{CHAPTER 6} FOOD SAFETY: REGULATION, RISK ANALYSIS AND FOOD CHEMICALS

OBJECTIVES

- Explain the importance of food standards and non-regulatory approaches in maintaining a safe food supply.
- Identify the role of risk communication in the overall risk analysis process.
- Demonstrate an understanding of various food chemical risks.
- Explain the role of monitoring and evaluation in food chemical risk management.

QUIZ AND EXAM QUESTIONS

6.1 *A recent report in the media has questioned the safety of a commonly used food additive and has caused considerable consumer anxiety. Decades of scientific research have shown no evidence of any adverse effects for this additive and recent surveys have also shown the additive in foods are well below the maximum permitted level. From a risk communication perspective, which of the following would be a suitable strategy?*

A. Products containing the additive should be recalled until further new research is conducted to ensure the safety of the additive.
B. Education materials on the lack of evidence to support the reported concerns should be made accessible online.
C. Due to the lack of scientific risk, and no new information coming to light, no further action should be taken on this issue.
D. A media release should be composed with the objective of updating public on the lack of scientific and safety evidence supporting the report.
E. A new survey should be conducted urgently into content levels of the additive in the food supply.

6.2 *Several different sources of evidence are used by FSANZ to assess the level of risks to the food supply by different biological, physical and chemical factors. Which of the following sources carries the most weight, scientifically, when assessing these risks?*

A. recently published peer-reviewed paper
B. media report
C. expert opinion
D. Cochrane review
E. technical report

6.3 *In the current food regulatory environment in Australia and New Zealand, enforcement of the food standards code is the responsibility of _____, setting food policy is the responsibility of _____ while _____develop(s) the food standards code.*

A. FSANZ, state food agencies, ministers
B. state food agencies, ministers, FSANZ
C. FSANZ, ministers, state food agencies
D. state food agencies, FSANZ, ministers
E. ministers, FSANZ, state food agencies

6.4 *As part of a food-monitoring program, dried pasta that is to be tested for chemical residues is prepared as it would be by consumers. This type of methodology would be used by which food monitoring program?*

A. contaminant surveys
B. Total Diet Studies
C. health surveys
D. residues surveys
E. ad hoc surveys

6.5 *Green potatoes contain what naturally occurring toxicant?*

A. glycoalkaloids
B. agaric acid
C. histamine
D. oxalates
E. phytates

6.6 *A company specialising in manufacturing ready to eat meals is currently looking for a more cost-effective way of sourcing fish for their operation. As food safety advisor for this company, you are asked to assess whether chemical analysis results on a batch of 10 orange roughy fish provided by a potential supplier meet the standards set out in the food standards code. Test results on a test batch of 10 fish indicate a mean level of mercury of 1.7 mg/kg.* (Marks 2)

For this answer, access the food standards code site: http://www.foodstandards.gov.au/code/Pages/default.aspx Report which Standard and Schedule you would find this information and whether, based on the maximum level of mercury allowed, you would recommend this supplier.

Note: This question is requires students to navigate the Food Standards Code and develop an understanding of searching and finding standards and schedules – remembering the specific standard and schedule is not important but navigating and finding information in the FSC is the main objective here. This would be suitable for an open-book exam or a tutorial activity.

Answer: Schedule 19: In samples of mercury in orange roughy the mean level should be no more than 1.0mg/kg. The fish cannot be used, and supplier can not be recommended.

6.7 *Mercury, Amoxycillin and Histamine can all pose chemical risks in food. Identify which food chemical class each of these chemicals belong to and discuss briefly for each how the food risks would be managed.* (6 marks)

Answer: mercury, heavy metal; amoxycillin, agvet chemical; histamine, naturally occurring (pp.107-111).

6.8 *Describe the steps in the risk assessment process.* (4 marks)

Answer: Refer to pp.102-103

6.9 *Your friend has developed a novel food for the market. What are the considerations for public health and safety?* (4 marks)

Answer: Refer to pp.113

Tutorial, assignment and ePortfolio activities

vigating the Food Standards Code