

# Tropical Agroecosystems

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Edited by  
John H. Vandermeer

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Front and back covers: Rustic coffee production in Chiapas, Mexico. (Photos courtesy of John Vandermeer.)

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## CHAPTER 6

# The Coffee Agroecosystem in the Neotropics: Combining Ecological and Economic Goals

Ivette Perfecto and Inge Armbrecht

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## THE SOCIOPOLITICAL AND ECONOMIC LANDSCAPE OF COFFEE

In Latin America, a region of rich and diverse natural resources and intensifying anthropogenic pressures upon them, policy makers, economists, and conservationists struggle to balance economic development with environmental conservation. The interest in combining conservation and development has resulted in more attention being paid to managed agroecosystems, in particular those that incorporate high levels of planned biodiversity (Vandermeer and Perfecto, 1997). Among the agroecosystems that have received considerable attention recently is the coffee agroforest. It has been argued that coffee production in Latin America, if managed with a diverse canopy of shade trees, presents the opportunity to generate economic benefits, conserve biodiversity, and enhance the livelihood of small producers (Perfecto et al., 1996; Rice and Ward, 1996). This chapter examines the agroecology of the shade coffee agroecosystem, focusing on its biodiversity and the potential that this system presents for combining economic and conservation goals in Latin America.

### Economic Importance of Coffee

Coffee, along with petroleum and cotton, is one of the world's most traded commodities (McLean, 1997; International Coffee Council, 2001). Approximately 34% of the world's coffee production and 30% of the world's coffee area is based in northern Latin America, an area that extends from Mexico to Colombia and includes the Caribbean (Rice, 1999). As early as the mid-1800s, coffee had been economically linked to the countries of the region, becoming one of their main export crops. Until the mid-1980s, when production declined due to the civil war and adverse policies, coffee accounted for more than 50% of total exports in El Salvador (Consejo Salvadoreño del Café, 1997). In Mexico over the past few decades, coffee has become one of the most important exports, generating 36% of the agricultural export value (Nolasco, 1985; Nestel, 1995); and in Peru, coffee is the single most important export crop in terms of value (Greenberg and Rice, 2000). Furthermore, the coffee produced in this region belongs to varieties of *Coffea arabica*, which produces a higher-quality coffee and demands higher prices in the international market than varieties of *C. robusta* grown in Brazil and in lower elevations in the region. In Colombia, coffee constitutes around 66% of permanent crops in the country (Rice and Ward, 1996) and traditionally has been the dominant agricultural activity of the country, with 20% of the value of agricultural production (Sanint, 1994).











































































