wide range of top quality speakers gave a series of fascinating talks on topics of a highly practical nature, with relevance for breeders, owners and trainers.

The seminar was founded in 2001 by Intervet UK Ltd and has been supported by the Horserace Betting Levy Board, Cheltenham Racecourse and Dodson & Horrell Ltd from the outset. These founder sponsors all maintain their commitment, with the welcome addition of Weatherbys GSB from 2005. It is organised by R&W Communications and is directed by representatives of organisations with interests in the racing and breeding industries. Attracting increasing numbers each year, it has become the largest forum in the UK for all sectors of the industry to meet and exchange views.

Seminar Chairman, Peter Webbon (Director of Veterinary Science and Welfare at the Jockey Club), said "this Seminar presents a unique opportunity for research scientists to present their results to the people who are at the sharp end of the industry, those involved at first hand with the breeding, training and racing of Thoroughbreds. Our speakers are of outstanding quality and the programme was deliberately planned with a great deal of emphasis on practical issues".

The programme focused on nutrition, stud farm management, genetics and racing and training injuries. Dr David Marlin kicked off the first session by posing the question "Where does the energy to gallop come from?". He managed to explain some very complex concepts in a clear and understandable manner, describing the various sources of energy available to horses and how to make the best use of this energy in terms of performance. He used some interesting analogies to simplify his presentation, for example likening a horse's diet to coal or gas which, in itself, cannot power appliances in the home, but must first be converted into electricity.

Dr Derek Cuddeford followed with a presentation on the relationship between glycaemic response to food and bone disorders. There is a great deal of talk, currently, about the value of the glycaemic index but he highlighted the fact that this is an imprecise measure and it is not possible to predict glycaemic responses to food. He gave some very useful guidance on feeding regimes and presented interesting results from a number of studies, but with a warning that they must be interpreted very carefully.

In order to ensure that the above presentations would be as valuable as possible to the audience, Dr Teresa Hollands then gave a brief overview of the information contained in them, and summarised the key points. This usefully illustrated the way in which advances in knowledge of equine nutrition can be incorporated into practical management.

Professor Twink Allen outlined 2 studies which supplied information on a range of factors, including singleton and twin conception rates, pregnancy loss rates, foaling rates, the influence of hormone therapy and the inherent difference in fertility between stallions. He concluded that the per cycle conception rate (64%) and foaling

rate (90%) have risen markedly in the last 30 years, largely due to the top quality management and veterinary attention available on stud farms. He noted that the incidence of twin conceptions has risen from 3% to 11% over the last 18 years, but that the success in reducing these to a healthy singleton pregnancy is 91 to 7%. These studies also revealed a wide variation in stallion fertility, ranging from 43% to 96% per cycle conception rate.

Professor Allen's research assistant, Sandra Wilsher, reported on a survey of over 1,000 Thoroughbred foals on 25 Newmarket stud farms. She followed them from birth to 3 years of age and recorded how many went into training, how often they raced, won or were placed and the prize money earned. She also looked at the occurrence of 9 common conditions which prevent horses from racing. Interestingly only 52% of them entered training as 2-year-olds. The rest went abroad, were put away as National Hunt stores, started training at 3-years-old, died or were bred for purposes other than racing. Of those that did race, joint problems and sore shins were the ailments most commonly suffered and, with the exception of 'tying up', colts and geldings suffered a higher incidence of musculoskeletal injuries than fillies.

This theme was continued by Dr Phil Dyson who described a study into the number of days lost from training due to different types of injury in 2- and 3-year-olds. His results showed that the 2-year-olds trained on 55%, and 3-year-olds on 57%, of days available. He found lameness to be the major cause of days lost from training and, reflecting Sandra Wilsher's findings, that colts were affected more than fillies. His data indicated that the incidence of knee lameness is influenced by the trainer and/or training regimes. Dr Dyson stressed the need to develop methods for identifying animals at risk of injury.

In the first contribution on genetics, Lynn Hillyer provided results from her investigation into the influence of genes on soundness. She had selected 10 genes which are involved in bone structure or function and then identified genetic markers (stretches of DNA sequence) for each gene. She then characterised these markers in blood samples from 470 flat race and 770 National Hunt horses. Her preliminary results suggest that 2 particular genes may have the ability to increase the risk of fracture and she is optimistic that this might lead to the development of genetic testing which could give an overall risk assessment of a horse's resistance to injury.

Dr Kristien Verhagen discussed her attempts to identify breeding-related factors associated with risk of fracture, looking particularly at dam age and parity. Her results indicated that first foals, and foals from older dams, have a relatively lower risk of fracture. This came as something of a surprise because work done in the human field had led her to expect these 2 groups to have a higher risk of fracture. However, she acknowledged that the human studies were based on the general population, not elite athletes which would have been more comparable to Thoroughbreds.

Dr James Wood presented some very early research findings on fracture and tendon injury in National Hunt horses. He had collected data from 1,221 horses from 14 training yards, with the aim of measuring rates of fracture, flexor tendon and suspensory ligament injuries. Although the full analysis of these data has not yet been completed, early results show that a high proportion of injuries occur in training rather than racing and that fracture and tendon injury are a significant cause of early retirement and mortality.

Professor Joanna Price addressed the problem of sore shins, again in terms of assessing risk factors with a view to instituting preventive measures. The condition, which is a manifestation of the bone's response to training, is another cause of many days being lost from work. Professor Price's studies showed that it is likely that training could be adjusted to reduce the occurrence of sore shins. Specifically, the early introduction of regular training sessions at racing speeds, over short distances, may be helpful. It is also probable that the measurement of a bone resorption marker could be used to identify 2-year-olds at increased risk of developing sore shins.

Peter Webbon then introduced a new training and welfare system which has been produced jointly by the Horserace Betting Levy Board, Weatherbys and the Jockey Club. The system was demonstrated at the seminar and constitutes a strictly confidential horse health and performance database that will be available, free of charge, to all trainers. The database is divided into 5 sections: Injuries and illness; exercise; medication; vaccination; and general health. Trainers will only have access to their own records but they will be able to produce monthly reports comparing their own horses' health and performance to those of other trainers.

Another example of the value of databases came from Anthony Stirk who described the development of a database to record fatalities, injuries and medical conditions which occur on the racecourse. This information is submitted to Weatherbys for inclusion in the Veterinary Database, which is available to Jockey Club Veterinary Officers. The analysis of these records will allow an objective assessment to be made of risks relating to horse, racecourse or particular race.

Professor Price returned to the stage to give the final presentation on current and future approaches to prevention of musculoskeletal injuries. She outlined a number of studies which have provided information about the relationship between these injuries and training. It appears that there is more knowledge available on the risk factors related to fractures than to tendon injury, although research in this area is currently underway. One of Professor Price's concerns is the challenge of persuading trainers to modify their training regimes in the light of research findings.

There is no doubt that this programme provided a great deal of food for thought and really allowed the audience to gain a good appreciation of the current areas of equine research and the potential benefits in practical terms. The Seminar has become firmly established in the equine calendar and represents a unique forum for the exchange of ideas and constructive discussion.

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