

## SURVEY REPORT

### Introduction

The object of this report is to collect together and present facts relating to the agricultural conditions and practises within the St. Augustine area of Trinidad. In a later section of the report particular attention has been paid to the problem of external parasites of cattle within the area.

The information presented in the earlier sections is scanty because of lack of time, and lack of experience in the method of carrying out a survey of this nature, but it is hoped that the Imperial College of Tropical Agriculture, will, by using this survey as it stands, together with others to be presented at the same time, have a basis for further detailed surveys, investigation, and ultimately extension within the St. Augustine area. The second part of our report is an attempt to indicate the range of one of the detailed problems.

Observations were made during the period October 1948 to June 1949, and records kept of visits to the areas, and contacts with local peasant cultivators and cattle owners, and with local dairies.

### PART 1: Agricultural Factors and Practices

#### NATURAL RESOURCES

The survey area lies within a radius of three miles of the College at St. Augustine, a residential settlement nine miles east of Port-of-Spain. From the accompanying map, it will be seen that our district lies on the foothills, and in the shadow of the Northern Range; comprising Floradale, Maracas and the Monastery valleys to the north, and St. Augustine and Streatham/

Streatham Lodge estates to the south of the College.

General communication by road and rail links St. Augustine with all parts of Trinidad. Two first class roads, the Eastern Main, and the Churchill-Roosevelt, traverse the area, providing easy access to the markets in the capital, and at Arima, 16 miles to the east, and also to the nearby village marked at Tunapuna.

Internal communications are much more primitive, with pitch roads confined to the residential districts, while the lowland area to the south of the College has cart tracks almost impassable in the wet season. The Northern hill area is even more neglected; trampled footpaths with a few earth cart tracks being the only link between the peasant holding and the consumer.

#### TOPOGRAPHY

The area can be subdivided into three distinct parts, namely:

(i) the Northern Range hill district to the north, (ii) the flat land area to the south, and (iii) the transitional foothill area around the College. The land to the north runs up to the 2,000 ft. contour mark in a distance of about two miles, producing steep-sided valleys and generally inhospitable conditions. The central transitional area consists of shallow valleys and small hills; an area prone to sporadic flooding in the wet season. Approaching the flat land to the south between the 100 ft. and 25 ft. contours we have the detrital material carried down from the Northern Range, while to the south of the Churchill-Roosevelt highway the swamp lands begin, a very low lying district built up of alluvium from the Caroni River and its tributaries. As will be seen later, topography plays an important part in determining the type of agriculture practised.

CLIMATE (1)

The comprehensive records of the Chemistry Department of I.C.T.A. give an accurate picture over many years of the climate of the St. Augustine-Streatham Lodge area. The Northern hill district, by reason of its proximity to the station, must be considered as covered by the records, except for a fall in temperature of 1°F for every 300 ft. rise, and probably a heavier rainfall.

There is little variation throughout the year from the figures for Mean Annual Maximum Air Temperature of 86°F and the Mean Annual Minimum Air Temperature of 70°F with a total range from 65°F to 90°F.

Mean Annual Maximum Soil Temperature taken at 3" depth is 87°F and Mean Annual Minimum Soil Temperature also at 3" depth is 75°F.

The following rainfall and relative humidity figures show that there are well defined wet and dry seasons, with an average daily sunshine record of 7 hours in the wet season and 8 hours in the dry season.

TABLE I

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Average Monthly Rainfall, 17 years.	2.61	1.05	1.43	1.96	5.60	8.07	8.57	9.37	7.70	6.35	7.82	6.26
Average Relative Humidity, 16 yrs.	77	74	70	69	72	78	80	81	80	80	81	80
	D R Y   S E A S O N					*	W E T   S E A S O N					*
	"Petit Careme"											

\* Transitional months

The majority of the rain falls around midday, and from May to July there are minor peaks at sunrise. It has been estimated that 20% of the total rainfall is "effective".

(1) The small numerals in brackets refer to a list of references given at the end of the report.