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Titolo	Low-Cost Methods for Molecular Characterization of Mutant Plants : Tissue Desiccation, DNA Extraction and Mutation Discovery: Protocols / / by Bradley J. Till, Joanna Jankowicz-Cieslak, Owen A. Huynh, Mayada M. Beshir, Robert G. Laport, Bernhard J. Hofinger
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Nota di contenuto	Introduction -- Health and Safety Considerations -- Sample Collection and Storage -- Low-Cost DNA Extraction -- PCR Amplification for Low-Cost Mutation Discovery -- Enzymatic Mismatch Cleavage and Agarose Gel Evaluation of Samples -- Alternative Enzymology for Mismatch Cleavage for TILLING and Ecotilling: Extraction of Enzymes form Common Weedy Plants -- Example Data -- Conclusions. .
Sommario/riassunto	This book offers low-cost and rapid molecular assays for the characterization of mutant plant germplasm. Detailed protocols are provided for the desiccation of plant tissues; the extraction of high-quality DNA for downstream applications; the extraction of single-strand-specific nucleases for single nucleotide polymorphism; and

small insertion/deletion discovery using standard agarose gel electrophoresis. The methods described can be applied in any laboratory equipped for basic molecular biology and do away with the need for expensive freezers and toxic organic compounds. With the appropriate validation of sample quality and longevity, they can provide sufficient DNA for a variety of molecular applications, such as marker studies and TILLING, at approximately one tenth of the cost per sample when compared to commercial kits.