

Contents

Research articles

- Optimal fertilization for high yield and good quality of waxy sorghum (*Sorghum bicolor* L. Moench)
C. Wang, L. Zhou, G. Zhang, Y. Xu, L. Zhang, X. Gao, J. Gao, N. Jiang and M. Shao (PR China) 1
- Spatial variation of attainable yield and fertilizer requirements for maize at the regional scale in China
X. Xu, P. He, J. Zhang, M.F. Pampolino, A.M. Johnston and W. Zhou (PR China, Philippines, Canada) 8
- Effect of aboveground and belowground interactions on the intercrop yields in maize-soybean relay intercropping systems
F. Yang, D. Liao, X. Wu, R. Gao, Y. Fan, M.A. Raza, X. Wang, T. Yong, W. Liu, J. Liu, J. Du, K. Shu and W. Yang (PR China) 16
- Ratooning pigeonpea in maize-pigeonpea intercropping: Productivity and seed cost reduction in eastern Tanzania
L. Rusinamhodzi, B. Makoko and J. Sariah (Kenya, Tanzania) 24
- Impact of climatic variables on the spatial and temporal variability of crop yield and biomass gap in Sub-Saharan Africa- a case study in Central Ghana
A.K. Srivastava, C.M. Mboh, T. Gaiser and F. Ewert (Germany) 33
- The effect of sowing depth and soil compaction on the growth and yield of rapeseed in rice straw returning field
Q. Zuo, J. Kuai, L. Zhao, Z. Hu, J. Wu and G. Zhou (PR China) 47
- Nitrogen accumulation, partitioning, and remobilization by diverse sesame cultivars in the humid southeastern USA
A. Couch, A. Jani, M. Mulvaney, G. Hochmuth, J. Bennett, R. Gloaguen, R. Langham and D. Rowland (USA) 55
- Low straw phosphorus concentration is beneficial for high phosphorus use efficiency for grain production in rice recombinant inbred lines
K. Wang, K. Cui, G. Liu, X. Luo, J. Huang, L. Nie, D. Wei and S. Peng (China) 65
- Do no-till and pig slurry application improve barley yield and water and nitrogen use efficiencies in rainfed Mediterranean conditions?
D. Plaza-Bonilla, C. Cantero-Martínez, J. Bareche, J.L. Arrúe, J. Lampurlanés and J. Álvaro-Fuentes (Spain) 74
- Priming of rice (*Oryza sativa* L.) seedlings with abscisic acid enhances seedling survival, plant growth, and grain yield in saline-alkaline paddy fields
L.-X. Wei, B.-S. Lv, X.-W. Li, M.-M. Wang, H.-Y. Ma, H.-Y. Yang, R.-F. Yang, Z.-Z. Piao, Z.-H. Wang, J.-H. Lou, C.-J. Jiang and Z.-W. Liang (China, Japan) 86
- Strategies for yield determination of bread wheat and two-row barley growing under different environments: A comparative study
S. Alvarez Prado, J.M. Gallardo, B.C. Kruk and D.J. Miralles (Argentina, France) 94
- Effects of pollination-prevention on leaf senescence and post-silking nitrogen accumulation and remobilization in maize hybrids released in the past four decades in China
L. Yang, S. Guo, F. Chen, L. Yuan and G. Mi (PR China) 106
- Yield determination, interplay between major components and yield stability in a traditional and a contemporary wheat across a wide range of environments
A. Ferrante, J. Cartelle, R. Savin and G.A. Slafer (Spain) 114

| | |
|---|-----|
| N:P:S stoichiometry in grains and physiological attributes associated with grain yield in maize as affected by phosphorus and sulfur nutrition | |
| F. Salvagiotti, P. Prystupa, G. Ferraris, L. Couretot, L. Magnano, D. Dignani and F.H. Gutiérrez BGutiérrez-Boemoem (Argentina) | 128 |
| Benefits of mechanized deep placement of nitrogen fertilizer in direct-seeded rice in South China | |
| S. Pan, X. Wen, Z. Wang, U. Ashraf, H. Tian, M. Duan, Z. Mo, P. Fan and X. Tang (China) | 139 |
| Productivity and profitability of upland crop rotations in Northwest Cambodia | |
| S. Montgomery, C. Guppy, R. Martin, G. Wright, R. Flavel, S. Phan, S. Im and M. Tighe (Australia, Cambodia) | 150 |
| Effects of common <i>Echinochloa</i> varieties on grain yield and grain quality of rice | |
| Z. Zhang, T. Gu, B. Zhao, X. Yang, Q. Peng, Y. Li and L. Bai (China) | 163 |
| Rice yields and water use under alternate wetting and drying irrigation: A meta-analysis | |
| D.R. Carrijo, M.E. Lundy and B.A. Linqvist (USA) | 173 |
| The relationship between plant height and sugar accumulation in the stems of sweet sorghum (<i>Sorghum bicolor</i> (L.) Moench) | |
| S. Shukla, T.J. Felderhoff, A. Saballos and W. Vermerris (USA) | 181 |
| Characters in light-response curves of canopy photosynthetic use efficiency of light and N in responses to plant density in field-grown cotton | |
| H. Yao, Y. Zhang, X. Yi, W. Zuo, Z. Lei, L. Sui and W. Zhang (China) | 192 |
| Ridge–furrow with plastic film mulching practice improves maize productivity and resource use efficiency under the wheat–maize double–cropping system in dry semi–humid areas | |
| C. Li, C. Wang, X. Wen, X. Qin, Y. Liu, J. Han, Y. Li, Y. Liao and W. Wu (China, Canada) | 201 |
| Meteorological limits to winter wheat productivity in the U.S. southern Great Plains | |
| R.P. Lollato, J.T. Edwards and T.E. Ochsner (USA) | 212 |
| Replacing fallow with forage triticale in a dryland wheat-corn-fallow rotation may increase profitability | |
| D.C. Nielsen, D.J. Lyon and J.J. Miceli-Garcia (USA) | 227 |
| Vernalisation and photoperiod sensitivity in wheat: The response of floret fertility and grain number is affected by vernalisation status | |
| U. Steinfort, S. Fukai, B. Trevaskis, D. Glassop, A. Chan and M.F. Dreccer (Australia) | 243 |
| Short communication | |
| Is early morning flowering an effective trait to minimize heat stress damage during flowering in rice? | |
| R. Bheemanahalli, R. Sathishraj, M. Manoharan, H.N. Sumanth, R. Muthurajan, T. Ishimaru and J.S.V. Krishna (Philippines, USA, India) | 238 |