

## CONTENTS

<i>List of figures and map</i>	page xii
<i>List of tables</i>	xiii
<i>Preface</i>	xv
<i>List of abbreviations and notes for the reader</i>	xvi
<b>Chapter 1 The archive and the estate</b>	
1A Introduction	1
1B The Heroninos archive	6
1C The status of the Appianus and related estates	14
1D The topography of the Appianus estate	22
<b>Chapter 2 Owners and managers</b>	
2A Introduction	44
2B The owners	44
2C The central administration	58
2D The managers of the units	71
2E The management of the Appianus estate	82
<b>Chapter 3 Permanent labour</b>	
3A Introduction	88
3B Slaves and servants	89
3C The identification of permanent employees	91
3D The deployment of the <i>oiketai</i> and <i>metrematiaioi</i>	103
3E The social and economic position of the <i>oiketai</i>	106
3F The social and economic position of the <i>metrematiaioi</i>	116

## CONTENTS

<b>Chapter 4 Occasional labour</b>	
4A Introduction	148
4B The proportion of casual labour	149
4C Unskilled casual labour	155
4D Specialist labourers and craftsmen	166
<b>Chapter 5 Lessees and other contractors</b>	
5A Introduction	175
5B Tenants and <i>epoikiotai</i>	177
5C Leases of arable land	183
5D Viticultural contracts	188
5E Leases of utilities	196
5F Fish and pigs	200
5G Leases of sheep	202
5H A family of lessees	209
<b>Chapter 6 Production on the <i>phrontides</i></b>	
6A Introduction	212
6B Crops and stock	212
6C Irrigation	219
6D Arable agriculture	228
6E Viticulture and oleiculture	244
6F Overview	260
<b>Chapter 7 Transport, marketing and monetisation</b>	
7A Introduction	265
7B The centralised transport system	266
7C The distribution and marketing of wine	278
7D The distribution and marketing of wheat and other produce	306
7E Money and credit	318
<b>Chapter 8 The accounts</b>	
8A Introduction	331
8B The monthly accounts of the <i>phrontistai</i>	335
8C Other accounts of the <i>phrontistai</i>	359
8D The accounts of the central administration	366
8E The rationale of the accounting system	369

CONTENTS

<b>Chapter 9 Conclusions</b>	388
<i>Appendix 1 Papyrological matters</i>	
A Texts of and relating to the Heroninos archive	410
B Dating texts from the Heroninos archive	420
C Two draft monthly accounts of Heroninos ( <i>Texts 1 and 2</i> )	424
<i>Appendix 2 Measures and prices of wheat and of wine</i>	
A Wheat	464
B Wine	466
<i>Indexes</i>	472