

## ROYAL AGRICULTURAL COLLEGE MODULAR SCHEME

<i>Sheet updated: September 2010</i>		
<b>Module Code</b> 4037	<b>Module Title</b> Equine Nutrition	<b>Module Leader</b> Jo Charles
<b>School which owns module</b>	School of Agriculture	
<b>Programme(s) to which module belongs</b>	MSc Applied Equine Science (core)	
<b>Module Level</b> 7	<b>Module Credits</b> 15	<b>Pre-Requisites</b> None
<b>Minimum Study Time</b> 150 hours	<b>Contact Hours within Study Time</b> 50	<b>Teaching Period</b> Wednesday mornings
<b>Module Content</b> Alternative sources of nutrition. Recent nutritional research and developments. Biotechnology and additives. GIT microbial activity. Nutrition of conserved and fresh forage. Advanced characterisation of horse feeds. Appropriate feeding of the performance horse incorporating consideration of physiological needs. Energy partition, systems and diet formulation procedure. Nutrition/health interactions.		
<b>Module Outcomes</b> To achieve credit for this module, students must be able to: <ol style="list-style-type: none"> <li>1. Demonstrate an advanced understanding of the biochemical properties of horse feeds.</li> <li>2. Conduct a critical appraisal of analytical techniques in the laboratory.</li> <li>3. Relate feed characteristics to the physiological and dietary requirements of the performance horse.</li> <li>4. Identify nutrition/health interactions and formulate feeding strategies to prevent and rectify health disorders.</li> </ol>		
<b>Assessment</b>	<b>Description</b>	<b>Weighting</b>
<b>Coursework</b>	Lab report Diet formulation exercise	50%
<b>Examination</b>	3 hours	50%

**Key Text:**

Students should be familiar with the content of at least one of the following:  
Ellis, A.D. and Hill, J. (2005) *Nutritional Physiology of the Horse*. Nottingham University Press.

Frape, D. (2010) *Equine Nutrition and Feeding*. 4<sup>th</sup> edition. Wiley-Blackwell.

NRC (2007) *Nutrient Requirements of Horses*. Bulletin No. 6 (revised). The National Academies Press, Washington, USA.

Pagan, J.D. (ed.) (2009). *Advances in Equine Nutrition IV*. Kentucky Equine Research Inc. (Annual). Nottingham University Press.

**Additional texts:**

Ellis, A.D., Longland, A.C., Coenen, M. and Miraglia, N. (Ed) (2010) *The Impact of Nutrition on the Health and Welfare of Horses*. EAAP Scientific Series no. 128. Wageningen Academic Publishers.

Equine Health and Nutrition Association (2006) *Horse Health Nutrition: Proceedings: 3rd European Equine Health and Nutrition Congress 17-18 March 2006*.

Ewing, W.N. (1997). *The Feeds Directory*. Context Publication.

Garnsworthy, P.C. and Wiseman, J. (2006). *Recent Advances in Animal Nutrition*. Annual Publication. Nottingham University Press.

Harris, P.A. (2005). *Equine Nutrition for All: the 1st BEVA and WALTHAM nutrition symposia, Harrogate, September 2005*. British Equine Veterinary Association.

Pagan, J.D. (2005). *Advances in Equine Nutrition III*. Kentucky Equine Research Inc.

Saastamoinen, M.T. and Martin-Rosset, W. (2008). *Nutrition of the Exercising Horse*. (EAAP Publication; 125). Wageningen Academic Publishers.

Lindner, A. (2007). *Applied Equine Nutrition and Training: Equine Nutrition Conference (ENUCO) 2007*. Wageningen Academic Publishers.

Lindner, A. (2005) *Applied Equine Nutrition: Applied Equine Nutrition Conference (ENUCO)*. Wageningen Press.

Lyons, T. P. (1996). *Biotechnology in the Feed Industry. Proceedings of Alltech's 12th annual symposium*. Alltech Inc.

McDonald, P., Edwards, R.A., Greenhalgh, J.F.D. and Morgan, C.A. (2002). *Animal Nutrition*. 6th edition. Longman.

Moughan, P.J., Vestegen, M.W.A. and Visser-Reyneveld, M.I. (2000). *Feed Evaluation: Principles and Practice*. Wageningen Pers.

**Other supporting information****Journals:**

*Animal Science*

*Equine Veterinary Journal*

*Journal of Equine Veterinary Science*

*Equine and Comparative Exercise Physiology :The International Journal of Animal Exercise Physiology, Biomechanics and Nutrition*

**Websites:**

<http://nrc88.nas.edu/nrh> (nutrient requirements for horses)

<http://www.ker.com/research/>