
The author seeks to contribute a pragmatic economic perspective to issues on matters of access and use of genetic resources on mutually agreed terms to assist in implementing the objectives of the Convention on Biological Diversity (CBD). He attempts to apply economic thinking to the resolution of some of the more contentious points of the discussions. This book should be useful to scientists and administrators involved with developing policies concerning access to genetic resources and benefit sharing arising from the utilization of these genetic resources as well as to those involved with the acquisition and exchange of genetic resources.

The relevant use and sharing Articles of the Convention on Biological Diversity are listed in Chapter 1, including Article 8: In situ conservation; Article 9: Ex situ conservation; Article 15: Access to genetic resources; Article 16: Access to and transfer of technology; Article 18: Technical and scientific cooperation; and Article 19: Handling of biotechnology and distribution of its benefits. The author indicates that “The creation of operational exchange mechanisms involves shared understandings of value, legal structures defining the extent of ownership and use rights, as well as the institutional market systems in themselves.” His objective in this book is to explore each of these aspects.

Chapters 2 and 3 cover access issues under Article 15 and using access legislation to implement sovereign rights under article 15. The author points out that the CBD establishes national sovereign rights over genetic resources of a country, but that domestic legislation is required to implement these sovereign rights. He traces the exchange of genetic resources over the centuries, the common heritage approach, and then points out that the CBD can be seen in part as a wide endorsement of the cessation of open access in exchange for a system providing some remuneration. Both Intellectual Property Rights and Farmers’ Rights are discussed, including Plant Breeders’ Rights, Material Transfer Agreements (MTAs), mutually agreed terms, and benefit sharing. An overview of existing access legislation in several countries is given as well as an assessment of this legislation.

Valuation and equity under Articles 8, 15, 16, and 19 are discussed in Chapter 4. Main sections include approaches to valuation of genetic resources, estimates of value of genetic resources, and perspectives on what constitutes ‘fair and equitable’. Chapter 5 includes prior informed consent (PIC) under Articles 15 and 19. Examples from medicine are cited. It is pointed out that PIC applies to access to genetic resources and biosafety.

Ex situ storage issues under Article 9 and the Nairobi Final Act are discussed in Chapter 6. Ex situ conservation is defined, and the exclusion from CBD rules of materials collected prior to the CBD going into effect is recognized. The author feels that genetic resources fit well with the concept of common property and that the conversion from common property to private property is complex and costly in transaction costs.

Chapter 7 deals with roles and treatment of traditional knowledge under Articles 8 and 18. Although many recognize that cultural and biological diversity are intertwined, there is no succinct, generally accepted definition of what local/indigenous (L/I) knowledge is. He advocates a system which separates ownership of genetic resources from the ownership of the knowledge of its use. His proposed system of “reserved rights” is discussed. It is suggested that solutions for L/I knowledge might come from MTAs and a new sui generis system which is described.

National technology transfer commitments under article 16 are covered in Chapter 8. Examples are cited from Australia, Germany, Switzerland, and the United Kingdom.

Chapter 9 covers roles of intellectual property rights in achieving technology transfer objectives under Article 16. The author indicates that the intent of this chapter is to present information on the roles and record of IPR as a component of technology transfer. One of the sections describes the current status of IPR protection worldwide.

The覆盖 of issues relating to access to genetic resources and benefit sharing is excellent, but the important aspect of this book is the emphasis on economic factors as they affect the use and conservation of biological diversity as covered in the Convention on Biological Diversity. Many references are cited to provide the reader the opportunity to obtain an even broader background of information about these and related issues.

Steve A. Eberhart
National Seed Storage Laboratory, USDA, ARS, 1111 South Mason Street Fort Collins, CO 80521-4500


The editors have developed a comprehensive overview of seed production in general, including excellent up-to-date coverage of a wide range of crops throughout the world. It is divided into two sections: (i) Principles of seed growing (production) and (ii) Seed growing (production) of various crops. I found the information in section one to be highly readable, interesting, and enjoyable. Furthermore, it provides information that, to my knowledge, is not available in any other reference.

Chapter 1 of section one covers the structure of the seed industry. The focus is worldwide and covers access by farmers in government sponsored programs in developing countries as well as contract seed production in developed countries. Finally, it covers the practice of seed saving and discusses how this fits into the seed industry. I found this chapter interesting reading as well as informative.

Chapter 2 covers international agreements and national legislation and is presented in two parts. The first deals with protection of varieties (germplasm) by the seed industry, particularly at the international level. It spends a lot of time discussing UPOV, the international plant protection system. It does a good job of discussing the concept of a variety and the criteria required for varietal authenticity. However, this chapter is silent on national plant variety protection systems.

Finally, it discusses international and national programs for seed certification and seed testing. Although it provides detail about national seed testing programs, its discussion about seed trade organizations include only the Federation Internationale du Commerce des Semences (FIS) and the Asia Pacific Seed Association (APSA), with no mention of the American Seed Trade or other North American seed industry associations.

Part Two of Chapter 2 discusses seven examples of national seed legislation including that of Canada, Chile, the European...