Contents

Important notice concerning the information in this book iii
Preface v

Chapter 1  Why is food safety your concern? 1
What are the food safety hazards you should know about? 1
   Microbial hazards 1
   Chemical hazards 3
   Physical hazards 4
Taking responsibility for food safety – it’s the Law 5
   The Australia New Zealand food standards system 5
The benefits of taking food safety issues seriously 9
   Health and wellbeing of your customers 11
   Viability and growth of your business 13
   Continued popularity of products in your industry sector 15
   Minimising the overall cost to society 16
   Protecting the reputation of Australia’s food industry 17
Key messages from Chapter 1 19

Chapter 2  Food safety hazards – under the spotlight 21
Microbial hazards – pathogenic microorganisms and their toxins 21
   Pathogenic foodborne bacteria 22
   Pathogenic foodborne viruses 34
   Parasites 36
Chemicals – environmental contaminants, food business use or naturally occurring 38
   Government regulations and monitoring 38
   Chemicals hazards in food businesses 39
   Naturally occurring substances 43
Physical contaminants in food 50
Key messages from Chapter 2 53
Recommended storage practices for different food categories 149
Food storage containers and covers 153
Re-packing and portioning bulk ingredients 155
Stock rotation 155
Separation of rejected or discarded foods 156

Key messages from Chapter 5 159

Chapter 6  Controlling food safety hazards – preparing, cooking and cooling safely 161
The planning phase – it pays to think before you make 161
Basic steps for safely preparing food 161
  Chilling as you go 163
  Washing and sanitising fruit and vegetables 163
  Thawing frozen foods 165
  Food preparation equipment 166
  Labelling and keeping track of individual components 167
  Making unplanned changes 167
  Clearing and cleaning as you go 168
  Preparing products containing food allergens 168
Cooking – some like it hot, but not pathogens … 169
  Commercial sterilisation 170
  Measuring the temperature of food 173
  Pasteurisation 178
Cooling – now your product is hot you must cool it down … carefully 188
  Reducing portion sizes before chilling 189
  Chilling equipment 189
  Chilling in appropriate containers 191
  Freezing post pasteurisation 192
Chilling without a prior cooking step 193
Microbiological testing provides important evidence 193
Key messages from Chapter 6 195

Chapter 7  Controlling food safety hazards – packaging, shelf-life and labelling 197
Packaging your products 197
  Packaging materials 198
Purchasing packaging 200
Caring for packaging materials 202
Temperature control during packaging 204
Controlling the atmosphere around food 204
Packaging and heat processed products 207
Packaging seals and closures 209
Secondary and tertiary packaging 214
Using contract packers 214

**Product shelf-life and food safety** 216
Do your products require a use-by or best-before date? 217
Determining appropriate use-by dates: in house 219
Determining appropriate use-by dates: technical experts 220

**Labelling your products** 224
Mandatory statements and declarations 224
Product traceability 229
Directions for use and storage 230
Legibility of writing on labels 234
Minimum recommended labelling 235
Requirements for unlabelled products 236

**Key messages from Chapter 7** 237

**Chapter 8 What if something goes wrong?** 239

**Food recalls – overview and definitions** 239
Reasons for food recalls 239
Legal obligations 240
Initiation of recalls 240
Levels of recalls 241
Priorities in the recall process 242
Notification and reporting requirements 243
An effective recall requires fast facts 246
Retrieval of recalled products 246
The fate of recalled products 246

**Writing a recall plan** 247
Roles and responsibilities 247
Notification procedures and contact details 248
Access to production and distribution records 249
Contents

Product retrieval and disposal 250
Trialling and reviewing the recall plan 250
Key messages from Chapter 8 251

Chapter 9  Food microbiology: further facts 253

Sources of information 269
Useful contacts 275
Glossary 279