

# Cambridge Core

The new  
home of  
academic  
content

[cambridge.org/core](https://cambridge.org/core)

Cambridge **Core**





# Life Sciences

Books and Journals from  
Cambridge University Press

Cambridge is one of the leading publishers in ecology and conservation biology and publishes high quality texts and research across the breadth of the life sciences, focusing particularly on animal behaviour, biological anthropology, evolutionary biology, computational and systems biology, as well as statistics and professional development titles for biologists.

We also have an extensive portfolio of established journals in agriculture, ecology and conservation, and animal science.

For further details visit:  
[cambridge.org/core-life-sciences](https://cambridge.org/core-life-sciences)

Cambridge  
Core



CAMBRIDGE  
UNIVERSITY PRESS

# Cambridge Core

The new home of  
Cambridge Journals

[cambridge.org/core](https://cambridge.org/core)

Cambridge Core

<https://doi.org/10.1017/S0021859618000308> Published online by Cambridge University Press



CAMBRIDGE  
UNIVERSITY PRESS

# THE JOURNAL OF AGRICULTURAL SCIENCE

## CLIMATE CHANGE AND AGRICULTURE RESEARCH PAPER

- Long-term simulation of temporal change of soil organic carbon in Denmark: comparison of three model performances under climate change  
I. OZTURK, B. SHARIF, S. BABY, M. JABLOUN AND J. E. OLESEN 139
- Changes of grain production potential in farming–pastoral ecotone: a case study in West Jilin, China  
FEI LI, SHUWEN ZHANG, YIJING ZHANG, HAIJUAN YANG AND JIUCHUN YANG 151

## CROPS AND SOILS RESEARCH PAPER

- Linseed as a dual-purpose crop: evaluation of cultivar suitability and analysis of yield determinants  
G. FILA, M. BAGATTA, C. MAESTRINI, E. POTENZA AND R. MATTEO 162
- Early sowing increases nitrogen uptake and yields of winter wheat grown with cattle slurry or mineral fertilizers  
A. SUAREZ-TAPIA, J. RASMUSSEN, I. K. THOMSEN AND B. T. CHRISTENSEN 177
- Growth, morphology and biological nitrogen fixation potential of perennial ryegrass-white clover swards throughout the grazing season  
C. GUY, D. HENNESSY, T. J. GILLILAND, F. COUGHLAN AND B. MCCARTHY 188
- Modelling shoot growth and yield of Ceylon tea cultivar TRI-2025 (*Camellia sinensis* (L.) O. Kuntze)  
H.A.S.L. JAYASINGHE, L.D.B. SURIYAGODA, A.S. KARUNARATHNE AND M.A. WIJERATNA 200
- How sequential reduction of terminal electron acceptors modulates nitrification and dynamics of nitrifying bacteria and archaea in a tropical vertisol  
SANTOSH RANJAN MOHANTY, RAKHI YADAV, GARIMA DUBEY, USHA AHIRWAR, NEHA AHIRWAR, K. AParna, D. L. N. RAO AND BHARATI KOLLAH 215
- Effect of balanced fertilizers on soil quality and lentil yield in Gangetic alluvial soils of India  
S. R. SINGH, D. K. KUNDU, P. DEY, PUSHPA SINGH AND B. S. MAHAPATRA 225
- Development of recombinant high yielding lines with improved protein content in rice (*Oryza sativa* L.)  
K. CHATTOPADHYAY, S. G. SHARMA, T. B. BAGCHI, K. A. MOLLA, S. SARKAR, B. C. MARNDI, A. SARKAR, S. K. DASH AND O. N. SINGH 241

## ANIMAL RESEARCH PAPER

- Differential growth performance and intestinal immune gene expression in diverse genetic lines of growing chickens fed a high concentration of supplemental phytase  
S. Q. JIANG, S. J. LAMONT AND M. E. PERSIA 258
- Comparison of three different step-down feeding to weaning programmes on performance, body measurements and age at first breeding of Holstein heifers  
D. ZAHMATKESH, F. NIAZI, M. HOSSEIN YAZDI AND E. MAHJOUBI 265
- Effects of isovalerate supplementation on morphology and functional gene expression of small intestine mucosa in pre- and post-weaned dairy calves  
Q. LIU, C. WANG, Y. L. ZHANG, C. X. PEI, S. L. ZHANG, G. GUO, W. J. HUO AND W. Z. YANG 272
- Determination of static space occupied by individual weaner and growing pigs using an image-based monitoring system  
M. FELS, K. KONEN, E. HESSEL AND N. KEMPER 282
- Performance and meat quality of broiler chicken fed a ration containing flaxseed meal and higher dietary lysine levels  
NASIR AKBAR MIR, PRAVEEN K. TYAGI, ASHIM KUMAR BISWAS, PRAMOD K. TYAGI, ASIT B. MANDAL, MANZOOR A. WANI, CHANDRA DEO, AVISHEK BISWAS AND ARUN KUMAR VERMA 291

Submit your paper online

[mc.manuscriptcentral.com/jagricsci](http://mc.manuscriptcentral.com/jagricsci)

Register to receive the latest news and content from the journal

[https://www.cambridge.org/core/journals/  
journal-of-agricultural-science](https://www.cambridge.org/core/journals/journal-of-agricultural-science)

Cambridge Core

For further information about this journal  
please go to the journal web site at:

[cambridge.org/ags](http://cambridge.org/ags)



MIX  
Paper from  
responsible sources  
FSC® C007785

CAMBRIDGE  
UNIVERSITY PRESS