

What you should know about the module

We feel strongly that when you study plant genetic diversity, you need to know what your goals are, what your limitations are, and what you must accomplish.

We have therefore taken care to discuss:

- The fundamental principles of genetic diversity,
- The qualities of the markers used to measure it and
- The most widely used technologies, including those based on proteins, DNA and the polymerase chain reaction.

Explanatory graphics and photographs illustrate key experimental procedures, and real-life examples are given of applications to particular cases of genetic diversity studies and/or germplasm management. These should help in the use of the module as a useful educational resource, whether as a self-tutorial or incorporated into a university curriculum.

We also compare the various techniques—their advantages and disadvantages, and relative costs of each procedure to help the beginning scientist understand the key components for selecting those procedures most appropriate for a given research.

Because this module was designed for use as a training aid or reference tool, lists of key references, references to extra applications and equipment lists are also given.

The module is intended for scientists with a minimal background in genetics and plant molecular biology, but with a working knowledge of plant genetic resources and issues concerning their conservation and management. We hope that the module will be particularly useful to scientists in developing countries, for whom print materials may be unavailable, expensive, or too quickly outdated. We also hope that it will be useful for science educators who wish to have access to a general overview of current DNA technologies and their possible uses in biodiversity conservation and use.

So that users may select only those sections of relevance or interest to them, we organised the module into complementary yet independent submodules. The exception is the Introduction, which is relevant to all sections and should always be included. In this way, the module, as a whole, can be used as reference for particular protocols, as a refresher or update for the scientist needing to make new research decisions or as a guide for short technical workshops.

Updating and feedback are of critical importance in the very fast evolving fields of molecular genetics (and their associated technologies) and plant genetic resources. We expect to update this product at relatively frequent intervals. To effectively respond to our partners and other users' needs, we would greatly appreciate your giving us feedback on the organisation, content and usefulness of this tool. You can write to us at cdevicente@cgjar.org; tf12@cornell.edu or at our mail addresses:

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We most wish that the module will be used in diverse ways and that it will, together with a companion module on the analysis of marker data for genetic diversity studies, expected to be out by the end of 2003, bring to many readers, especially those in developing countries with limited access to state-of-the-art technologies, a chance to conduct advanced research in plant genetic diversity, thereby contributing to the world's knowledge of these valuable resources.

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