CAMBRIDGE

JOURNALS



Experimental Agriculture

Experimental Agriculture is available online at: http://journals.cambridge.org/eag

To subscribe contact Customer Services

in Cambridge: Phone +44 (0)1223 326070 Fax +44 (0)1223 325150 Email journals@cambridge.org

in New York: Phone +1 (845) 353 7500 Fax +1 (845) 353 4141 Email subscriptions_newyork@cambridge.org *Editor* Dave Harris, Bangor University, UK

Experimental Agriculture publishes the results of original research from any source on the agronomy of field, plantation and herbage crops grown for human or animal food; for industrial purposes; and on systems of agricultural production, particularly in the warmer regions of the world. It is especially concerned with experimental work designed to explain agronomic results in biological and environmental terms. The journal publishes accounts of new experimental techniques, new methods of crop production and discusses problems in countries where production is developing rapidly. There are regular book reviews.

Price information is available at: http://journals.cambridge.org/eag

Free email alerts Keep up-to-date with new material – sign up at http://journals.cambridge.org/alerts

For free online content visit: http://journals.cambridge.org/eag



CAMBRIDGE

JOURNALS



World's Poultry Science Journal

Published on behalf of the World's Poultry Science Association

Editor

Lucy Tucker, Waiti Hill Ltd, New Zealand

World's Poultry Science Journal provides authoritative reviews in poultry science and an international forum for the exchange and dissemination of information including research, education and industry organisation. Each issue includes poultry industry related news, regional reports on global developments in poultry, reports from specialist scientific working groups, book reviews, association news and a calendar of forthcoming events.

NEW - Digital Archive!

Access from the first issue in 1945 until 2003 online! For more information, email, quoting filler0709: In the USA, Canada and Mexico USJournals@cambridge.org Rest of the World jnlsales@cambridge.org

Free email alerts Keep up-to-date with new material –sign up at http://journals.cambridge.org/alerts

For free online content visit: http://journals.cambridge.org/wps



World's Poultry Science Journal

is available online at journals.cambridge.org/wps

To subscribe contact Customer Services

in Cambridge:

Phone +44 (0)1223 326070 Fax +44 (0)1223 325150 Email journals@cambridge.org

in New York:

Phone +1 (845) 353 7500 Fax +1 (845) 353 4141 Email journals_subscriptions@cambridge.org

COPYING

No contents may be reproduced by any means without the permission of Cambridge University Press. This journal is registered with the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, USA (www.copyright.com). Organizations in the USA who are also registered with the CCC may therefore copy material (beyond the limits permitted by sections 107 and 108 of US copyright law) subject to payment to CCC. This consent does not extend to multiple copying for promotional or commercial purposes. *ISI Tear Sheet Service*, 3501 Market Street, Philadelphia, PA 19106, USA, is authorized to supply single copies of separate articles for private use only. Organizations authorized by the Copyright Licensing Agency may also copy material subject to the usual conditions. *For all other use*, permission should be sought from Cambridge or the American Branch of Cambridge University Press.

INTERNET ACCESS

This journal is included in the Cambridge Journals Online service which can be found at http://www.journals.cambridge.org For further information on other Press titles access http://www.cambridge.org

This journal issue has been printed on FSC-certified paper and cover board. FSC is an independent, non-governmental, not-for-profit organization established to promote the responsible management of the world's forests. Please see www.fsc.org for information.

CAMBRIDGE UNIVERSITY PRESS

The Edinburgh Building, Shaftesbury Road, Cambridge CB2 8RU, United Kingdom 32 Avenue of the Americas, New York, NY 10013–2473, USA 477 Williamstown Road, Port Melbourne, VIC 3207, Australia Ruiz de Alarcón 13, 28014 Madrid, Spain Dock House, The Waterfront, Cape Town 8001, South Africa

Printed in the United Kingdom by the University Press, Cambridge

Volume 148 Part 3 June 2010

THE JOURNAL OF **AGRICULTURAL SCIENCE**

CONTENTS

MODELLING ANIMAL SYSTEMS PAPERS

J. DIJKSTRA, S. LOPEZ, A. BANNINK, M. S. DHANOA, E. KEBREAB, N. E. ODONGO, M. H. FATHI NASRI, U. K. BEHERA, D. HERNANDEZ-FERRER and J. FRANCE Evaluation of a mechanistic lactation model using cow, goat and sheep data	249
G. ANDRÉ, P. B. M. BERENTSEN, G. VAN DUINKERKEN, B. ENGEL and A. G. J. M. OUDE LANSINK Economic potential of individual variation in milk yield response to concentrate intake of dairy cows	263
R. S. DIAS, S. LOPEZ, J. A. MOREIRA, M. SCHULIN-ZEUTHEN, D. M. S. S. VITTI, E. KEBREAB and J. FRANCE Application of a kinetic model to describe phosphorus metabolism in pigs fed a diet with a microbial phytase	277
R. M. GOUS and M. K. NONIS Modelling egg production and nutrient responses in broiler breeder hens	287
CROPS AND SOILS PAPERS	
H. JONES, S. CLARKE, Z. HAIGH, H. PEARCE and M. WOLFE The effect of the year of wheat variety release on productivity and stability of performance on two organic and two non-organic farms	303
A. GONZÁLEZ, V. BERMEJO and B. S. GIMENO Effect of different physiological traits on grain yield in barley grown under irrigated and terminal water deficit conditions	319
C. YAN, Y. DING, Q. WANG, Z. LIU, G. LI, I. MUHAMMAD and S. WANG The impact of relative humidity, genotypes and fertilizer application rates on panicle, leaf temperature, fertility and seed setting of rice	329
Y. S. CHAUHAN, G. C. WRIGHT, R. C. N. RACHAPUTI, D. HOLZWORTH, A. BROOME, S. KROSCH and M. J. ROBERTSON Application of a model to assess aflatoxin risk in peanuts	341
S. SRIPHADET, P. KASEMSAP and P. SRINIVES Effect of leaflet size and number on agronomic and physiological traits of mungbean	353
ANIMAL PAPER	
N. GHAVI HOSSEIN-ZADEH and M. ARDALAN Estimation of genetic parameters for body weight traits and litter size of Moghani sheep, using a Bayesian approach via	
Gibbs sampling	363
BOOK REVIEWS	371
FORTHCOMING EVENTS	373

Journal of Agricutural Science now accepts submissions via Manuscript Central. Go to http://mc.manuscriptcentral.com/jagricsci

Cambridge Journals Online For further information about this journal please go to the journal website at: journals.cambridge.org/ags



Mixed Sources Product group from well-managed forests and other controlled sources www.fsc.org Cert no. SA-COC-1527 © 1996 Forest Stewardship Council

CAMBRIDGE UNIVERSITY PRESS

https://doi.org/10.1017/S0021859610000262 Published online by Cambridge University Press