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Titolo	Pre-Field Screening Protocols for Heat-Tolerant Mutants in Rice [[electronic resource] /] / by Fatma Sarsu, Abdelbagi M.A. Ghanim, Priyanka Das, Rajeev N. Bahuguna, Paul Mbogo Kusolwa, Muhammed Ashraf, Sneha L. Singla-Pareek, Ashwani Pareek, Brian P. Forster, Ivan Ingelbrecht
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Nota di contenuto	General Introduction -- Screening Protocols for Heat Tolerance in Rice at the Seedling and Reproductive Stages -- Validation of Screening Protocols for Heat Tolerance in Rice -- Conclusion -- References.
Sommario/riassunto	This open access book presents simple, robust pre-field screening protocols that allow plant breeders to screen for enhanced tolerance to heat stress in rice. Two critical heat-sensitive stages in the lifecycle of the rice crop are targeted – the seedling and flowering stages – with screening based on simple phenotypic responses. The protocols are based on the use of a hydroponics system and/or pot experiments in a glasshouse in combination with a controlled growth chamber where the heat stress treatment is applied. The protocols are designed to be effective, simple, reproducible and user-friendly. The protocols will enable plant breeders to effectively reduce the number of plants from a few thousands to less than 100 candidate individual mutants or lines in a greenhouse/growth chamber, which can then be used for further

testing and validation in the field conditions. The methods can also be used to classify rice genotypes according to their heat tolerance characteristics. Thus, different types of heat stress tolerance mechanisms can be identified, presenting opportunities for pyramiding different (mutant) sources of heat stress tolerance. .
