

# Chapter 17

## The Ivory Coast and Uganda

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### 17.1 The Ivory Coast

#### 17.1.1 Brief Outline of the Crop

A country of 322 thousand square kilometers, and inhabited by 16 million people, the Ivory Coast is considered the 'economic lung' of West Africa, with a GDP of 16.3 billion dollars in 2005. Nonetheless, social unrest and the instability of the international commodity market made the country's annual growth rate fall from 7% in the 1990's to 2% (Anonymous, 2006).

The Ivory Coast's prosperity is based primarily on agriculture, which accounts for 35% of the GDP, 70% of the export earnings, and 66% of the employment positions (Anonymous, 1997a). Major agricultural products are coffee, cocoa (40% of the world's production), palm-kernel oil, cotton, rubber, banana, pineapple, and mango. The offshore reserves of oil and natural gas are also important assets for the national economy.

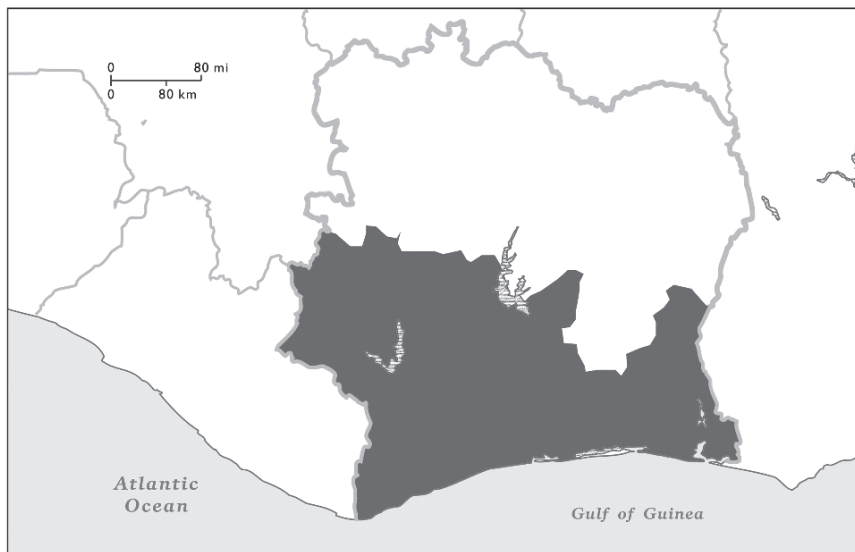
Although coffee (*Coffea* sp.) has been cultivated in the Ivory Coast since the 1880, it was only after the Second World War that the crop received a real impetus. Programs were undertaken nationwide to promote the establishment of new plantations, and the regeneration of old ones. Consequently, coffee farming spread into the entire southern forest zone (Fig. 17.1), reaching 1.2 million hectares (ha). The country's historical output of 250 thousand metric tonnes declined to around 100 thousand, due to consistently low prices on the international coffee market (Anonymous, 1997; 2005). Despite this decline, coffee still contributes 18 to 35% of the country's export earnings and 5% of the GDP, and employs 12% of the population (Anonymous, 1990).

In the Ivory Coast, coffee is produced by some 500 thousand growers, most of them smallholders. Twenty-five percent of the national output is produced in plantations that are up to 2 ha in area, and 70% is produced in 2 to 10 ha-plantations

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**Fig. 17.1** The Ivory Coast's coffee-growing region. Map by UENF/GRC

(N'guessan, 2004). The production is essentially extensive: forests are cut down and replaced by fullsun coffee plantations intercropped with food crops, in a low input system. Fertilizers and pesticides are rarely used because of their high cost, and labor-intensive cultural practices, such as weeding, sucker removal and pruning, are insufficiently practiced. Ninety percent of the coffee plantations are established with the farmer's own seedlings, with 98% of the plantations being *C. canephora* Pierre ex A. Froehner variety (var) *Robusta* (Anonymous, 1988b; 2003; Montagnon et al., 2001).

The average productivity ranges from 200 to 250 kg/ha, although technology exists to produce ten times more (Montagnon et al., 2001; Anonymous, 2003). Since most growers believe that soil exhaustion is the primary cause of the plantations' low productivity, they simply abandon them, and move into new forest lands. In addition to *C. canephora*, some growers cultivate *C. liberica* W. Bull ex Hiern var *Indeniensis*, *C. liberica* var *Excelsa*, and *C. arabusta* Capot et Aké Assi, var *Arabusta* (Jacques-Félix, 1954; Meiffren, 1957).

### **17.1.2 Coffee-Parasitic Nematodes**

Until recently, the only study involving coffee-parasitic nematodes in the Ivory Coast was a survey by Luc and de Guiran (1960). These authors gave an account of the plant-parasitic nematodes associated with the rhizosphere, roots or tubers of cultivated plants in West Africa. Luc and de Guiran reported 13 nematode species associated with coffee plants in the Ivory Coast. Of these species, three were