Book Review

Crop Wild Relative Conservation and Use.

N. Maxted, B.V. Ford-Lloyd, S.P. Kell, J.M. Iriondo, M.E. Dulloo, and J. Turok (editors). 2008. CAB International, Wallingford, Oxford, UK. 682 pages. \$240.00. ISBN: 978 1 84593 099 8.

Crop wild relatives are examined and discussed in detail in this comprehensive tome. The 127 authors are primarily reporting on European crop relatives, although there are a few other geographic locations included, such as Russia (Asia and Europe), West Africa, Fiji Islands, Sri Lanka, Ecuador, Costa Rica, and western Asia. The importance of diverse genetic resources is discussed in the preface and expounded on in the first chapter.

Crop wild relatives serve as genetic repositories of beneficial traits, yet they are subject to numerous threats. Global climate change, habitat loss, degradation, and mismanagement represent politically charged issues, whereas conservation techniques are more technologically based. The roles of farmers can be important considerations, for as in some cases, agricultural practices themselves can have destructive, irreversible effects. Conservation of the genetic resources provided by wild relatives is a global food security concern. Such issues are explored throughout this text, in addressing issues

surrounding many crops, from almond and amica to wheat to yams. Crops that provide condiments, food, fiber, forage, forest products, medicine, and oils are considered. In the book, both *ex situ* and *in situ* conservation efforts are explored.

The 49 chapters are grouped into the following categories:

- Part I: Overview of crop wild relative conservation and use.
- Part II: Establishing inventories and conservation priorities.
- Part III: Threat and conservation assessment.
- Part IV: Genetic erosion and genetic pollution.
- Part V: *In situ* conservation.
- Part VI: *Ex situ* conservation.
- Part VII: Information management.
- Part VIII: Gene donors for crop improvement.
- Part IX: Use of crop wild relatives and underutilized species.
- Part X: Global issues in crop wild relatives and use.

The publisher, CAB International, is a nonprofit organization that collects and disseminates knowledge “to enhance sustainable development, human welfare and the environment.” This book grew out of the First International Conference on Crop Wild Relative Conservation and Use, held in 2007. The conference was organized to provide a collaborative environment for sharing knowledge in related areas of work, and contribute

to development of strategic alliances in this research.

Numerous projects are reviewed in the book, including the Dryland Agrobiodiversity Project in Jordan, Lebanon, Syria, and the Palestinian Authority; the Royal Botanic Garden Kew’s Millennium Seed Bank Project; and GENE-MINE project in the European Union. The plant genetic resources group Bioversity International (formerly the International Plant Genetic Resources Institute) collaborated on many of these efforts.

For the interested readers, many chapters provide wonderful examinations of crop wild relative origins, historical use, and recent changes to germplasm. For example, traditional farming methods and maintenance of landraces by aging farmers are not necessarily being adopted by the younger generation of farmers, thereby contributing to the loss of genetic diversity. The reader will gain extensive knowledge of crop plant origins, efforts to maintain genetic diversity among wild relatives, and barriers to accomplishing such goals. Extensive bibliographies at the end of each chapter lead one to broader and deeper information on each subject. This book is a good resource for those concerned with biodiversity conservation, from scientists to policy-makers to farmers.

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