

CHAPTER 1

Introduction

Tobacco, *Nicotiana tabacum*, L. of the *Solanaceae* family, originated in South America. It is probably the most widely cultivated non-food crop in the world. Over 33 million people worldwide engage themselves in tobacco production, particularly in the third world countries of Africa. This drug crop is consumed as a smoke, a snuff or a chew for its stimulant alkaloid, nicotine. Upon consumption, the nicotine influences the intellect, stimulates the imagination and improves the endurance of the consumer (Chaplin, 1977; Collins and Legg, 1977; and Keller, 1976). The crop is classified as flue-cured, burley, dark air-cured and oriental. These classes differ in their genetic make-up, production, curing and use. However, all tobaccos have a common ancestral gene pool (Wernsman and Ruffy, 1988). Flue-cured and burley tobaccos are the most produced and utilised classes.

The first European person to be introduced to tobacco was Christopher Columbus when he was given tobacco as a gesture of friendliness by the inhabitants of the Americas in 1492. Today, tobacco is grown worldwide from the latitude 45° N to the latitude 40° S under a wide range of climatic and edaphic conditions. The varying conditions under which tobacco is grown result in the localization and specialization in certain types of grades for particular tobacco products (Keller, 1976).

The Portuguese and other sailors brought tobacco to the natives of Southern Africa. When Jan Van Riebeck came to the Cape in 1652, the Hottentots were already using tobacco. Initially, the suitable areas for tobacco production in the inland of South Africa were found in Magaliesburg, Northern Transvaal and the Eastern Lowveld, where it was originally grown on a subsistence basis. The growth of the mining industry and the influx of foreign miners, who brought

sophisticated tobacco consumption methods like cigars and cigarettes, led to commercial production of tobacco. In 1937, a tobacco research farm was established near Rustenburg. In 1953, the tobacco research farm became the Tobacco Research Centre, now known as the Tobacco and Cotton Research Institute (TCRI). Today, the tobacco production areas in South Africa include the Northern Province, the Mpumalanga Lowveld, the Eastern Cape, the Western Cape, the North West Province and certain areas of KwaZulu-Natal (Figure 1.1) (Van Wyk, 1985).

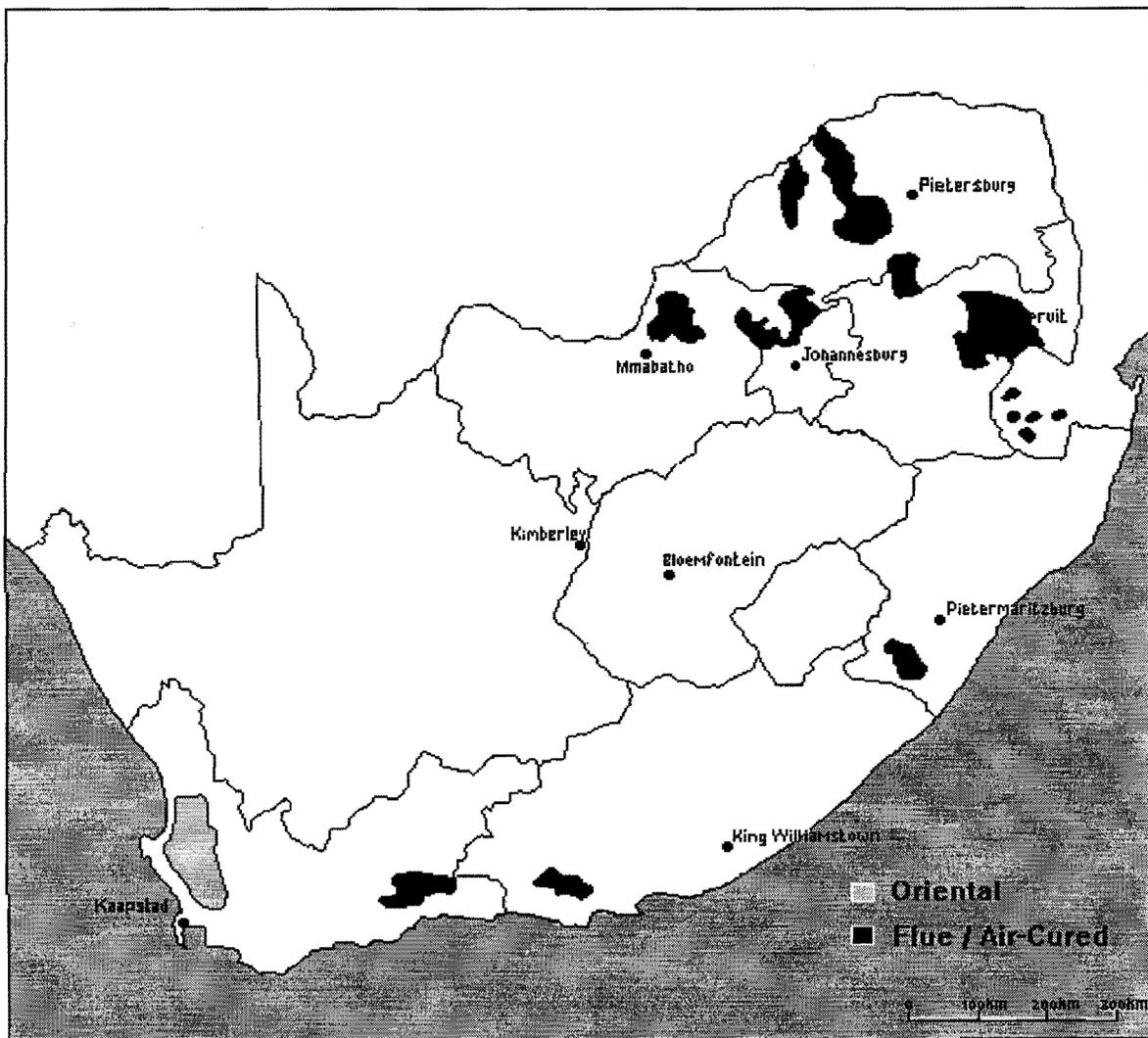


Figure 1.1: Tobacco producing areas in South Africa

The labour-intensive nature and profitability of the crop make its production a large-scale job-creating enterprise (Anonymous, 1996). The six provinces invest about R1 billion per year in tobacco farming, generating jobs for over 35000 people, over 63000 wholesalers and about 460000 retailers of tobacco products. Tobacco is easy and not costly to transport because it has a low weight and a low volume/value ratio. Tobacco is not easily perishable, unlike other agricultural products. It is a lucrative crop. In Zimbabwe, tobacco is 22 times as profitable as cotton, 57 times as profitable as maize and 59 times as profitable as soybeans (Anonymous, 1996).

South Africa features on the map of the world economy as the 25th most important tobacco producer (Anonymous 1996). The agricultural sector contributed 4.0% of the total gross domestic product (GDP) in 1998 (Orkin, 1998) (Figure 1.2).

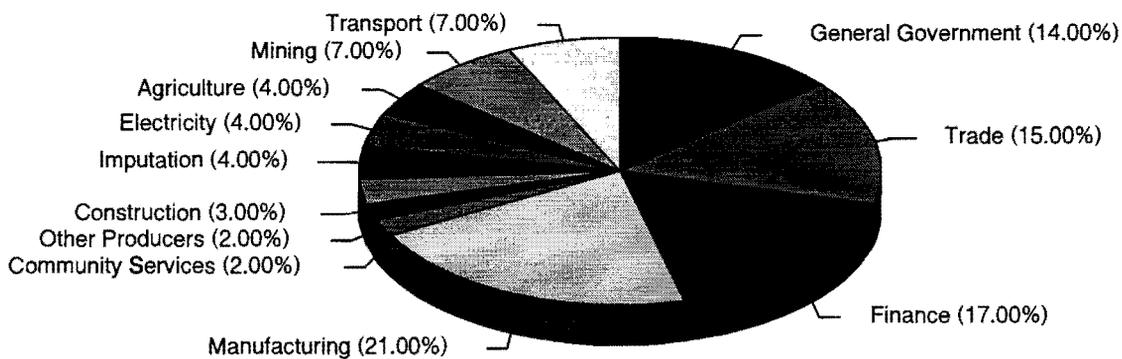


Figure 1.2: Contributions of different economic sectors to total GDP at current prices for the first three-quarters of 1998: redrawn from Statistics SA. 1998.

In most parts of the world, tobacco is grown profitably on light soils. In South

Africa, it is mostly grown on heavy black soils (Akehurst, 1968), although today more light soils are also used. Generally, most parts of South Africa receive unreliable rainfall during the tobacco-growing period (Anonymous, 1993). Because of these factors, tobacco produced in South Africa is of a relatively low quality. Attempts to improve on quality by supplementing the inadequate rainfall result in the escalation of the production costs. To compound these problems, the activities of the anti-smoking lobby, who stress the deleterious effects of tobacco smoking on human health, have resulted in a reduction in tobacco consumption (Table 1.1).

Table 1.1: The decline in the local consumption of tobacco in South Africa from 1991 to 1992. {Source: Trends in the agricultural sector. (51):9. Department of Agriculture. Republic of South Africa}

Tobacco products	1991	1992
Cigarettes	33 639 000	32 509 000
Pipe tobacco	7 496 000	6 552 000
Snuff	704 000	1 084 000
Roll-tobacco	49 000	23 000
Cigars	5 000	-
Total	41 893 000	40 168 000

The low-quality tobacco led to reduced demand and prices on both the local and export markets. The price of burley tobacco dropped by 35% during the period 1991-1992. Consequently, burley tobacco production was discontinued throughout the country. South Africa experienced a dwindling of both the local and the export tobacco markets in 1992 (Anonymous, 1996).

New technologies, which could improve tobacco yield and quality and reduce production costs, would revive the tobacco industry in South Africa. Tobacco breeding for yield and quality is intended to revive and sustain the industry.