

applying equine science: research into business



edited by A. Hemmings, P. Harris, M. Moore-Colyer,
S. Tracey, K. Howells and A. Northrop

bsas
british society of animal science

publication **35**

British Society of Animal Science
Occasional Publications

The following Occasional Publications, published by the British Society of Animal Science, are now available from Nottingham University Press:

- No. 14 □ New Developments in Sheep Production (1990)
- No. 15 □ Neonatal Survival and Growth (1992)
- No. 17 □ Safety and Quality of Feed from Animals (1993)
- No. 18 □ Livestock Production and Land Use in Hills and Uplands (1994)
- No. 19 □ Breeding and Feeding the High Genetic Merit Dairy Cow (1995)
- No. 20 □ Animal Choices (1997)
- No. 21 □ Food, Lands and Livelihoods - Setting Research Agendas for Animal
□ Science (1998)
- No. 22 □ *In Vitro* Techniques for Measuring Nutrient Supply to Ruminants (1998)
- No. 23 □ Farm Animal Welfare - Who Writes the Rules? (1999)
- No. 24 □ Metabolic Stress in Dairy Cows (1999)
- No. 25 □ Milk Composition (1999) (CD-rom)
- No. 26 □ Fertility in High Producing Dairy Cows - 2 volumes (2001)

The following BSAS Publications have been published by Nottingham University Press:

- No. 29 □ Dairying: Using Science to Meet Consumers' Needs (2004)
- No. 30 □ Farm Animal Genetic Resources (2004)
- No. 31 □ The Appliance of Pig Science (2004)
- No. 32 □ Emerging Equine Science (2004)
- No. 33 □ Responding to the Livestock Revolution (2004)
- No. 34 □ Herbivores: Assessment of Intake, Digestibility and the Roles of Secondary
□ Compounds (2004)

To obtain Occasional Publications contact:

Nottingham University Press, Manor Farm, Thrumpton, Nottingham, NG11 0AX, UK
Tel: +44 115 9831011; Fax: +44 115 9831003; E-mail: orders@nup.com
Website: <http://www.nup.com>

Applying Equine Science: Research into Business

Cover photograph by Catherine Hale

Applying Equine Science: Research into Business

Edited by

L. Clarke, P. Harris, S. Tracey, M. Moore-Colyer and
A. Hemmings



Nottingham University Press
Manor Farm, Main Street, Thrumpton
Nottingham, NG11 0AX, United Kingdom

NOTTINGHAM

First published 2006
© British Society of Animal Science

All rights reserved. No part of this publication may be reproduced in any material form (including photocopying or storing in any medium by electronic means and whether or not transiently or incidentally to some other use of this publication) without the written permission of the copyright holder except in accordance with the provisions of the Copyright, Designs and Patents Act 1988. Applications for the copyright holder's written permission to reproduce any part of this publication should be addressed to the publishers.

British Library Cataloguing in Publication Data

Applying Equine Science

I. Clarke, L., II. Harris, P., III. Tracey, S., IV. Moore-Colyer, M., V. Hemmings, A.

ISBN 10: 1-904761-14-3

ISBN 13: 978-1-904761-14-3

Disclaimer

Every reasonable effort has been made to ensure that the material in this book is true, correct, complete and appropriate at the time of writing. Nevertheless, the publishers and authors do not accept responsibility for any omission or error, or for any injury, damage, loss or financial consequences arising from the use of the book.

Typeset by Nottingham University Press, Nottingham
Printed and bound by Hobbs the Printers, Totton, Hampshire

CONTENTS

Foreword	vii
1. Buying and selling the sport horse	1
G. K Crossman and R. E. Walsh <i>The Royal Agricultural College, Stroud Road, Cirencester, Gloucestershire GL7 6JS, UK</i>	
2. Genetic improvement and relative evaluation of competition performance within the UK sport horse population	13
T.C. Whitaker <i>Centre for Equine and Animal Science, Writtle College, Chelmsford, Essex, CM1 3RR</i>	
3. Equine hair analysis: a non-invasive technique for identifying exposure to drugs and toxins	29
M. Dunnett ¹ , S. Tracy ² and P. Lees ¹ ¹ <i>Department of Veterinary Basic Sciences, Royal Veterinary College, Hawkshead Campus, North Mymms, Hatfield, Herts., AL9 7TA, UK;</i> ² <i>Centre for Equine and Animal Science, Writtle College, Writtle, Chelmsford, Essex, CM3 1RR, UK</i>	
4. Equine passports and the National Equine Database – current situation and future prospects	51
R H Graham Suggett <i>Director of Equine Development, British Equestrian Federation, Stoneleigh Park, Warwickshire, CV8 2RH</i>	
5. Scientific methods used to measure the efficacy of alternative therapies in animals	69
A. D. Ellis, L. Hopegood and K. Hunter <i>Nottingham Trent University, School of Animal, Rural and Environmental Science, Brackenhurst, Southwell, Nottinghamshire NG25 0QF, UK</i>	
6. Osteopathy and its application in the treatment of musculoskeletal dysfunction in horses	85
J Brooks and AG Pusey <i>Awbrook Lodge, Lewes Rd., Haywards Heath, West Sussex RH17 7TB UK</i>	

Table of contents

7.	Nutritional supplements in support of equine welfare	95
	P Harris <i>Equine Studies Group, WALTHAM Centre for Pet Nutrition, Melton Mowbray, Leics.</i>	
8.	Laminitis and grass carbohydrate levels	103
	A.C.Longland <i>ELNS, Pantafallen Fach, Tregaron, Ceredigion, SY25 6NG</i>	
9.	Equine behavioural science: perspectives on problems	109
	H. Randle <i>School of Biological Sciences, University of Plymouth, Drakes Circus, Plymouth, PL4 8AA</i>	
10.	Behavioural reactivity and ensuing temperamental traits in young thoroughbred racehorses (<i>Equus caballus</i>)	129
	S. McGee <i>School of Psychology, Aras an Phiarsaigh, University of Dublin, Trinity College, Dublin 2, Ireland</i>	
11.	Laterality and visuo-spatial ability in the equine: Functional measures of sport horse selection?	159
	¹ Jack Murphy and ² Sean Arkins <i>¹F1-145, Foundation Building, Department of Life Sciences, University of Limerick, Ireland; ²SR2022, Schrödinger Building, Department of Life Sciences, University of Limerick, Ireland.</i>	
	Posters	171
	Index	311