AN ECONOMIC AND STATISTICAL ANALYSIS OF FACTORS AFFECTING THE RATE OF GROWTH OF THE AUSTRALIAN SHEEP POPULATION

A Thesis submitted in partial fulfilment of the requirements for the Degree of Doctor of Philosophy

by

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TABLE OF CONTENTS

CHAPTER III

A POPULATION MODEL FOR SUPPLY ANALYSIS

CHAPTER IV

RESULTS OF THE SUPPLY ANALYSIS

LIST OF TABLES

SUMMARY

The scope and aims of the thesis are discussed in a brief Introduction. The first chapter of the thesis describes the structure of the Australian sheep industry; it emphasizes important characteristics of the outputs and alternative products of various states and regions. There is also a discussion of historical movements in the location of the sheep population and changes in the composition of output. Chapter 2 discusses the theoretical and practical problems of empirical livestock supply analysis, possible analytical techniques and the results of some previous work on supply responses within the Australian sheep industry. The results are also presented of a Monte-Carlo experiment with the Powell-Gruen method of estimating supply elasticities based on the concept of production possibility curves. Chapter 3 describes the development of a simulation model for supply analysis. The application of simulation techniques to supply analysis follows from the conclusions drawn in Chapter 2. Chapter 4 presents results of the application of the simulation model. Chapter 5 is concerned with the analysis of sheep trading activities based on data from about 200 farms for which continuous records were available from 1952-53 to 1962-63 from the Bureau of Agricultural Economics as well as published statistics. The conclusions of the thesis are in Chapter 6. Some statistical tables and results have been included in appendices.

This Thesis contains no material which has been accepted for the award of any other degree or diploma in any University; to the best of my knowledge and belief this Thesis contains no material previously published or written by another person except where due reference is made in the text.

Signed: _____

A.S. Watson