## Index

<table>
<thead>
<tr>
<th>Term</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>activity gross margins</td>
<td>93</td>
</tr>
<tr>
<td>animal activity GM</td>
<td>94–5, 97–8, 99</td>
</tr>
<tr>
<td>crop activity GM</td>
<td>98–101</td>
</tr>
<tr>
<td>use in planning a change</td>
<td>101</td>
</tr>
<tr>
<td>adjustments</td>
<td>61</td>
</tr>
<tr>
<td>advertising</td>
<td>222</td>
</tr>
<tr>
<td>advisers, goals</td>
<td>12</td>
</tr>
<tr>
<td>agribusiness</td>
<td>62–4</td>
</tr>
<tr>
<td>concepts, ideas, principle, ways of thinking and rules</td>
<td>240–2</td>
</tr>
<tr>
<td>distinction from business</td>
<td>62</td>
</tr>
<tr>
<td>in Australia</td>
<td>63</td>
</tr>
<tr>
<td>theoretical foundations</td>
<td>63</td>
</tr>
<tr>
<td>agribusiness firm in its marketing environment</td>
<td>214–17</td>
</tr>
<tr>
<td>agribusiness systems</td>
<td></td>
</tr>
<tr>
<td>marketing developments</td>
<td>235–7</td>
</tr>
<tr>
<td>marketing management in</td>
<td></td>
</tr>
<tr>
<td>233–7</td>
<td></td>
</tr>
<tr>
<td>agricultural activities, contribution to process growth of an economy and wellbeing of people</td>
<td>58</td>
</tr>
<tr>
<td>agricultural commodity price changes, impact of</td>
<td>59</td>
</tr>
<tr>
<td>agricultural commodity supply, change in</td>
<td>59</td>
</tr>
<tr>
<td>agricultural economic analysis, philosophy</td>
<td>74</td>
</tr>
<tr>
<td>agricultural economics, marketing focus</td>
<td>216</td>
</tr>
<tr>
<td>agricultural export earnings</td>
<td>58, 59</td>
</tr>
<tr>
<td>agricultural marketing</td>
<td>216</td>
</tr>
<tr>
<td>agricultural production</td>
<td></td>
</tr>
<tr>
<td>definition</td>
<td>67</td>
</tr>
<tr>
<td>technical relationships</td>
<td>68</td>
</tr>
<tr>
<td>agricultural technology</td>
<td>2</td>
</tr>
<tr>
<td>agriculture and the economy</td>
<td>58–62</td>
</tr>
<tr>
<td>key indicators</td>
<td>58</td>
</tr>
<tr>
<td>contribution to Australia’s national income</td>
<td>59</td>
</tr>
<tr>
<td>All Industrial shares</td>
<td>49</td>
</tr>
<tr>
<td>All Ordinaries shares</td>
<td>49</td>
</tr>
<tr>
<td>alternative food products, customer perception of</td>
<td>223–4</td>
</tr>
<tr>
<td>alternative uses of resources, choosing between</td>
<td>9</td>
</tr>
<tr>
<td>amortised loans</td>
<td>110</td>
</tr>
<tr>
<td>animal activities</td>
<td></td>
</tr>
<tr>
<td>measures of feed demand and supply for different livestock activities and feed supplies</td>
<td>129–30</td>
</tr>
<tr>
<td>planned change</td>
<td></td>
</tr>
<tr>
<td>considerations</td>
<td>128–9</td>
</tr>
<tr>
<td>animal activity gross margins</td>
<td>94–5</td>
</tr>
<tr>
<td>prime lamb and beef activity GM</td>
<td>97–8, 99</td>
</tr>
<tr>
<td>animal feeding</td>
<td>19</td>
</tr>
<tr>
<td>animal health</td>
<td>20, 24</td>
</tr>
<tr>
<td>animal husbandry</td>
<td>19, 20</td>
</tr>
<tr>
<td>animal nutrition</td>
<td>20</td>
</tr>
<tr>
<td>animal production systems</td>
<td>18–24</td>
</tr>
<tr>
<td>constraints on feed conversion activities</td>
<td>20</td>
</tr>
<tr>
<td>constraints on feed supply</td>
<td>24</td>
</tr>
</tbody>
</table>
animal production systems (cont.) potential feed conversion activities 19–20 potential feed supply 24 present feed conversion activities 19 present feed supply 21–3 animal replacement systems 19, 20, 21 animals, for feed conversion 19 annual budgets, to evaluate change 131 annual cash surplus 105 annual depreciation costs 91, 103 annuities 110, 246–7 annuity whose present value is one 247, 254 annuity whose terminal value is one 247, 258 arbitrage 145, 198 asset classes 49 assets 36–7, 87–90 categorisation 87 Australian agribusiness firms, environment of 63 Australian Stock Exchange 194 Australia’s national income, agriculture’s contribution to 59 average costs, and profit maximisation 83–6 average fixed costs 82 average marginal tax rate 114, 116 average output 70 average product 70 average value of capital 89 average variable costs 57 bad decisions 44 balance sheet 87–90 example 36, 88, 106–8 basic economic problem 51 basis 198, 200, 203 bear 198 beef activity budget 99 beef activity gross margins 98 example 99 beef agribusiness system 226 market segmentation 225 vertical segmentation 231 beef business land purchase, case study 160–3 benefit–cost ratio (B:C ratio) 142 bonds 49, 50 brand selection 221 brands 227 breakeven levels 186 budget of a single production period, steady stage 131–3 budgets, tax rate in 115 bull 198 business, distinction from agribusiness 62 business analysis 117–20 using financial ratios 119 using summary ratio measures 119–20 using technical productivity ratios 118–20 business growth 32 business health 34 example 34–6 business health check 34 business organisations 116–17 business risk 43, 180 business summaries, comparison 119
buyers 52
buying a futures contract 198
buying hedge 203
call options 205, 206, 207
capital 51, 87
capital expenditures, and
taxation 111, 114
capital gains 48
capital gains tax 115
capital investment
  in extra land for a wool-producing
  property 39–40
  to acquire machinery service 41–3
  to improve whole farm profit 38–9
cash 105
  links to profit and growth 106–8
cash and futures prices 196
  convergence 209
  example 201–2
  positive and negative
  differences 202
  relationship 200–2
cash farm operating expenses 90
cash flow 87
cash flow budgets 105
  and inflation 145
cash prices, futures trading influence
  on 204
cereal property purchase, case
  study 163–6
change making decisions 44
characteristics (products) 220–1
choice of output 17
commodities, and products 236
commodity price changes, impact
  of 59
commodity put option 205
common contingent liability 88
communication 15
companies 117
tax rate 111
company law 117
competitive industries 52
competitive market model 53
complementary effects between
  products 73
complementary products,
  profit-making rule 76
compound annual growth rates
  for farm businesses 49
  for non-farm investments 49
compound growth factors 139
compounding 245
concentrate feed and complete mixed
  rations 23
concessions to farmers (taxation)
  111
constraints
  on cropping 27–8
  on feed conversion activities 20
  on feed supply 24
  on machinery 29
consumer preferences in agribusiness
  systems 235, 236
consumer segments 226
contingent liabilities 88
contract (futures) 198
contracting versus owning
  machinery 104
control 14
cost–benefit analysis 151
cost–price squeeze 60–1
cost of capital 38
costs, revenue and maximum profits
  for a farm 80
credence characteristics 220
credit, affect on growth 106
economic and financial conditions 29, 74–86
example 30–1
economic efficiency 51, 62
economic principles of using resources for agricultural production 74
increasing farm profit in the current production period 77–81
input combinations in current production period 75–6
input–output in current production period 75
product combinations in current production period 76–7
economic system beyond the farm gate 10, 51–64
components 5
features 59
economic thinking, power of 243–4
economics
and farm systems 9
as core discipline of farm management analysis 9–11
definition 29
disciplinary areas applicable to management of farms 9
in decision making 10
economy
and farming 58–62
and firms 51–8
and resource use 51
definition 51
efficiency 120
efficient feed utilisation 20
efficient market idea 36
elastic demand 55
employee remuneration 15
equi-extra returns principle 76
equi-marginal returns principle 76
equity 32, 34, 87, 89, 92
example 35–6
equity percentage 89, 108
estimates of probabilities 44
exchange 199
expected average marginal tax rate 116
expected cash flows in current (real) dollars 140
expected money values (EMVs) 184
expected value 47, 184
example 185
experience characteristics 220
extra input 69
extra output 69, 70, 71
family businesses 2
family-owned businesses 1
farm activity analysis 93–5
animal activity gross margins 94–5
crop activity gross margins 98–101
machinery costs 102–4
use of activity budgets in planning a change 101
farm benefit–cost analysis 6
farm business analysis 67–120
analysing business profit, liquidity, growth and risk 120
economic and financial conditions 74–86
technical basis of economic, financial, growth and risk analysis 67
farm business management of price risk, futures market instruments role 208–11
farm business owners 2
financial difficulties 61
farm business system, components 4
farm costs, rise in 60
farm families, goals 11
farm family labour force 13
farm management
  choice of output 17
  crucial skills 16
  differences from managing
    non-farm businesses 16
  focus of 10
  rules of the game 17–18
farm management analysis 6–7
  as interdisciplinary activity 8
  based on economics 9–11
  usage by decision makers 6–7
farm management economic analysis,
  philosophy 7, 74
farm management economic
  questions 5
farm managers, characteristics 16
‘farm problem’ 60
farm production, demand for 60
farm purchasing 153–4
farm size 2
farm systems 9
farm transfers within the family 115
farmer income, relative decline
  of 59
farmers
  adapting to change 60
  goals 12
  leaving farming 61
  love of what they are doing 60
  profit-orientation 12
  reluctance to use futures 209–10
  use of farm management analysis 6
farming
  and the economy 58–62
  as a business 1
  definition 1
  uncertainty in 181–2
  farming business, concepts, ideas,
    principles, ways of thinking
    and rules 240–2, 243
  farming operations 1–2
farmland
  adjusting land price for financing by
    vendor 173
  evaluation of investment
    in 152–73
  purchasing a farm 153–4
  valuing 154–8
farmland purchase case studies 158
  beef business land purchase
    160–3
  cereal property purchase 163–6
  conclusions 171–3
  dairying property purchase
    166–8
  land price purchase appraisal
    model, methods and
    assumptions 159–60
  mixed cropping–grazing property
    purchase 168–71
farmland vendors 173
feed conversion activities
  constraints 20
  potential 19–20
  present 19
feed demand and supply measures for
  different livestock activities
  and feed supplies 129–30
feed supplementation 20
feed supply
  constraints 24
  potential 24
  present 21–3
feed utilisation, efficient 20
feeding systems 19
fertiliser
  and pasture, planned change considerations 127
  and quantity of water applied 72
  economic principles 75–6
  and yield response 69–72
  economic considerations 75
fertiliser constraints 27
fertiliser history 22
finance, definition 29
financial analysis, definition 125
financial budgets, and inflation 145–6
financial ratios 119
financial risk 43, 108, 120, 180
firms 51
  and the economy 51–8
  motivation for collaboration 233
  role in marketing system 232–3
fixed costs 30, 55, 56, 78, 102
fixed costs per unit of output 57
fixed investment 55
fixed variable costs 57
fodder crops 24
forecasting 14
Four Ps of marketing 216
future value 138
futures contracts 194, 196
  definition 198
futures exchange, price-discovery mechanism 196
futures market instruments, role in farm business management of price risk 208–11
futures markets
  as derivative 195
  basic functions 195
contributions to economic activity 196
example 193
farmers’ reluctance to use 209–10
hedging and speculation 202–3
key terms 200
operational features 196–8
points to note 210
relationship between cash and futures prices 200–2
requirements for success 195
role in managing exposure of farm businesses to volatile prices 193–8
zero sum returns 203
futures trading 194
  influence on cash prices 204
  futures transaction 197
gearing
  and growth 33–4, 108–10
  and principle of increasing risk 109
  definition 33
gearing ratio 108, 119, 120
general principle of production 68
generic brands 227
genetic improvement 19, 20
  constraints 21
glossary 274
goals 11–13
good decisions 44
good management 16–17
governments 51
  welfare aid for farm families 61
grain-based feeding systems, constraints 24
gross income 30, 79, 90
gross margin (GM) of an activity 93
growing costs 99
growth 32, 105–6, 120
  and gearing 33–4, 108–10
  and taxation 115
definition 29
  example 32, 35–6
  factors affecting 106
  formula 106
  links to profit and cash 106–8
growth at compound interest 245, 248
gut-feeling 44

harvest costs 99
hedge 181, 193, 199
hedgers 199, 203
hedging 201, 202, 210
herd diagram 95, 96
historical average performance 119, 120
horizontal segmentation 227
house brands 227
households 51
human elements
  goals 11–13
  in planning a change 126
  labour 13
  management 13–18
husbandry of livestock 19
  improving 20

income capitalisation method of valuing an asset 154
income tax 111
income tax minimisation 116
increasing farm profit in the current production period 77–81
increasing returns 70
increasing risk principle 33, 109
industry structures, types of 52
inelastic demand 55

inflation
  and leases 175–6
  and market interest rates 144
effect on value of money 143–6
information providers 6
information utilisation in management 16
innovation analysis 123–5
  benefits and costs 131–7
  budget of a single production period, steady stage 131–3
  comparison of alternative futures 124
  human aspects 126
  questions of future resource use 124
  start with the market 126
  technical knowledge when planning a change 126–30
time effects and discounted cash flow budgeting 137–51
innovations, to the marketing mix 230, 231, 232
input combinations
  in the current production period 72
  economic principles 75–6
input–input 68
input–output 68
  in the current production period 68–72
  economic principles 75
input suppliers 225
inputs
  definition 68
  fixed in the short run 68
  variable in the short run 68
insider trading 37
insolvency 90
intensive animal systems 24
interdisciplinary approach 14
interest costs 103
interest payments on loans 91
interest payments to creditors 91
intermediary firms 227, 229
intermediate debt 88
internal rate of return (IRR) 140, 142, 146, 155
intuition 44
inventory change 78
investment 36–8
and profit-making rule 77
benefit–cost ratio 142
benefits and cost of 137–8
criteria to judge 43
in farmland, evaluation 152–73
inflation effects 143–6
internal rate of return 140
investing capital to improve whole farm profit 38–9
investing in extra land for a wool-producing property 39–40
investing to acquire machinery service 41–3
involving different amount of capital 147–8
involving different lengths of life 147
life of project and salvage value 143
returns on 48–51
risk and return 146–7
rules for thinking about 43
sound judgment and perspective 151–2
time effects and discounted cash flow budgeting 137–51
investment portfolio 50
investment risk 43, 183
investment theory 36–7
irrigated lucerne, partial budget 133–6
irrigation systems 26, 27
restraints 28
joint ventures 232
judgment 44
‘just right’ zone 71, 72, 75
labour 13, 51, 68
in cropping 27
labour force 13
labour management 15
land 51, 68
evaluating investment in 152–73
investing in extra land for a wool-producing property 39–40
leasing 173–7
purchasing a farm 153–4
valuing 154–8
land ownership, benefits of 156
land price
adjusting for financing by vendor 173
what should be paid 154–7
land price purchase appraisal model, method and assumptions 159–60
land purchase case studies 158
beef business land purchase 160–3
cereal property purchase 163–6
conclusions 171–3
dairy property purchase 166–8
mixed cropping–grazing property purchase 168–71
land values 153–4
landowners  
 lease payment calculations 175  
 risks associated with leasing and sharing 176  

law of demand 53, 54  
law of diminishing marginal returns to variable inputs 56–7  

law of diminishing returns 70, 72  
lease payments 92  
  and taxation 115  
leased land 89  
  landowner and tenant calculations 175  
  length of lease 176  
  risks associated with 176  
leasing land 173–7  
  inflation considerations 175–6  
leasing non-land assets 177  
legal forms of business 117  
legume–crop sequences 25  
  extending cropping phase 28  
length of lease 176  
liabilities 88  
life of project 143, 155  
limited funds, and profit-making rule 77  
limited liability 117  
limited resources 51  
liquidity 89, 120  
  and change in net worth 90  
listed property 49, 50  
livestock 68  
livestock activity gross margins 97–8  
livestock income, and tax 113  
livestock trading schedule (to calculate trading profit/loss) 95–7  
beef example 99  
prime lamb example 97  
loan repayments 110–11  
long run 55  
  definition 55  
long-term debt 88  
longer run, profit maximisation in 81–3  
longer-term assets and liabilities 87  
longs 197, 199, 207  
loss on futures 199  
machinery 68  
  annual use 104  
  depreciation 102, 114  
  interest cost 103  
  ownership versus contracting 104  
  taxation 114  
machinery constraints 29  
machinery costs 102–4  
machinery potential 28  
machinery services  
  investing in 41–3  
  present 28  
management 13–15  
  good 16–17  
  labour 15  
management process 14  
marginal 199  
marginal calls 197, 206  
marginal deposit 197  
marginal costs and profit maximisation 83–6  
  dairying example 85–6  
  horticultural example 84–5  
marginal output 71  
marginal product 69, 71  
marginal tax rate 114, 115  
market 52  
market economy 52  
market equilibrium 52
market interest rates 144
market levels 215, 227–9
   analysis of outcomes 230–1
   and marketing mix 228
market position (futures) 197
market price 157
market prospects for the change in output 126
market segmentation 225–6
   horizontal 227
   vertical 227, 231
market supply 52
market value of total resources 88
marketing
   as an 'add on' to the product 217
   assumptions 218–19
   definition 215, 217–18
   what to produce? 217, 234
marketing agricultural
   products 214–37
marketing channel 222, 227
marketing costs 99
marketing management, in
   agribusiness systems 233–7
marketing mix 216, 219–23
   and innovation 230, 231, 232
   and market level 228
   components that contribute to satisfaction of the trigger need 224
   components that facilitate exchange 224
   control over characteristics of components 229
   management 223–5
   place 216, 222
   premiums for better marketing mixes and who gets them 229
   price 216, 222
product 216, 224, 228
promotion 216, 222, 228
marketing systems 215
   firms' role in 232–3
maximising profit
   by focusing on marginal costs, not average costs 83–6
   in medium and longer run 81–3
   in the short run 79–81
   rule for 57
maximum profit
   from each unit of output 57
   from total production 57
measures of performance 48
medium run, profit maximisation
   in 81–3
medium-term debt 88
megajoules of metabolisable energy (MJ/ME) 129–30
minimum cultivation techniques 26
Mishan, E. J. 151
mixed cropping–grazing property purchase, case study 168–71
monopolistic competition 52
monopoly 52
monopsony 52
motivation of staff 15
negative basis 200
net cash flow 31, 104
net farm income 92
net present value (NPV) 138, 139–40, 141, 146
net profit 31, 32, 92
net worth 32, 89
   change in, and liquidity 90
   change in balance sheet 106
network organisations 233
nitrogen deficiency 22
no-name products 227
non-farm businesses, management 16

objectives, risk and uncertainty 181–2
oligopoly 52
operating profit 30–1, 89, 90, 91
definition 90
equation 79
operator's labour 91
operator's wages 92
opportunity cost 102
opportunity interest cost on capital invested 41–3
optimising production 228
option buyers 207
option premiums 205, 206, 207
option sellers 207
option strike price 208
options 204–8
price paid for 207
outcome measures of performance 48
output–output 68
outputs
choice of 17
definition 68
overhead costs 30, 78, 79, 90, 102
examples 78
owner-operator's wages 92
owner's capital, growth of 32

partial budgets to evaluate change 131–3, 137
irrigated lucerne example 133–6
partnership agreement 117
partnerships 117
and taxation 111

pasture
and cropping, planned change considerations 127
and fertiliser, planned change considerations 127
pasture development risk 191
pasture palatability and digestibility 21
pasture production, and rainfall 22
pasture supply 21
pastures 22–3
penalty costs 102
percentage return on total capital 89
performance measures 48
personal growth 32
personal selling 222
place (marketing mix) 216, 222
planning a change, technical considerations 127–30
planning horizon 155
plant tissue tests 22
portfolio of investments 50
positive basis 200, 203
potential cropping activities 26–7
potential feed conversion activities 19–20
potential feed supply 24
pre-mixed feeds 23
premiums (options) 205, 206, 207
present cropping activities 25–6
maintaining soil fertility 25
present feed conversion activities 19
present feed supply 21–3
concentrate feed and complete mixed rations 23
pastures 22–3
present soil nutrient status and fertiliser history 22
present machinery services 28
present value (PV) 138
present value of a future lump sum 245, 250
present value of an annuity 247, 252
price and demand 54
price changes, and efficient markets 37
price decline, and productivity 60
price elasticity 54
price makers 216
price (marketing mix) 216, 222
price responsiveness 54
price takers 216
prime lamb activity budget 95
example 97
prime lamb activity gross margins 98
example 98
principal–agent challenge 15
principle of equi-extra returns 76
principle of equi-marginal returns 76
principle of increasing risk 33, 109
principle of substitution 76
private organisations 6
probabilities 47, 183–4, 185
probability estimates 44
product (marketing mix) 216, 219–22, 224, 228
characteristics 220–1
differentiation from commodity 236
product combinations example 73
in the current production period 72–4
economic principles 76–7
production 218
production, costs and profit for a farm for existing and changed stocking rate 80
production function 68
productivity 60, 61
professional farm management advisers, goals 12
profit 30, 89
definition 75
equation 78
links to cash and growth 106–8
profit and loss 87
profit budgets 90–3
example 106–8
profit-making rule and investment 77
for two or more products 76
under limited funds 77
profit maximisation costs and total gross margins 81
in medium and longer run 81–3
in the short run 81
example 79–81
increasing profit through focusing on marginal costs, not average costs 83–6
rules for 57
profit-maximising principle 75
profit on futures 199
profit-orientation 12
promotion (marketing mix) 216, 222, 228
property 49, 50
public relations 222
purchasing a farm 153–4
put options 205, 207
quality assurance schemes 235
quantity of water applied, and fertiliser 72
rainfall, and pasture production 22
reinvestment 142
repair and maintenance costs 99, 102
research and development (R&D) organisations 6
resource use, decisions about 51
resources 51
limited 51
response function 68, 69
imprecision of 71
inputs to capital 69
retailers 227, 234, 235, 236
return on owner's capital 31, 34
return on total capital 30
return versus risk: agricultural and non-agricultural investment 50
returns, and risks 36, 50, 146–7
returns on capital 48–50
and risks 49
returns on investment, in farm and non-farm businesses 48–51
revenue per unit of output 57
risk 33
and gearing 108–10
and probabilities 183–4
and returns 36, 50, 146–7
and returns on capital 49
and uncertainty 1, 14, 15, 43–8, 179–211
as a commodity 45
hedging against 181
investment 43, 183
role in decision analysis 45
tracking performance 48
types of 43, 180
risk analysis 182–5
decision trees 187
sensitivity analysis 186
simulation 187
risk management 44, 45–6, 188–9
common-sense rules 46
coping with drought risk 189–91
example 46
pasture development and cropping risk 191
specialisation versus diversification in activity mix 189
stocking risks 191
strategies for long-term survival 192
risk–return trade-off 45, 46, 50
riskiness and uncertainty of production 61
risky decisions, analysis of 184
rural lifestyle 2
sales promotion 222
salvage value 103, 143, 155
science, narrow focus of 8
search characteristics 220, 221
seasonal hedges 203
seasonal pasture production 22
segmentation 225–6
horizontal 227
vertical 227, 231
sellers 52
selling 217
selling a futures contract 199
selling hedge 203
sensitivity analysis 186
settling a contract 199
share-farming agreements 173
risks associated with 176
share price 37
shareholder’s equity 89
shares 49, 117
shift in demand or supply 54
short run 55
  and inputs 68
  and variable costs 56
  changing costs in 84–6
  profit maximisation 79–81
short-run shut-down point 56
short-term assets and liabilities 87
shorts 197, 199
simulation 187
soil deficiencies 22
soil fertility, maintaining 25
soil nutrient status 22
soil tests 22
soils 21
sole proprietorship 116
Solow, Robert 11
solventy 89
specialisation 189
speculators 200, 203, 204
spot price 200
spread 198
stage of negative returns to extra input 70
statement of financial performance 87
statement of financial position 87–90
stocking risks 191
straight-line method of depreciation 91, 103
strategic alliances 232
strategic collaboration 233
strategic marketing 231–3
strategic marketing decisions 234–5
stubble retention 25
subsidised production 61, 62
substitution principle 76
summary ratio measures 119–20
supplementary effects between products 73
supplementary irrigation schemes 24
supplementary products, profit-making rule 76
supplier–customer collaboration 232
supply 52
supply and demand 53
supply and demand schedules and curves 54
supply and demand shifts, world markets 62
supply chain management 232, 236
supply of agricultural commodities, change in 59
supply relationship 53
Sydney Futures Exchange 194
systems management 14
target markets 234, 236
targeted segments 225
tax accounting, misleading for purposes of farm management 112
tax averaging 112, 115
taxable income 111–13
  allowable deductions 111
  and changes in operation of a farm 112
taxation 111–13
  and growth of equity 115
  and lease payments 115
capital expenditures 111, 114
capital gains tax 115
income tax minimisation 116
interest costs 114
livestock 113
machinery 114
rate to use in budgets 115
returns after tax 113
technical productivity ratios 118–20
technical systems 18
  animal production systems 18–24
  cropping systems 25–9
tenants
  lease payment calculations 175
  risks of sharing and leasing 176
term loans 110
terminal value of an annuity 247,
  256
theory of market supply and demand 53
time effects and discounted cash flow
  budgeting 137–51
  benefit–cost ratio 142
  decision rule 141
  discount rate 141–2
  example 148–51
  inflation effects 143–6
  internal rate of return 140
  investments involving different amounts of capital 147–8
  investments involving different lengths of life 147
  life of project and salvage value 143
  reinvestment 142
  time period, notion of 55
  timeliness costs 102
tissue tests 22
topography 21
total capital 88
  total capital value 88, 89
  total cost per unit of output 57
  total gross margins (TGM) 30, 79,
    81, 90, 93
    estimation 98
    fixed costs and profit 82
    total revenue 54, 55
    total variable costs 79
trace elements 22
tracking performance 48
trade agreements 62
type basis risk 209
uncertainty
  and risk 1, 14, 15, 43–8, 179–211
  caused by the unknowability of certain things 45
  caused by the unpredictability of the future 45
  hedging against 181
  in farming 181–2
  tracking performance 48
types of 45
unlimited liability 117
unpredictable variability 18
value of capital 30
values of lump sums of money now and in the future, and the present and future equivalent values of sums received or paid on equal instalments 245
valuing farmland 154–8
  what could be paid 157–8
  what others pay – market price 157
  what should be paid 154–7
  what the buyer is prepared to pay, all things considered 158
variability 18
  unpredictable 18
variable costs 30, 56, 78, 90, 102
  and short run 56
  examples 78
variable costs per unit of output 57
vendor finance 173
vertical alliances 232
vertical coordination 232
vertical segmentation 227, 232
beef agribusiness system 231

walk-in-walk-out value (WIWO) 88
wealth
and requirement for food and fibre 59
spending on non-agricultural goods and services 59
‘what if’ approach 44, 186
wheat activity gross margins 100
example 100
whole farm approach 7–8
to analysing farm businesses 34

whole farm business system 4–51
whole farm cash budgets 104–5
whole farm profit, investing capital to improve 38–9
whole farm risk management 179–80
objectives, risk and uncertainty 181–2
wholesalers 225, 227, 234
world markets, supply and demand shifts 62
yield response to fertiliser 69–72
economic considerations 75
zero sum returns 203