

TABLE OF CONTENTS

Acknowledgements vii

Image credits ix

Note to the reader xi

Author's biography xiii

Dedication xv

1 Introduction and Anatomy of Bees 1

Anatomy of the bee

The anatomy of the adult (imago) worker honey bee

Other bees

2 Managing the Health of Bees - Nutrition 66

To provide sufficient nutrition how much space is required for each hive?

Major components of nutrition

Measuring the quality of honey: from a human perspective

Monitoring hive health and food resources

3 Understanding Health and Disease 96

Definition of health

The causes of disease

Infectious agents

How infectious agents are spread

Understanding cleaning

Possible sources of pathogen entry into your apiary and what you should consider in order to prevent it

Reducing the pathogen load in a hive

Workshop

Killing bees

4 Treating Sick and Compromised Hives 136

Legal requirements

How medicines are prescribed

Understanding dosage levels

Controlling and storing medicines

Antibacterial medicines and their uses

5 Managing the Health of the Brood 154

Normal brood

Disorders of the brood

6 Managing the Health of the Adult Bee 188

The life cycle of the honey bee

The life cycle of the bumblebee

Ageing bees

Disorders of the adult bee

7 Managing the Health of the Hive as a Whole 224

The normal Honey bee hive

Man-made bee hives

Where to place the hive

Wild Apis hives

Disorders of the hive and nest

8 Oie and International Bee Health 262

OIE list of honey bee pathogens, 2015

Global situation

Different countries

Reporting a suspected notifiable condition

9 Poisoning of Bees 269

Toxic chemicals

Natural poisons

Physical problems

Action if you believe your bees have been poisoned

Treatment options

10 Bees as Neighbours 278

Being a good neighbour

Managing a sting

Bees as deterrents

Best time to examine the hive

Neighbours can be good to you

11 Maintaining Health 284

Integrated pest management (IPM)

Maintenance of hive health

How to examine the hive on a normal day

Basic hive examination when nothing is suspected as a problem

How to clinically examine the hive in detail

The hive through the year

12 Techniques 316

Conversion tables

Reviewing the health of the hive

Feeding the hive

Properties of honey

Examination of pollen

Manipulating the queen

Integrated pest management

Collecting honey

Miscellaneous

Further reading 362

Index 364.