

GENERAL INTRODUCTION

Avocado growing in South Africa is a relatively young and a rapidly expanding industry. The number of avocado trees planted up to 1970 totalled 320 000 and increased to 845 000 in 1980 (Burelli, 1951). Production has also increased considerably in the past few years. In 1974, 3 040 tons of avocados were exported from South Africa while 9 500 tons were shipped to overseas markets in 1979 (Lourens, 1979). In 1980, the export totalled 11 632 tons (Kotzé, 1981).

The introduction of new rootstocks resistant to *Phytophthora* root rot and the registration of modern chemicals for the control of the disease have given impetus to an increase in plantings. Further increases in production are expected and greater efforts are therefore needed to ensure the arrival of high quality fruit on a competitive overseas market.

An important aspect of the South African avocado export industry is the great distance from the European market. Fruit is transported under refrigeration and the exceptionally long cold storage period required for sea transport further increases and complicates South Africa's post-harvest problems. Heavy losses caused by post-harvest diseases have occurred in the past, but most of them remained unreported and uninvestigated. It is only in the past two years that the South African Avocado Growers' Association has been conducting a detailed survey of the problems experienced with fruit arriving in Europe.

The purpose of this study was to identify the major pre and post-harvest fruit diseases, to investigate their characteristics and to devise effective control measures. The investigations were carried out at Westfalia Estate (Pty) Limited. The estate is situated in the North Eastern Transvaal (longitude 30° 10' and latitude 23° 45') and is the largest single avocado grower in South Africa, with about 500 hectares planted mainly with the cultivars Fuerte and Hass and to a lesser extent with Edranol and Ryan.

The average rainfall at Westfalia Estate between 1914 and 1981 was 1 291mm, most of which fell in the summer between October and March. This warm, humid climate creates conditions conducive to a wide variety of unique disease problems on avocados.