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Altri autori (Persone)	SerrajRachid BennettJ HardyB
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Nota di contenuto	Contents; Foreword; Rice drought-prone environments and coping strategies; Drought: economic costs and research implications Sushil Pandey and Humnath Bhandari; Drought: definition, coping strategies, and consequences ² ; Frequency of drought and economic loss ³ ; Household-level consequences of drought; Implications; Agricultural research; Technology design considerations; Complementary options; Concluding remarks; References; Modeling spatial and temporal variation of drought in rice production Robert J. Hijmans and Rachid Serraj; Defining drought; Systems analysis and simulation Distribution of rice production systems and rainfallWater as a yield-limiting factor; The potential benefits of drought tolerance; Discussion; References; Recent progress in breeding and genetics of drought

resistance; Rice germplasm development for drought-prone environments: progress made in breeding and genetic analysis at the International Rice Research Institute G.N. Atlin, R. Venuprasad, J. Bernier, D. Zhao, P. Virk, and A. Kumar; Target environments for drought germplasm improvement; Physiological and agronomic effects of drought, and implications for germplasm improvement Screening cultivars for tolerance of acute stress at flowering versus intermittent stress Cultivar development for drought-prone environments; Developing cultivars with improved lowland drought tolerance for banded upper terraces; Developing cultivars with improved drought tolerance for unbanded uplands; Designing cultivar development programs that can combine drought tolerance with yield potential; Prospects for marker-aided selection for drought tolerance in rice; Conclusions; References

Drought research at WARDA: current situation and prospects M. Sie, K. Futakuchi, H. Gridley, S. Mande, B. Manneh, M.N. Ndjioudjop, A. Efiue, S.A. Ogunbayo, M. Moussa, H. Tsunematsu, and H.

Samejima Identification of genetic sources for drought resistance; WARDA-JIRCAS Drought Project; Generation of breeding and mapping populations; Evaluation of breeding lines developed; Conclusions and prospects; References; Drought resistance characters and variety development for rainfed lowland rice in Southeast Asia Shu Fukai, Jaya Basnayake, and Ouk Makara; Drought resistance characters

Characterizing the water environment Improving yield in drought-prone environments; Current status in research and development; References;

Molecular breeding for drought-tolerant rice (*Oryza sativa* L.): progress and perspectives Zhi-Kang Li and Yong-Ming Gao; Mechanisms of drought tolerance in rice; Genetic basis of DT in rice; Breeding for improved DT in rice; Improving rice DT by backcross breeding and designed QTL pyramiding; References; Recent efforts to improve drought resistance of rice in Brazil Flavio Breseghello, Cleber Moraes Guimaraes, and Beatriz da Silveira Pinheiro

Early studies on drought resistance at Embrapa

Sommario/riassunto

The success of the Green Revolution in closing the gap between world population and food production was principally achieved by increasing crop productivity in favorable areas. However, this success has been limited in the rainfed systems, which are prone to frequent droughts and other abiotic stresses. Worldwide, drought affects approximately 23 million hectares of rainfed rice. Varieties combining improved drought resistance with high yield under favorable conditions and quality characteristics preferred by farmers are the most promising and deliverable technologies for alleviating poverty
