Advisory Committee on the Microbiological Safety of Food

Annual Report

2000

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The Advisory Committee on the Microbiological Safety of Food (ACMSF) was established in 1990 to provide UK Agriculture and Health Ministers with independent advice on the microbiological safety of food. The Committee's terms of reference were "*to assess the risk to humans from microorganisms which are used, or occur, in or on food, and to advise Ministers on the exercise of powers in the Food Safety Act relating to the microbiological safety of food*".

Details of the work remitted to the ACMSF by Ministers, and the strategic aims which the Committee set itself, are given in its Report of Progress 1990-1992[1] and its Annual Report 1993.[2] The various issues addressed by the Committee are reviewed in these reports,[1,2] in its other Annual Reports,[3,4,5,6,7,8] and in a series of subject-specific reports.[9,10,11,12,13,14,15,16]

With the creation, by Act of Parliament,[17] of the Food Standards Agency (FSA), which came into being on 1 April 2000, there was a change in the ACMSF's reporting lines. The recipient of the Committee's advice became the FSA rather than Agriculture and Health Ministers. The Committee's terms of reference were redrawn to reflect this change. They are now :-

to assess the risk to humans from microorganisms which are used, or occur, in or on food, and to advise the Food Standards Agency on any matters relating to the microbiological safety of food.

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FOREWORD

1. I am pleased to present the Advisory Committee on the Microbiological Safety of Food's Annual Report for the year 2000.

2. This, the Committee's tenth year, has been marked by two very significant developments. The first concerns the change in our reporting lines. When the Committee was first established, in late 1990, we were charged with reporting to United Kingdom Health and Agriculture Ministers. This remained the position until the Food Standards Agency (FSA) came into being on 1 April 2000. We now advise the Agency. The Agency was created to protect public health from risks which may arise in connection with the consumption of food, and otherwise to protect the interests of consumers in relation to food. I therefore very much welcome the opportunity which the ACMSF has been given of working closely with the Agency because we share the same core values – putting consumers first; being open and accessible; and being an independent voice. I am confident that the Committee will continue to make an important contribution in providing scientifically sound, independent and practical advice on the microbiological safety of food.

3. The second significant development arises from the second of the core values I have already mentioned – being open and accessible. The Committee has continued to pursue a policy of opening up its work to greater public scrutiny. We already publish our agendas, minutes and papers (subject to certain exceptions on grounds of commercial or other sensitivity). On 5 December, we took a further major step forward by holding our first routine quarterly meeting in public. This was attended by some 30 members of the public and provided a useful opportunity for a two-way exchange of views and information about the Committee, its work and other matters related to the microbiological safety of food. As a firm proponent of the principle of opening up the ACMSF's work to greater public scrutiny, I believe that this was a very worthwhile exercise and one which I am keen to see repeated in future years.

4. The Committee completed some important tasks during 2000, not least its second report on *Salmonella* in eggs. One of the Committee's original tasks, on the recommendation of the Richmond Committee,[18] was to address the *Salmonella* in eggs question. That work resulted in the Committee's first *Salmonella* in Eggs Report.[10] The second report brings us up to date. I am very grateful to Mike Painter and his Working Group for the considerable time and effort they have put into examining developments since our first report was published in 1993, and preparing a report for the Committee to send to the FSA. I look forward to the report being published in the New Year. The significant fall in human *Salmonella enteritidis* infections in Great Britain, which began in 1998, is very encouraging. We can be cautiously optimistic that the measures introduced by industry in this country to tackle the problem of *Salmonella* in eggs have

contributed to this improvement in public health. I also note the downward trend in *Salmonella* outbreaks associated with poultry meat, a subject which we have also investigated in depth and upon which we reported in 1996.[13] It may well be that this development reflects improvements made by the industry.

5. Among the other topics revisited was *Mycobacterium paratuberculosis* (ie. *M. avium* subspecies *paratuberculosis* - MAP). It was clear from data that we saw from an FSA-funded survey that viable MAP was present in a small number of samples of commercial pasteurised milk for retail sale. The role of MAP in the aetiology of Crohn's disease has neither been proved nor disproved and, given the different views on possible links to human illness, the matter is unlikely to be resolved in the foreseeable future. We do not think it is right to do nothing until proof emerges one way or the other. That is why we have recommended that the FSA convenes a group of stakeholders to consider options for the control of MAP in primary production – including tackling the problem of Johne's disease in cattle - and to look at possible developments in dairy technology which would help ensure that the organism does not get into milk which is ready for consumption. I am very pleased that the FSA has accepted our recommendation and is moving towards hosting the kind of forum we recommended in 2001.

6. Another topic on which our advice was sought in 2000 was the question of the possible risk of growth and toxin production by *Clostridium botulinum* in a range of new food products. It is reassuring that cases of botulism are extremely rare in the UK. On the other hand, botulinum toxin is deadly. It is thus of paramount importance that food manufacturers take all necessary measures to eliminate any risk of botulism from their products. The advice in our Report on Vacuum Packaging and Associated Processes[9] remains valid, but the Committee judges that the time is now right to review the industry's code of practice[19] with a view to simplifying it and making it more accessible and relevant to those whom it is intended to inform and assist.

7. Looking to the future, the Committee has been asked by the FSA to consider the possible health risks associated with the consumption of meat from animals with evidence of *Mycobacterium bovis* infection. We will be setting up a Working Group to address this question and I hope that the work, which will start early in 2001, can be completed quickly.

8. We shall also be returning to the subject of *Campylobacter*, about which we issued an interim report in 1993.[11] This organism is, and has for some years been, the most common cause of food poisoning in the UK. However, unlike other major food poisoning organisms like *Salmonella* - and despite a great deal of research - we still know very little about the origins of *Campylobacter* infection, the routes of transmission or the mechanisms by which infection might be controlled. The ACMSF and the FSA have already agreed that there should be a *Campylobacter* workshop in 2001, and we hope that this will help promote a

greater understanding of the public health issues and identify fresh initiatives to help us tackle this problem effectively.

9. My thanks, as always, go to the members of the Committee and its Working Groups without whose efforts the ACMSF could not operate effectively, and to the many other individuals and organisations who have helped the Committee with its work. I am also very grateful for the support of the Secretariat. Their efforts in ensuring the efficient and effective conduct of Committee business, including our first open meeting, is greatly appreciated, as is the work they have done in developing and expanding our website.

Professor Douglas L Georgala
Chairman

INTRODUCTION

1. This is the ninth annual report of the Advisory Committee on the Microbiological Safety of Food (ACMSF). It is the first since the ACMSF became a committee reporting to the Food Standards Agency (FSA).

ADMINISTRATIVE MATTERS

Committee and Group meetings

2. The full Committee met four times in 2000. All meetings were chaired by Professor Douglas Georgala (but see paragraphs 14-16).

3. The Working Group on *Salmonella* in Eggs met formally on five occasions in 2000 under the chairmanship of Dr Mike Painter. Dr Painter also held a number of informal drafting sessions with various members of the Group and the Secretariat, for the purpose of developing the Group's report.

4. The Committee established a standing Surveillance Working Group (see paragraph 51) which was chaired by Mr David Clarke. The Surveillance Working Group will hold its first meeting in 2001.

5. The Committee also established a Working Group on *Mycobacterium bovis* (see paragraphs 44-45), chaired by Professor Mac Johnston, which will commence work in 2001.

6. The Committee set up three *Ad Hoc* Groups dealing with :-

- risk control (see paragraph 57), chaired by Mr David Clarke;
- the agricultural disposal of sewage sludge (see paragraph 59), chaired by Dr Norman Simmons.
- the Committee's forward work programme, chaired by Professor Georgala (see paragraphs 69-73);

7. The Groups dealing with the Committee's forward work programme, and with risk control each met once in 2000. The Group dealing with the agricultural use of sewage sludge will hold its first meeting in 2001.

Membership

8. Full details of the membership of the full Committee, its Working Groups and its *Ad Hoc* Groups are given in Annex I. A Register of Members' Interests is at Annex II.

Reporting lines and terms of reference

9. The Food Standards Agency (FSA) was created by the Food Standards Act 1999[17] and came into being on 1 April 2000. From that date, food safety and other interests of consumers in relation to food became the responsibility of the Agency. An effect of this was that the recipient of the Committee's advice became the FSA rather than Agriculture and Health Ministers.

10. In order to enable the FSA to assume the responsibilities previously discharged by Agriculture and Health Ministers (in relation, for example, to appointing and remunerating ACMSF members, and defraying ACMSF expenditure), the Secretary of State for Health directed that the ACMSF should be treated as if it had been established, and its members appointed, by the FSA. A copy of the Direction made under Paragraph 7, Schedule 2 to the Food Standards Act 1999 is at Annex III. The Committee's revised terms of reference, reflecting this change, appear on page 1 of this Report.

Openness

11. The ACMSF is firmly committed to improving public access to its work. The Committee's agendas, minutes and papers (subject to certain exceptions on grounds of commercial or other sensitivity) are all publicly-available and are posted on the FSA website at :-

<**www.foodstandards.gov.uk/committees/acmsf/summary.htm**>.

12. The Committee also has an individual e. mail address :-

acmsf@foodstandards.gsi.gov.uk

13. The Committee held its first open meeting on 5 December 2000. This was one of the Committee's routine quarterly meetings. Around 30 members of the public attended. An opportunity was afforded at the end of the day's business for them to make statements and to ask questions about the Committee and its work. A summary of points made is annexed to the minutes of the Committee's 39th meeting (ACM/MIN/39) which can be found on the ACMSF's website.

Declarations of interest

14. The Chairman and Members of the Committee routinely declare any personal or business interest, in accordance with the provisions of the ACMSF's code of practice (see Annual Report 1999,[8] Annex IV). In addition, a Register of Members' Interests is included in each of the Committee's Annual Reports.

15. Professor Georgala made a statement about a personal conflict of interest in relation to the Committee's consideration in September 2000 of the *Mycobacterium avium* subspecies *paratuberculosis* (MAP)[♣] results from the FSA's national study on the microbiological quality and heat processing of cows' milk[20] (see paragraphs 38-41). He recalled that, when, in September 1998, the subject of MAP had first been addressed as a major item by the Committee, he had declared a personal interest arising from his position as a consultant to Express Dairies, a major dairy group. As this discussion had pre-dated the adoption of the Committee's code of practice, Professor Georgala recalled that he had taken a personal decision to withdraw from the meeting whilst the item was discussed. His action reflected the fact that the item was of great importance to the whole dairy industry, and that there were many scientific uncertainties associated with it. The decision to withdraw from the September 1998 discussions were taken against this background and to avoid any possible misunderstanding of his position.

16. At the September 2000 meeting, Professor Georgala confirmed that he remained a consultant to Express Dairies. Having discussed the matter with the Secretariat, he had decided to ask Professor Johnston to take the chair for the MAP item. Professor Johnston would then be free to determine with Members whether Profesor Georgala should participate in the discussion or withdraw from the meeting whilst the item was dealt with. Professor Johnston acquainted Members with the relevant section of the ACMSF code of practice and Members agreed that, given his personal statement and the value of his expertise to the Committee, Professor Georgala should remain and should participate in the meeting.

17. Dr Stevens took the opportunity of clarifying his position. He reminded Members that he too had declared an interest, and had withdrawn from the meeting, when the matter had been debated in September 1998. Unigate plc, the company of which he was Technical Director, had at that time been actively engaged in the sale of liquid milk, cheese and other dairy products. He was now Group Technical Director of Uniq Convenience Foods and the company had divested itself of its liquid milk business. He thus considered that he no longer had a strong personal interest in the subject.

[♣] It should be noted that, in previous ACMSF Annual Reports, and in other documents issued by the Committee, *Mycobacterium avium* subspecies *paratuberculosis* (MAP) has been referred to as *Mycobacterium paratuberculosis* (MPTB).

THE COMMITTEE'S WORK IN 2000

Trends in salmonellosis

18. At its thirty sixth meeting in March, the Committee received an oral briefing from the Public Health Laboratory Service (PHLS) on UK trends in salmonellosis. The data presented showed a continuing downward trend in the numbers of laboratory reports of human salmonellosis in England and Wales and in Scotland.

19. Members welcomed the fact that reports of faecal isolations from humans in Great Britain had decreased by over 45 per cent between 1997 and 1999, and that reports of *Salmonella enteritidis* and other major serotypes were also showing a downward trend. The Great Britain trend had not been reflected in Northern Ireland where salmonellosis, *S. enteritidis* and *S. enteritidis* PT4 isolations had all shown significant increases. It was noted, however, that Northern Ireland rates (per 100,000 population) had historically been significantly lower than those in Great Britain and were only now approaching Great Britain levels.

20. The Committee also received information prepared by the Veterinary Laboratories Agency on the numbers of incidents of *Salmonella* in food producing animals. In relation to England and Wales, the significant fall in *S. enteritidis* notifications in chickens was of particular note. For the fourth year running, the total number of incidents and isolations of *Salmonella* reported in cattle and pigs had fallen. In Scotland, the total number of incidents and isolations of *Salmonella* reported in cattle, sheep and pigs had continued to fall. Significant among Northern Ireland data presented was the marked reduction in incidents of *S. typhimurium* recorded in cattle.

Salmonella in eggs

21. The Working Group on *Salmonella* in Eggs completed its programme of oral evidence with presentations from :-

- United Kingdom Egg Producers Ltd;
- Asda;
- the Food Safety Authority of Ireland;
- the Public Health Laboratory Service;
- the Northern Ireland Department of Agriculture and Rural Development;

- the Veterinary Laboratories Agency; and

- Hubbard ISA Ltd.

The Working Group also held a number of meetings with the Department of Health's Economics and Operational Research Division, on risk assessment.

22. A near final draft of the Working Group's report was approved by the full Committee, subject to a few detailed drafting points, in September and the Group was able to produce a final draft in December. The report was formally submitted to the FSA by Professor Georgala on 2 January 2001. The report contains around thirty detailed recommendations and is supported by a risk assessment supplement. It is hoped that the report will be published, with the FSA's agreement, early in 2001. The report reflects developments which have taken place since the Committee's first in-depth examination of the topic, culminating in the publication of its first Report on *Salmonella* in Eggs[10] in 1993.

In-shell egg pasteurisation

23. Following an announcement by J Sainsbury plc on 1 August that it had produced the UK's first in-shell pasteurised eggs, the FSA sought the Committee's views on the effectiveness of the process from a microbiological food safety standpoint. To help inform their consideration of this question, Members received a briefing paper and presentation from Sainsbury's. The minimum process lethality achieved was reported to be better than a 4 log reduction. The Committee concluded that the achievement of a 4 log reduction in *Salmonella* would make a positive contribution to the microbiological safety of eggs. However, the Committee noted that, for reasons of commercial sensitivity, it had not been presented with complete processing data and the claimed effects would need to be validated. Members expressed some disquiet at being asked about a specific product produced by a single trading company and noted that the ACMSF had no role in product approval or licensing. Its advice had traditionally been confined to generic issues. The matter was subsequently raised with the FSA by the Chairman, and discussed by him with the Agency's Chief and Deputy Chief Executives. It was agreed that, to avoid any possible future difficulties, Professor Georgala would be consulted informally, to assess whether and in what form, a particular case should be put before the Committee. This would help ensure that matters were dealt with in a way that was likely to elicit the most useful advice.

Verocytotoxin-producing *Escherichia coli* (VTEC)

24. There have been a number of developments during the year in connection with this organism.

Animal surveillance conferences

25. The Committee was informed of two open meetings sponsored by the Ministry of Agriculture, Fisheries and Food (MAFF), the FSA, the Scottish Executive Rural Affairs Department (SERAD), the National Assembly for Wales (NAW) and the Health and Safety Executive which were held in order to coordinate the release, to the scientific community, the public and the media, of information from research, surveillance and case control studies on VTEC O157 and other foodborne pathogens.

26. The first meeting took place at the Royal College of Physicians of Edinburgh on 28 June and focused on zoonotic VTEC O157 infections in livestock and the risk to public health. The second meeting was held at the Glaziers Hall in the City of London on 7 December. The subject was zoonotic infections in livestock and the risk to public health – *Salmonella*, *Campylobacter* and *Yersinia* in cattle, sheep and pigs.

27. The information provided to ACMSF Members is reported in greater detail in the minutes of the Committee's 39th meeting (ACM/MIN/39).

28. The Committee also received a report on VTEC 2000, an international conference, held in Kyoto, Japan at the end of October/beginning of November. Again, fuller details can be found in ACM/MIN/39.

Publicly-funded VTEC research

29. The FSA provided the Committee with the draft of a paper by the Microbiological Safety of Food Funders' Group (MSFFG)[21] providing an overview of publicly-funded VTEC research, and identifying gaps in knowledge, some of which might merit the commissioning of future research. Members pointed out that some of the gaps identified in the paper had already been filled by other published research and that the paper needed to make clear that the gaps did not necessarily reflect unmet research requirements. It was felt that much of the research was basic in nature and that little had been done to assess the effectiveness of interventions. Members stressed that a strategy was needed to ensure that effective use was made of research results.

Examination of stools by clinical laboratories

30. The Committee noted the growing reluctance among clinical laboratories to follow the recommendation in its VTEC Report[12] that they should routinely examine all diarrhoeal stool specimens for *E. coli* O157. The laboratories' preference was to test bloody stools only. The Committee drew fresh attention to the fact that a substantial proportion of stools containing O157 VTEC are not bloody and reaffirmed the importance of its recommendation for the routine testing of <u>all</u> diarrhoeal stools.

Vehicles for VTEC infection

31. The Committee noted that the vehicles for VTEC infection appeared to have changed over recent years. Minced meat products like burgers are now featuring less prominently as vehicles for infection. The Committee believes that a view is needed on the relative importance of the various exposure pathways and the required protective measures. However, the Committee firmly believes that it is also extremely important to keep in mind that VTEC infection can occur at any time that food is mishandled.

Scottish *E. coli* O157 Task Force

32. In September 2000, the Food Standards Agency, Scotland announced the setting up of a task force on *E. coli* O157.[22] The Task Force was set up in response to evidence showing that infection from *E. coli* O157 was originating from environmental sources and through human contact with animals, as well as through contaminated food. The remit given to the Task Force was, in the light of existing and emerging information on the incidence of *E. coli* O157 in Scotland, to review the risk to health of the public in Scotland and current activities to prevent human infection with *E. coli* O157; assess the effectiveness of the present arrangements for coordination of action at national and local level; consider what future measures would help protect public health; and report by May 2001.

33. Given the wish that its findings should be of use on a UK-wide basis, the Task Force regarded it as important to engage the relevant UK scientific advisory committees and interested parties outside Scotland in its work. The role of the ACMSF as the FSA's principal source of independent advice on microbiological food safety was fully recognised. It was therefore agreed that Dr Simmons, who had chaired the ACMSF VTEC Working Group, should attend Task Force meetings, as appropriate, to represent the Committee's interests. He made an oral report to Members at the ACMSF's December meeting on the outcome of the Task Force's second meeting, on human health, which he had attended (details in ACM/MIN/39). Dr Simmons also reported his intention of attending the Task Force's planned meeting on foodborne transmission, and undertook to report back to the Committee at a later date.

Campylobacter

34. The Committee identified *Campylobacter* as an important topic for future work (see paragraph 71). Paragraph 30 of the 1999 Annual Report[8] had foreshadowed the intention to present the ACMSF with an MSFFG paper summarising UK-publicly-funded *Campylobacter* research, as a precursor to a workshop which it was hoped would help identify where changes of direction and fresh initiatives might be required. The promised MSFFG report was presented to the Committee in June. Members welcomed the information it contained. It

was noted that, despite extensive research programmes, results had done little to facilitate risk analysis. Put simply, the fundamental questions were "how common is *Campylobacter* infection", "who gets it" and "how do they get it". No substantive progress had been made in addressing the question of seasonality. Members felt that, whilst a large range of bodies had a legitimate interest in funding *Campylobacter* research, it was vital that there should be one central body – in their view, the FSA – responsible for taking a strategic overview of *Campylobacter* control, including coordinating research and identifying gaps and overlaps. Members were hopeful that further progress could be made through the Committee's forward work programme, the next steps in which were a workshop, followed by the setting up of a formal ACMSF Working Group.

Clostridium botulinum

35. Members' views were sought in June on a Government-commissioned report evaluating the risk of growth and toxin production by *Clostridium botulinum* in selected new food products. To put the paper in the correct context, Professor Georgala reminded Members that cases of botulism were extremely rare in the UK but that botulinum toxin was deadly. The organism was naturally present in soil and the marine environment. It grew in the absence of air, and the spores of some *C. botulinum* could be very heat resistant. Consumer options for self-protection were limited. It was thus extremely important that food manufacturers took all necessary measures to eliminate any risk of botulism from their products.

36. Members stressed the importance of doing nothing which would detract from the already very clear guidance and rules applying to commercial food manufacturers. They recognised, however, that produce (including vegetables, herbs and spices) preserved in oil, and recipes for the production of these products in the domestic setting, gave grounds for particular concern. Some concern was also expressed about the adequacy of powers available to local authority enforcement staff in ensuring that manufacturers adopted measures which enforcement staff regarded as necessary.

37. The Committee recommended that the FSA, in consultation with other interested bodies, should jointly consider whether the report mentioned in paragraph 35 justified reviewing the advice given in its Report on Vacuum Packaging[9] and whether there was any need to amend the industry code of practice.[19] The FSA presented a further paper to the Committee in December addressing these issues. Members confirmed the validity of the ACMSF's published advice[4,9] but agreed that it was now timely for the FSA to review with the other parties concerned the industry's code of practice.[19] The Committee noted evidence that, in some circumstances, spores might be capable of surviving heat treatment at 90°C for 10 minutes. This should be addressed as part of the review. The advice to local authorities must be that challenge testing should be a standard requirement where producers of vacuum and modified atmosphere packaged products could not satisfactorily demonstrate the

application of appropriate heat and preservative factors in the manufacturing process. The Committee agreed that new ways needed to be found of bringing to the public's attention the potential dangers of home bottling of fruit and vegetables.

Mycobacterium avium subspecies *paratuberculosis*

38. The Committee considered two papers on MAP at its September meeting. The first reported MAP results from the FSA's national study on the microbiological quality and heat processing of cows' milk.[20] Results of MAP culture were presented for 679 samples (81.8% of those tested). These showed that viable MAP was found in 1.9% of raw milk samples and in 2.1% of pasteurised milk samples. The ten samples of pasteurised milk found to contain the organism came from eight different dairies situated throughout the UK, ranging in size from small to very large. A variety of pasteurisation times and temperatures (including extended times up to 25 seconds) had been used. No evidence had been found suggestive of inadequate pasteurisation, or of cross-contamination at dairies. Molecular typing of the strains showed that cross-contamination with laboratory strains could not account for the results.

39. The second paper reported the results of Government-funded research carried out at Queen's University, Belfast on the heat resistance of MAP in milk at pasteurisation temperatures. The work showed that MAP at concentrations above 100cfu/ml was able to survive high temperature short time (HTST) pasteurisation, probably due to clumping of cells. The laboratory studies suggested that longer pasteurisation times (particularly 25 seconds) were associated with inactivation of high inocula of MAP. Increased temperatures did not have this effect.

40. The Committee also considered a Secretariat review of the information contained in these two papers and recent expert opinion on the role of MAP in human Crohn's disease, including a report from the Food Safety Authority of Ireland on whether MAP contributes to Crohn's disease.[23]

41. The Committee agreed that the interim results from the FSA's national milk survey showed that viable MAP was present in a small number of samples of commercial pasteurised milk for retail sale. Members felt that research work studying the death rate of MAP under laboratory conditions tended to support the results of the national survey. The Committee noted the current balance of scientific opinion that the link between MAP and Crohn's disease had neither been proved nor disproved. On the basis that the risk to human health had not yet been established, the Committee did not recommend any change in the current advice regarding the consumption of milk.[20] However, given the different views on possible links to human illness, which were not likely to be resolved in the foreseeable future, the Committee recommended that the FSA should convene a group of stakeholders, with an appropriate level of seniority and

practical experience, to consider all aspects of the control of MAP, including longer-term options for control in primary production and developments in dairy technology, taking due account of consumer concerns such as the risk of exposure in children. At the request of the Chairman, the Secretariat drew these latest developments to the attention of the Secretariat of the Advisory Committee on Dangerous Pathogens (ACDP). The ACDP had, in the past, reviewed the role of mycobacteria in Crohn's disease.[24]

42. At its December meeting, the Committee received an oral progress report on FSA plans for a stakeholder workshop on MAP which was scheduled to take place in 2001. The intention was to hold a seminar of science and industry experts to consider the whole question of the control of MAP, including controls in the primary production sector and in dairy processing.

Johne's disease

43. Johne's disease is a bowel disease of cattle caused by MAP. At its December meeting, the Committee received an oral progress report on a MAFF-funded review by the Scottish Agriculture College of Johne's disease control programmes in animals and in other countries. The work was being carried out in 2 parts. The first part consisted of a review of the organism, the disease, diagnosis and the epidemiology and control of the infection in cattle and small ruminants. There would also be recommendations for research, surveillance and control. The second part, which would draw on the findings of the first, would use mathematical modelling as a basis for exploring the costs/benefits and recommended control and surveillance strategies.

Mycobacterium bovis

44. Members considered a briefing paper on the current incidence of and trends in *Mycobacterium bovis* infection in cattle and humans, and on the measures in place to protect the food chain. The paper concluded that the milk and dairy products exposure pathway seemed well protected by existing legislation and control measures. However, it was felt that questions remained about the meat exposure pathway and the level of protection offered by current legislation and practice. The paper proposed the establishment of an ACMSF Working Group to review the possible health risks associated with the consumption of meat from animals with evidence of *M. bovis* infection and to provide advice to the FSA.

45. Members regarded it as reassuring that the marked rise in tuberculosis in cattle had not been reflected in the trend of human cases of tuberculosis due to *M. bovis*. These remained very small (on average only 42 cases a year out of approximately 3,600 bacteriologically-proven cases of TB). The Committee nevertheless regarded the increase in bovine TB in cattle as of concern and agreed to the setting up of the proposed Working Group. The Secretariat was asked to progress the questions of terms of reference, membership and timetable

in consultation with the Chairman. The Group has now been established (see paragraph 5).

Listeria monocytogenes

46. As noted in paragraph 73, in the context of the Committee's possible future work programme, Members requested a briefing paper on the French *Listeria* outbreak which had occurred over Christmas 1999/New Year 2000. This would help them take a view on whether the errors made which led to that outbreak, and the one in 1998/99 in the USA, were sufficiently well rehearsed and understood, or whether these two outbreaks raised new issues which the Committee needed to address. The Committee considered the paper at its December 2000 meeting. Members reiterated the Committee's view that, in the absence of scientific evidence to the contrary, all strains of *L. monocytogenes* should be regarded as potentially pathogenic. They also stressed the importance of HACCP in identifying and controlling hazards.

47. The Committee also commented on a draft European Commission proposal for a decision on the control of *L. monocytogenes* for certain categories of ready-to-eat food of animal origin (see paragraph 66 and Annex IV).

Infectious intestinal disease

48. The Committee received an oral report on the Government's seminar and workshop which had been arranged with the aim of making the results of the Study of Infectious Intestinal Disease in England (IID)[25] available to a wider audience, including those general practitioners who had participated in the study. There had also been discussions on how best to take the work forward, including implications for better surveillance and clinical management, and the future use of archived samples. In a separate exercise, the ACMSF *Ad Hoc* Group set up to review the Committee's future work programme reviewed the outcome of the IID study seminar and workshop, and pointed to the need to take stock of whether surveillance data on human foodborne disease contributed to the development of effective public health protection strategies. Members also expressed the need to integrate human and animal data. The Committee agreed to form closer links with the FSA's Epidemiology of Foodborne Infections Group who were planning to take a more fundamental look at surveillance.

Zoonotic potential of viruses

49. The Veterinary Laboratories Agency (VLA) presented the results of assessments they had made of :-

- a research paper reporting that viruses closely related to Norwalk-like caliciviruses had been found in animal stools,[26] sparking discussion about the potential for zoonotic transmission; and

- the zoonotic implications of a molecular typing study of human rotaviruses.[27]

50. The Committee has an on-going interest in the association of viruses with foodborne illness and published a report on the subject in 1998.[14] Members noted that it was still unknown whether these viruses were the cause of zoonoses resulting in foodborne disease in humans. Viruses were thought not to replicate in food. If compelling evidence began to emerge of the zoonotic transmission of those viruses with the capacity to cause foodborne disease in humans, the case for Government-funded research should be carefully considered against the background of competing priorities.

Microbiological food surveillance

Surveillance Working Group

51. To facilitate the process by which the Committee advises the Government on its programmes of microbiological food surveillance and other surveillance relevant to foodborne disease, the Committee agreed to set up a standing Surveillance Working Group. The aim is to be in a position to offer advice particularly in relation to the design, methodology, sampling and statistical aspects of surveillance projects. The Working Group is due to meet for the first time in 2001.

Planned survey of raw chicken

52. At its launch in April 2000, the FSA announced that it aimed to reduce levels of *Salmonella* in UK-produced chickens on retail sale by at least 50% in the coming five years.[28] The Agency sought the Committee's preliminary views on the factors which should be given priority in a survey whose purpose was to set a baseline against which progress towards the 50% reduction target can be monitored. Members welcomed the opportunity to comment on proposals at this very early stage and offered a number of suggestions in relation to the factors which should be given priority in the survey. It was agreed that a more detailed consideration of the proposals should be carried out by the Surveillance Working Group (see paragraph 51).

Microbiological Food Surveillance Group

53. The Committee received an oral report on the March 2000 meeting of the Microbiological Food Surveillance Group (MFSG). This had been a routine meeting at which the MFSG had been updated by funding bodies on current progress in relation to their respective microbiological food surveillance projects. Information had also been received about the wealth of data from the All-Wales Sampling Programme assembled by the Welsh Food Microbiological Forum.

Microbiological quality of cows' milk

54. The Committee received results from an FSA national study on the microbiological quality and heat processing of cows' milk.[20] MAP results, which were presented to the Committee in September 2000, are discussed at paragraphs 38-42.

55. Results from the other microbiological examinations carried out under the study were presented to Members in December. Members expressed concern that a number of pasteurised milk samples had been found to contain coliforms, *E. coli* and, in some cases, potential pathogens. These clearly showed that a small number of dairies needed reminding of the steps required to ensure that pasteurisation, a highly effective process when done properly, was correctly carried out on every occasion. The Committee encouraged the FSA to discuss with industry the unsatisfactory nature of some of the results, with a view to achieving the required improvement. Any discussion should also incorporate the question of on-farm pasteurisation about which there had been some concern in the past.

Ready-to-eat fruit and vegetables

56. Ready-to-eat fruit and vegetables were identified as a possible subject for future ACMSF work (see paragraph 72). To help them decide, Members requested a briefing paper from the PHLS. This was presented in June. In a wide-ranging discussion of the paper, it was noted that a significant proportion of outbreaks had been attributed to poor hygiene practice. This had been a recurrent theme over many years, despite legislation and heavy resource expenditure on training. The question of why there had been no improvement needed to be addressed. It was noted that, in identifying the causative organisms associated with IID outbreaks, small round structured viruses (SRSVs) posed particular problems because of the difficulties in routine detection and confirmation. The Committee concluded that, although there had been some outbreaks from this type of produce, there was no cause for serious concern over public health in this connection. The PHLS were, however, invited to keep the matter under review, including in relation to international developments, and to provide the Committee with a progress report in the first half of 2001.

Risk

Ad Hoc Group on Risk Control

57. Mr David Clarke, the Chairman of the *Ad Hoc* Group on Risk Control, reported on the outcome of the Group's October meeting to consider the reasons why risk controls were not being universally applied amongst small and medium sized enterprises (SMEs) in manufacturing and catering, and in the home. It was

noted that the formal HACCP system was less well adapted for use by SMEs who often had difficulties understanding what was required. HACCP plans may also be overcomplicated, documentaion requirements may be burdensome and training costs may be high in relation to resources and staff turnover. The Committee agreed that simplified, sector-specific generic models should help SMEs attain acceptable levels of risk control. Members felt that the production of generic model guidance would best be taken forward by industry bodies, with input as necessary from enforcement authorities. The Committee saw a coordinating role for the FSA. For the general consumer, the same basic risk control messages which applied to SME's were equally relevant. The Committee saw great value in the continued delivery of food safety information, and recommended that the FSA should re-evaluate its strategy for communicating food safety risk and controls to the consumer, to ensure that both the messages and the audiences were sharply focussed.

Review of risk procedures

58. As noted in paragraph 63, the Committee presented written evidence (Annex V) in connection with the review of risk procedures used by the Government's advisory committees dealing with food safety. In September 2000, the FSA Chairman, Sir John Krebs, wrote to Professor Georgala suggesting that the ACMSF might include a discussion of the May Group's report[29] in one of its forthcoming meetings and that the Committee might subsequently produce a note of the actions it decides to take in response to the report's recommendations. The Government's Chief Medical Adviser, Professor Liam Donaldson, wrote in similar terms in October 2000. The Committee discussed the May Group's recommendations at its December meeting. Members agreed with the May Group's recommendations on the relationship between the Government and the committees. Members noted that the ACMSF had already adopted much of what was recommended in the section on best practice for the committees. However, the Committee acknowledged the potential advantages which might flow from the adoption of a more formal structure for the process of risk assessment and agreed to explore the options more carefully. Members also indicated their agreement with the recommendation that better links should be established between the various advisory committees. Members were supportive of the recommendation that the Cabinet Office should facilitate the provision of training. A copy of the response to Sir John Krebs and Professor Donaldson is at Annex VI.

Agricultural disposal of sewage sludge

59. The Committee has in the past assisted with a Government-funded review of the agricultural use of sewage sludge. This previous involvement is detailed in the Committee's Annual Reports for 1997[6] (paragraph 34) and 1998[7] (paragraph 32). Following a further approach by UK Water Industry Research Ltd in October 2000, the ACMSF set up an *Ad Hoc* Group (see paragraph 6) to assist with the

peer review of the risk assessment which will inform the development of revised regulations, and an associated code of practice, governing the agricultural use of sewage sludge. The Group is due to hold it first meeting in 2001.

Food Hygiene Initiative in Schools

60. Members were brought up to date with latest developments in connection with the UK's Food Hygiene Initiative in Schools (see Committee's 1999 Annual Report,[8] paragraph 48). The primary school teaching resource (Safe-T and the H Squad) had been launched by the Food Minister, Baroness Hayman, on 8 March. The contract with the European Commission, under which the Health Education Authority (HEA) had developed this and the earlier secondary school pack (Aliens in Our Food) and distributed them free to all UK primary and secondary schools, had been completed. From 1 April 2000, when the HEA ceased to exist, the FSA had assumed ownership of the two resources, and the associated website, on a care and maintenance basis.

Briefing sessions and consultation exercises

61. The Committee provided information in connection with a number of briefing sessions and consultation exercises during the course of the year.

Briefing the FSA Board

62. The Chairman participated in briefing sessions designed to assist FSA Board members to better understand the role of the ACMSF and the characteristics of foodborne disease in the UK. The Board made clear its appreciation of the contribution which the scientific advisory committee had already made. They recognised the independence of the committees and the increasingly important contribution which they were likely to make to risk communication.

Review of risk assessment

63. The Committee provided evidence (Annex V) to the group set up at the invitation of the Prime Minister under the chairmanship of the (then) Government's Chief Scientific Adviser, Sir Robert May, to review the principles and procedures of risk assessment used by the Government's scientific committees dealing with food safety (see also paragraph 58).

Modernising the National Health Service (NHS)

64. In its comments on the consultation document about modernising the NHS (Annex VII), the Committee emphasised the heavy burden placed on the NHS by the substantial number of cases of foodborne disease in the UK. Attention was drawn to how the work of the ACMSF helps identify the ways in which foodborne disease can be reduced, to the fact that the NHS, as a significant provider of

catering services, is well placed to prevent foodborne disease, and to the NHS's potential involvement in the dissemination of advice on food preparation and hygiene through the medium of general practitioners and health professionals.

Veterinary surveillance

65. In its contribution to the MAFF review of veterinary surveillance in England and Wales (Annex VIII),[30,31] the Committee stressed the need for good practice and systematic planning in animal and food surveillance, good study design, particularly random sampling, being paramount. Noting that foodborne pathogens very often originate in farmed livestock, the Committee stressed that coordinated surveillance, including laboratory methodologies and reference typing, is essential in improving understanding of how, and by what route foodborne pathogens are able to move from the live animal through the food chain to cause human infections.

***Listeria monocytogenes* control measures**

66. The Committee was one of the bodies consulted by the FSA on a draft European Commission proposal for a decision on the control of *Listeria monocytogenes* for certain categories of ready-to-eat food of animal origin. The Committee reiterated its view that, for public health purposes, all strains of *L. monocytogenes* should be regarded as potentially pathogenic. The Committee also stressed that it regards the application of Hazard Analysis Critical Control Point (HACCP) principles as the key to controlling *L. monocytogenes* in the production process. In the ACMSF's view, the aim should therefore be to institute appropriate measures in the production stage which will guarantee compliance with a limit value of <100cfu/g at point of consumption. A copy of the full comments submitted by the Committee is at Annex IV.

Code of practice for scientific advisory committees

67. The Committee was invited by the Government's Chief Scientific Adviser to comment on a draft code of practice for scientific advisory committees, as part of a consultation exercise being conducted by the Office of Science and Technology. A copy of the Committee's response is at Annex IX.

Information papers

68. Among the documents provided for the information of Members during 2000 were :-

- the supplement to the Scottish Centre for Infection and Environmental Health Weekly Report on the Third Verocytotoxigenic *E. coli* Update (23 November 1999);[32]

- a report of a US Food Safety and Inspection Service public meeting on recent developments regarding beef products contaminated with *E. coli* O157 : H7.[33]

- British Veterinary Association guidelines on the prudent use of antimicrobials;[34]

- a paper on the genome sequence of *Campylobacter jejuni*;[35]

- a report on probabilistic approaches to food risk assessment;[36]

- a paper on the application of HACCP to identify hygiene risks in the home;[37]

- a report of the Veterinary Medicines Directorate on sales of antimicrobial products used as veterinary medicines or growth promoters;[38]

- an opinion of the Scientific Committee on Veterinary Measures relating to Public Health on the control of zoonoses along the food chain.[39]

A FORWARD LOOK

69. Following on from the initial discussion of candidates for its future work programme, held in December 1999 (see 1999 Annual Report, paragraph 53),[8] the Committee established an *Ad Hoc* Group to help elaborate the programme with greater precision. The Group met in March and subsequently put forward a number of proposals for future work covering risk control in food production, processing and preparation; *Campylobacter*; ready-to-eat fruit and vegetables; and *Listeria*.

70. The Committee concluded that an *Ad Hoc* group should conduct a preliminary scoping exercise on risk control in sectors of the food industry where HACCP principles had not yet been adequately applied, and in the home. The Group would formulate terms of reference for a formal Working Group, if appropriate. Subsequent developments are described in paragraph 57.

71. Members strongly supported the recommendation for the establishment of a formal Working Group on *Campylobacter*, with a view to identifying a strategy to reduce the incidence of *Campylobacter* infections in humans. The latest position is recorded in paragraph 34.

72. In the case of ready-to-eat fruit and vegetables, the Committee decided that, in order to reach a view on the potential risks and the need for further work, it

required up-to-date information on the microbiological status of this type of produce. This is dealt with in further detail in paragraph 56.

73. The Committee decided that it would require information on the French *Listeria* outbreak in order to consider whether there were any new features which required its attention (see paragraph 46).

74. In addition to the work identified above, the Committee will, in due course, consider the report of its Working Group on *Mycobacterium bovis* (see paragraphs 44-45) prior to tendering appropriate advice to the FSA.

75. The Committee will continue to offer advice on the results of Government-funded surveillance and research. It will also cooperate, through its Surveillance Working Group, on the design, methodology and statistical aspects of the Government's microbiological food surveillance programme and other surveillance relevant to foodborne disease.

76. Two on-going tasks will be to offer advice to the FSA on any *ad hoc* questions which may, from time to time, be referred to the Committee; and to review from time-to-time ACMSF subject-specific reports,[9,10,11,12,13,14,15,16] in order to judge whether any further action is required.

ANNEX I

MEMBERSHIP OF THE ADVISORY COMMITTEE, ITS WORKING GROUPS AND ITS *AD HOC* GROUPS

ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD

TERMS OF REFERENCE

To assess the risk to humans from microorganisms which are used, or occur, in or on food, and to advise the Food Standards Agency on any matters relating to the microbiological safety of food

MEMBERSHIP

Chairman

Professor D L Georgala	Independent scientific consultant. Retired Director of the Institute of Food Research

Members

Mr D Clarke	Chief Executive, Assured Food Standards
Dr T Clayton	Retired Head of Technology, Marks and Spencer plc
Mrs P Jefford	Environmental Health Services Manager, Gravesham Borough Council
Professor A M Johnston	Professor of Veterinary Public Health, Royal Veterinary College, University of London
Mr D Kilsby	Head of Food Microbiology Research, Unilever plc, Colworth Laboratory

Ms E Lewis	Computer consultant. Consumer representative
Dr M J Painter	Consultant in Communicable Disease Control, Infection Control and Surveillance Unit, Manchester Health Authority
Professor S R Palmer	Head of Department of Epidemiology and Public Health, University of Wales College of Medicine
Dr T A Roberts	Retired Head of Microbiology, Institute of Food Research
Dr N A Simmons	Emeritus Consultant in Microbiology to the Guy's and St Thomas' Hospital Trust; Honorary Senior Lecturer in Microbiology, St Bartholomew's and the Royal London School of Medicine and Dentistry
Professor W C S Smith	Department of Public Health, University of Aberdeen and Honorary Consultant in Public Health Medicine, Grampian Health Board, Aberdeen
Dr J V Stevens	Group Technical Director, Uniq Convenience Foods
Mrs B W Thomas	Consumer consultant
Dr T D Wyatt	Consultant Clinical Scientist, Mater Hospital Trust, Belfast

Assessors

Dr M Donaghy	Scottish Executive Health Department
Mr P J R Gayford	Ministry of Agriculture, Fisheries and Food
Professor C H McMurray	Northern Ireland Department of Agriculture and Rural Development

Dr E Mitchell	Northern Ireland Department of Health, Social Services and Public Safety
Dr R Skinner	Food Standards Agency

Secretariat

Medical Secretary

Dr J Hilton	Food Standards Agency

Administrative Secretary

Mr C R Mylchreest	Food Standards Agency

Administrative Secretariat

Mr R Greig (a)	Department of Health
Mrs E A Stretton (b)	Food Standards Agency
Miss J Kerr (c)	Food Standards Agency

(a) Until March 2000
(b) From 1 April 2000
(c) From 17 October 2000

WORKING GROUP ON *SALMONELLA* IN EGGS

TERMS OF REFERENCE

To establish the factors which determine the presence of Salmonella contamination in or on eggs and to recommend measures to reduce such contamination and consumers' exposure to it.

MEMBERSHIP

Chairman

Dr M J Painter	Consultant in Communicable Disease Control, Infection Control and Surveillance Unit, Manchester Health Authority

Members

Mr D Humphrey	Chairman, Humphrey Farms Ltd. Past Chairman, NFU Poultry Committee. Past Deputy Chairman, British Egg Industry Council
Professor T J Humphrey	Head, PHLS Food Microbiology Research Unit, Public Health Laboratory, Exeter
Professor A M Johnston	Professor of Veterinary Public Health, Royal Veterinary College, University of London
Mrs M Millard	Environmental Health Team Leader (Food and Safety), Environment Directorate, Milton Keynes Council
Professor S R Palmer	Head of Department of Epidemiology and Public Health, University of Wales College of Medicine
Dr T A Roberts	Retired Head of Microbiology, Institute of Food Research
Mrs B W Thomas	Consumer consultant

Assessors

Dr J P Back	Food Standards Agency
Mr P J R Gayford	Ministry of Agriculture, Fisheries and Food
Dr E Mitchell	Northern Ireland Department of Health, Social Services and Public Safety

Secretariat

Administrative Secretary

Mr C R Mylchreest	Food Standards Agency

Scientific Secretary

Dr P E Cook	Food Standards Agency

Administrative Secretariat

Mr R Greig (d)	Department of Health
Ms T Feltis (e)	Food Standards Agency
Mrs E A Stretton (f)	Food Standards Agency

(d) Until March 2000
(e) Until August 2000
(f) From 1 April 2000

SURVEILLANCE WORKING GROUP

TERMS OF REFERENCE

To facilitate the provision of ACMSF advice to government in connection with its microbiological food surveillance programme and other surveillance relevant to foodborne disease, particularly in relation to the design, methodology, sampling and statistical aspects; and to report back regularly to the ACMSF.

MEMBERSHIP

Chairman

Mr D Clarke	Chief Executive, Assured Food Standards

Members

Mrs P Jefford	Environmental Health Services Manager, Gravesham Borough Council
Mr D Kilsby	Head of Food Microbiology Research, Unilever plc, Colworth Laboratory
Professor S R Palmer	Head of Department of Epidemiology and Public Health, University of Wales College of Medicine
Dr T A Roberts	Retired Head of Microbiology, Institute of Food Research

Secretariat

Administrative Secretary

Mr C R Mylchreest	Food Standards Agency

Scientific Secretary

Ms G V Hoad	Food Standards Agency

Administrative Secretariat

Mrs E A Stretton	Food Standards Agency
Miss J Kerr	Food Standards Agency

WORKING GROUP ON *MYCOBACTERIUM BOVIS*

TERMS OF REFERENCE

To review the possible health risks associated with consumption of meat from animals with evidence of Mycobacterium bovis infection, including animals with no post mortem evidence of disease which have reacted positively or inconclusively to the tuberculin test, and to advise on the adequacy of current control measures.

MEMBERSHIP

Chairman

Professor A M Johnston	Professor of Veterinary Public Health, Royal Veterinary College, University of London

Members

Ms E Lewis	Computer consultant. Consumer representative
Dr M J Painter	Consultant in Communicable Disease Control, Manchester Health Authority
Professor W C S Smith	Head, Department of Public Health, University of Aberdeen. Honorary Consultant in Public Health Medicine, Grampian Health Board, Aberdeen
Dr N A Simmons	Emeritus Consultant in Microbiology to the Guy's and St Thomas' Hospital Trust; Honorary Senior Lecturer in Microbiology, St Bartholomew's and the Royal London School of Medicine and Dentistry
Dr J Watson	Consultant Epidemiologist and Head of Respiratory Division. Public Health Laboratory Service
Professor D B Young	Fleming Professor of Medical Microbiology. Imperial College School of Medicine

Dr M Attenborough	Technical Director. Meat and Livestock Commission
Dr J P Gallagher	Veterinarian

Assessors

Miss A Conroy	Food Standards Agency
Ms J M Downes	Meat Hygiene Service, Food Standards Agency
Dr R de la Rua	State Veterinary Service, Ministry of Agriculture, Fisheries and Food

Secretariat

Medical Secretary

Dr J Hilton	Food Standards Agency

Administrative Secretary

Mr C R Mylchreest	Food Standards Agency

Administrative Secretariat

Mrs E A Stretton	Food Standards Agency
Miss J Kerr	Food Standards Agency

AD HOC GROUP ON THE ACMSF'S FUTURE WORK PROGRAMME

TERMS OF REFERENCE

To help elaborate the Committee's future work programme more precisely.

MEMBERSHIP

Chairman

Professor D L Georgala	Independent scientific consultant. Retired Director of the Institute of Food Research

Members

Mrs P Jefford	Environmental Health Services Manager, Gravesham Borough Council
Ms E Lewis	Computer consultant. Consumer representative
Professor S R Palmer	Head of Department of Epidemiology and Public Health, University of Wales College of Medicine
Mrs B W Thomas	Consumer consultant

Assessors

Mr P J R Gayford	Ministry of Agriculture, Fisheries and Food
Dr R J Harding	Food Standards Agency
Professor C H McMurray	Northern Ireland Department of Agriculture and Rural Development
Dr R Skinner	Food Standards Agency
Mr D Worthington	National Assembly for Wales

Secretariat

Medical Secretary

Dr J Hilton	Food Standards Agency

Administrative Secretary

Mr C R Mylchreest	Food Standards Agency

Administrative Secretariat

Ms T Feltis	Food Standards Agency

AD HOC GROUP ON RISK CONTROL

TERMS OF REFENCE

To conduct a scoping exercise on risk control in sectors of the food industry where HACCP principles have not yet been adequately applied, and in the home, and, if appropriate, to formulate terms of reference for consideration by the ACMSF for a formal Working Group to take matters forward.

MEMBERSHIP

Chairman

Mr D Clarke	Chief Executive, Assured Food Standards

Members

Dr T Clayton	Retired Head of Technology, Marks and Spencer plc
Mr D Kilsby	Head of Food Microbiology Research, Unilever plc, Colworth Laboratory
Ms E Lewis	Computer consultant. Consumer representative
Dr T A Roberts	Retired Head of Microbiology, Institute of Food Research

Assessor

Dr J Hilton	Food Standards Agency

Secretariat

Administrative Secretary

Mr C R Mylchreest	Food Standards Agency

Administrative Secretariat

Miss J Kerr	Food Standards Agency

AD HOC GROUP ON SEWAGE SLUDGE

TERMS OF REFERENCE

To assist with the peer review of a microbiological risk assessment to determine whether the application of sewage sludge to agricultural land poses a significant, incremental pathogen risk to foods produced in/on such land.

MEMBERSHIP

Chairman

Dr N A Simmons	Emeritus Consultant in Microbiology to the Guy's and St Thomas' Hospital Trust; Honorary Senior Lecturer in Microbiology, St Bartholomew's and the Royal London School of Medicine and Dentistry

Members

Professor J Banatvala	Emeritus Professor of Clinical Virology, Guy's, King's and St Thomas' School of Medicine
Mr D Clarke	Chief Executive, Assured Food Standards
Dr T Clayton	Retired Head of Technology, Marks and Spencer plc
Dr T A Roberts	Retired Head of Microbiology, Institute of Food Research

Assessors

Dr J Hilton	Food Standards Agency

SECRETARIAT

Administrative Secretary

Mr C R Mylchreest	Food Standards Agency

Scientific Secretary

Dr P E Cook	Food Standards Agency

Administrative Secretariat

Mrs E A Stretton	Food Standards Agency
Miss J Kerr	Food Standards Agency

ADVISORY COMMITTEE ON THE MICROBIOLOGICAL SAFETY OF FOOD

ANNEX II

REGISTER OF MEMBERS' INTERESTS

Member	Personal interests		Non-personal interests	
	Name of company	**Nature of interest**	**Name of company**	**Nature of interest**
Professor D L Georgala CBE	Centre for Environment, Fisheries and Aquaculture Science Express Dairies plc Marks and Spencer plc Northern Foods plc Unilever plc	Ownership Board member Consultant Scientific adviser Scientific adviser Shareholder	None	
Mr D Clarke	Butterworth-Tolley	Contributing Editor to food safety publications	None	
Dr T Clayton	Marks & Spencer plc LM Solutions Dr Parsley.com Foodtrak	Shareholder Non-executive Director Consultant Scientific adviser	None	
Mrs P Jefford	None		None	
Professor A M Johnston	Humane Slaughter Association Tesco Stores Ltd	Veterinary Adviser Consultant	Specific projects undertaken by the Royal Veterinary College	Independent adviser and liaison on behalf of the Royal Veterinary College

Member	Personal interests		Non-personal interests	
	Name of company	**Nature of interest**	**Name of company**	**Nature of interest**
Mr D Kilsby	Unilever plc	Microbiologist and shareholder	None	
Ms Eva Lewis	None		None	
Dr M J Painter	None		None	
Professor S R Palmer	None		None	
Dr T A Roberts	Tulip International Food Standards Agency	Consultant Research Programme Adviser : assessing and managing the hazards and risks from *Salmonella* and *Campylobacter* in poultry from farm to fork (B 03)	None	

Member	Personal interests		Non-personal interests	
	Name of company	**Nature of interest**	**Name of company**	**Nature of interest**
Dr N A Simmons	Food Micro Ltd GR Micro Ltd Infection Management Ltd Marks & Spencer plc McDonalds Restaurants Ltd Waitrose Ltd Worshipful Company of Fishmongers	Director and shareholder Consultant and adviser Adviser and shareholder Consultant and adviser Consultant and adviser Consultant and adviser Bacteriologist	None	
Professor W C S Smith	None		None	
Dr J V Stevens	Unigate plc	Shareholder	None	
Mrs B W Thomas	None		None	
Dr T D Wyatt	None		None	

Member	Personal interests		Non-personal interests	
	Name of company	**Nature of interest**	**Name of company**	**Nature of interest**
Working Group on *Salmonella* in Eggs				
Mr D Humphrey	Humphrey Farms Ltd Stonegate Farmers Ltd	Chairman and shareholder Shareholder	National Farmers' Union British Egg Industry Council	Member of Poultry Committee Subscriber
Professor T J Humphrey	None		None	
Mrs M Millard	None		None	

ANNEX III

Richmond House 79 Whitehall London SW1A 2NS Telephone 020 7210 3000
From the Parliamentary Under Secretary of State
Ms Gisela Stuart MP

DIRECTION UNDER PARAGRAPH 7 SCHEDULE 2 TO THE FOOD STANDARDS ACT 1999

The Secretary of State under section 5(4) and Schedule 2 paragraph 7 of the Food Standards Act 1999 ("the Act"), hereby directs that the following non-statutory advisory committees should each be treated as if they had been established by the Food Standards Agency under section 5 of the Act and their respective members appointed in accordance with paragraph 3(1) of Schedule 2 to the Act:

The Advisory Committee on Novel Foods and Processes;
The Advisory Committee on the Microbiological Safety of Food;
The Food Advisory Committee;
The Ad Hoc Expert Group on Vitamins and Minerals.

This Direction shall have effect immediately.

Signed by authority of the Secretary of State for Health.

Date 5th June 2000

Signed Gisela Stuart

Parliamentary Under Secretary of State
Department of Health

ANNEX IV

Advisory Committee on the Microbiological Safety of Food

Administrative Secretary, Room 425, PO Box 31037, Ergon House, 17 Smith Square, London SW1P 3WG
Telephone : 0207-238-6451 Fax : 0207-238-6745
E. mail : colin.mylchreest@foodstandards.gsi.gov.uk

Rosalind Glover
Microbiological Safety Division "A"
Food Standards Agency
PO Box 30077
Room 501A
Skipton House
80 London Road
London
SE1 6XZ

7 September 2000

Dear Ms Glover

DRAFT EC PROPOSAL FOR A DECISION ON THE CONTROL OF *LISTERIA MONOCYTOGENES* FOR CERTAIN CATEGORIES OF READY-TO-EAT FOOD OF ANIMAL ORIGIN

1. I am writing on behalf of the Advisory Committee on the Microbiological Safety of Food to thank you for the opportunity to comment on the draft EC proposal for a decision on the control of *L. monocytogenes* (Lm) in certain RTE foods.

2. The Committee's view is that, for public health purposes, all strains of Lm should be regarded as potentially pathogenic. Thus, in view of the potential for serious illness, levels in food must be kept very low. The Committee recognises that it might not be appropriate to express this objective as absence at the point of production. Non-detection in a few 25g samples at the time of production is no guarantee of absence in total production. Whilst some food maturation processes (eg. pasteurisation and/or pH control) can be shown to destroy Lm, growth is more likely. There is clear evidence that Lm is widespread in some RTE foods. For example, results from a Government-funded national study showed Lm to be present in around 5% of RTE meat and meat products sampled (including at end of shelf life), albeit it at fairly low levels.

3. The Committee regards HACCP as the key to controlling Lm in the production process. In the view of the ACMSF, the aim should therefore be to institute appropriate

measures in the production stage which will guarantee compliance with a limit value of <100cfu/g at point of consumption.

4. Food companies should control Lm and other pathogenic organisms through their HACCP systems. Environmental testing and some product testing may be used as part of the HACCP verification process but the frequency of testing should be determined by the company on a case-by-case basis.

5. I hope you will find the Committee's comments helpful.

Yours sincerely

COLIN MYLCHREEST
Administrative Secretary

ANNEX V

Advisory Committee on the Microbiological Safety of Food

Administrative Secretary, Room 425, PO Box 31037, Ergon House, 17 Smith Square, London SW1P 3JR
Telephone : 0207-238-6451 Fax : 0207-238-6745
E. mail : colin.mylchreest@foodstandards.gsi.gov.uk

Sir Robert May
Chief Scientific Adviser
Office of Science and Technology
Albany House
94-98 Petty France
London
SW1H 9ST

28 April 2000

Dear Sir Robert

RISK ANALYSIS

1. Thank you for your letter of 19 April inviting me to participate on behalf of the Advisory Committee on the Microbiological Safety of Food (ACMSF) in your review into the way risk assessment is used by Government scientific advisory committees. I am delighted to do so and hope that you will find the information contained in this letter helpful.

2. By way of background, the ACMSF was set up in 1990 to advise UK Agriculture and Health Ministers on the microbiological safety of food. Under the new arrangements operating from 1 April 2000, the Committee reports to the Food Standards Agency (FSA). ACMSF membership is currently drawn from microbiology; the medical and veterinary professions; the food industry; food science, retailing and research; consumer affairs; and public and environmental health. In addition, to assist the Committee in its detailed consideration of specific topics, external expertise is co-opted on to Working Groups in support of ACMSF members. This broad range of interests and expertise has helped the Committee discharge its remit across the whole food chain from "farm to fork".

3. In the area of risk analysis, the Committee's principal role has been in relation to risk assessment. We have undertaken in-depth studies on vacuum packaging and associated processes; *Salmonella* in eggs; *Campylobacter*, verocytotoxin-producing *Escherichia coli* (VTEC); poultry meat; foodborne viral infections; and microbial antibiotic

resistance in relation to food safety and have provided Government with wide-ranging advice in our reports on these issues. These reports have been published by Ministers, together with the Government's response to our recommendations. We are currently revisiting *Salmonella* in eggs to assess the need for further interventions. Our future work programme will include a further look at the *Campylobacter* issue, following our interim report of 1993. We shall also consider why risk control is not being universally applied amongst small and medium size enterprises in food manufacturing and catering, and in the domestic environment. We shall also, for example, be taking stock of the public health implications of recent outbreaks of listeriosis, and looking at the potential risks associated with ready-to-eat fruit and vegetables.

4. In addition to the recommendations made in our major reports, the Committee has regularly provided advice on a wide range of issues concerning the microbiological safety of food in response to requests by Government Departments. Topics include raw milk and raw milk cheeses, New York dressed poultry, agricultural disposal of sewage sludge, *Mycobacterium paratuberculosis* (MPTB) in milk, infectious salmon anaemia and the pathogenicity of *Listeria monocytogenes*. The Committee's advice is also routinely sought on the public health implications of the results of Government-funded microbiological food safety surveillance and research. As indicated earlier, our advice about risk has traditionally been communicated to the UK Agriculture and Health Departments, in accordance with the remit which we received from Government. From 1 April 2000, the recipient of our advice became the Food Standards Agency.

5. Whilst the Committee's principal involvement has been with risk assessment, we have also been able to suggest risk management measures to Government. Many detailed risk management recommendations are contained in our subject-specific reports and in the advice we provide to Government on the *ad hoc* questions referred to us. A practical example to illustrate the Committee's contribution to risk management is the revised cooking instructions for burgers and similar raw minced meat products, aimed at avoiding exposure to VTEC infection. These formed the basis of Chief Medical Officer advice issued in July 1998. For the future, the ACMSF will continue to offer Government a suite of options for managing particular risks.

6. Risk communication presents the Committee with different challenges and we are committed to develop our thinking on how best to promulgate microbiological food safety messages against the background of the Government's policy of greater openness. We have already taken some important steps to improve public access to our work and outputs. A dedicated website contains details of the Committee and our published annual and subject-specific reports. We also publish our agendas, minutes and papers and we shall be holding at least one open meeting a year. We have also provided experts for media interviews on an *ad hoc* basis, to assist the Government's handling of a number of live issues. Recent examples include sewage sludge in French animal feed; and MPTB in pasteurised milk. However, ACMSF involvement in risk communication has hitherto been largely reactive and this is an area where we could, in cooperation with the FSA, be more proactive.

7. I hope the above provides the information you require. If you need anything more, perhaps you would let Colin Mylchreest (the Committee's Administrative Secretary – details above) know.

8. I look forward to meeting you and the other members of the Group in due course.

Yours sincerely

Professor Douglas L Georgala

ANNEX VI

Advisory Committee on the Microbiological Safety of Food

Administrative Secretary, Room 425, PO Box 31037, Ergon House, 17 Smith Square, London SW1P 3WG
Telephone : 0207-238-6451 Fax : 0207-238-6745
E. mail : colin.mylchreest@foodstandards.gsi.gov.uk

Sir John Krebs
Chairman
Food Standards Agency
PO Box 30080
Hannibal House
Elephant & Castle
London
SE1 6YA

Your ref: PRO/21/7

15 January 2001

REVIEW OF RISK PROCEDURES USED BY THE GOVERNMENT'S ADVISORY COMMITTEES DEALING WITH FOOD SAFETY

You wrote to me on 13 September drawing attention to the outcome of the review of risk procedures carried out by the May Group of which you and the Chief Medical Officer, Professor Liam Donaldson, were members. I sent you an interim reply on 19 September confirming that the ACMSF was already implementing best practice in many of the areas identified in the report of the May Group, for example, in offering policy makers a range of risk management options, and in opening up the Committee's work to greater public scrutiny. I also indicated my Committee's support for the introduction of appropriate training for members of committees and their secretariats. I also undertook to include discussion of the report on a future ACMSF agenda. We were able to do this for the Committee's first open meeting on 5 December. I am writing to let you know the outcome.

On a general point, I can confirm that the ACMSF welcomes the broad thrust of the report and that we shall continue to seek to operate in accordance with best

practice. In that context, we find the report's conclusions on the desirable relationship between the Government and the committees particularly helpful. With regard to the conclusions on best practice for committees :-

- we recognise the potential advantages which might flow from the adoption of a more formal structure for the process of risk assessment. We already have some experience of using risk assessment in our work but we shall be carefully exploring additional options;

- we shall continue to be as open as we can at all stages of the risk assessment process. We already make clear to authors that the Committee operates on the presumption that papers it considers will be made publicly-available. We publish detailed minutes of our proceedings and, subject to the Agency itself (to whom we report) being content, always look to publish our advice and other outputs;

- I have already indicated our support for appropriate training initiatives;

- we support the suggestion that there should be better links between the various advisory committees. There is already some cross-membership, ACMSF members having been members of eg. the Food Advisory Committee and the Advisory Committee on Novel Foods and Processes. We also took steps recently to acquaint the Advisory Committee on Dangerous Pathogens of our work on *Mycobacterium avium* subsp. *paratuberculosis*, given the possible importance of the organism in the aetiology of Crohn's disease. As a new development, I have asked the ACMSF secretariat to explore the possibility of compiling a regular summary of the current work of other committees – we already contribute to a similar document compiled by the Advisory Committee on Animal Feedingstuffs and there is informal on-going liaison at secretariat level which may benefit from being placed on a more formal footing;

- we shall continue to seek to offer policy makers a range of risk management options.

I hope you find this summary helpful. If you need anything more, please do not hesitate to get in touch.

I am copying this letter to Professor Donaldson who wrote to me on 16 October in terms similar to your own letter.

Professor Douglas L Georgala
Chairman : ACMSF

ANNEX VII

Advisory Committee on the Microbiological Safety of Food

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National Plan Project Team
Department of Health
Room 326
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19 June 2000

Dear Sir/Madam

MODERNISING THE NHS

Thank you for your letter of 26 May requesting comments on the consultation document about modernising the NHS. I have copied the document to the Advisory Committee on the Microbiological Safety of Food (ACMSF) and am replying on their behalf.

By way of background, I should point out that the ACMSF is an independent, non-statutory body originally appointed to advise UK Health and Agriculture Ministers. The Terms of Reference are :-

"To assess the risk to humans of microorganisms which are used or occur in or on food and to advise Ministers on the exercise of powers in the Food Safety Act 1990 relating to the microbiological safety of food."

Responsibility within Government for the microbiological safety of food transferred to the Food Standards Agency when it came into being on 1 April 2000. Since then, the ACMSF has reported to the Agency rather than to UK Health and Agriculture Ministers and the Committee's terms of reference are being revised to reflect this change.

I enclose a copy of the Annual Report for 1999 and a list of the reports which the ACMSF have produced is at Annex A.

There are a substantial number of cases of foodborne disease in the UK, which place a heavy burden upon the NHS both in terms of disease and costs. A study of Infectious Intestinal Disease (IID) in England estimated the overall cost of IID to be £750 million a year, of which 36% constituted costs falling on the NHS. Although foodborne disease is largely preventable, as with many other factors that are important in causing ill-health, this is largely outside the control of the NHS.

As an illustration of this, the work of the ACMSF points to three main ways in which food borne disease can be reduced. These are :-

1. The main bacterial causes of food illness often originate in the presence of these pathogens in farm animals. Subsequent slaughter and processing can cause further spread. A major objective therefore should be the reduction of the incidence of the main pathogens in farm stock. This is a complex issue and requires medium and longer term strategies.

2. Food illness outbreaks often reveal hygiene management failures in commercial food operations and catering. Improved and more effective training of food operators at all levels is therefore a primary requirement for the future.

3. In the home, failure to observe simple rules of safe food handling often results in family level food illness incidents. Despite the efforts of government, public bodies, and of the food industry, it appears that advice on food preparation and hygiene is not yet making the necessary impact.

The NHS is a significant provider of catering services. Whilst hospital outbreaks are most commonly due to agents transmitted from person to person a proportion are foodborne and, as such, should be preventable.

The other area of potential NHS involvement is in the dissemination of advice on food preparation and hygiene via GPs and other health professionals.
Yours faithfully

Liz Stretton
Secretariat

ANNEX VIII

Advisory Committee on the Microbiological Safety of Food

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29 June 2000

Dear Sir

VETERINARY SURVEILLANCE

1. I am responding on behalf of the Advisory Committee on the Microbiological Safety of Food (ACMSF) to the invitation to comment upon the MAFF Review of Veterinary Surveillance in England and Wales.

2. By way of background, the ACMSF and the Steering Group on the Microbiological Safety of Food (SGMSF) were established in 1990, on the recommendation of the Richmond Committee, as the two parts of a new national microbiological food surveillance and assessment system. Following a review in 1995, the Government decided to introduce new arrangements to ensure more efficient and streamlined consideration of food safety issues. As a result of these, the SGMSF ceased to exist and, in addition to its existing responsibilities for advising Government on the microbiological safety of food, the ACMSF was given responsibility for advising on the Government's microbiological food surveillance programme which had until then been the main task of the Steering Group.

3. As part of its extended remit in respect of surveillance, the ACMSF has, *inter alia*, :-

- received regular reports on the work of two Departmental groups, the Microbiological Food Surveillance Group, and the Epidemiology of Foodborne Infections Group (this latter Group concerned, *inter alia*, with veterinary surveillance and zoonotic infections in food animals);

- commented on draft Departmental surveillance strategies and forward work programmes;

- agreed arrangements with Departments to ensure that the Committee is regularly informed of, and able to comment on, the results of Departmental surveillance projects;

- advised on the public health implications of surveillance results;

- commented on draft surveillance protocols;

- established a standing Surveillance Working Group to facilitate the process by which the Committee advises the Government on its programmes of microbiological food surveillance and surveillance of animal and human infection.

4. The Committee wishes to stress the need for good practice and systematic planning in animal and food surveillance. The Committee regards as paramount good study design, particularly random sampling. There is a need to decide first what questions proposed surveillance is required to answer and then design the survey, with appropriate statistical input, to answer the identified questions.

5. It is equally important that results from different surveillance projects covering similar areas are comparable. Funding bodies should therefore aim to use uniform protocols and common methodologies. Similarly, close collaboration is required between organisations directing or undertaking surveillance of microorganisms isolated from food, animals and humans in order to provide a comprehensive picture of the prevalence of foodborne infection and better inform public health and food safety policy. In the Committee's view, it is essential that the results of veterinary (and food) surveillance are used both to highlight good and bad practice, and as a basis for remedial interventions.

6. As a parallel issue, the ACMSF looks to the Government to strongly encourage a collaborative approach across the UK, and in relation to food, animal and human isolates, to *Campylobacter* reference typing, particularly in view of the very significant contribution of this organism to foodborne disease. Such efforts are essential if the sources of *Campylobacter* and transmission routes are to be clarified.

7. The ACMSF is concerned that foodborne pathogens very often originate in farmed livestock. This is why coordinated surveillance, including laboratory methodologies, reference typing, etc, is essential in improving understanding of how and by what route foodborne pathogens are able to move from the live animal through the food chain to cause human infections.

Yours faithfully

C R MYLCHREEST
Administrative Secretary

ANNEX IX

Advisory Committee on the Microbiological Safety of Food

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13 September 2000

Dear Dr Duggan

CONSULTATION ON A CODE OF PRACTICE FOR SCIENTIFIC ADVISORY COMMITTEES

1. The Advisory Committee on the Microbiological Safety of Food (ACMSF) is grateful for the opportunity to comment on the consultation document which accompanied Sir Robert May's circular letter of 26 July 2000. The Committee has asked me to let you have its comments on the various elements identified in the consultation document and these are detailed below.

TRANSPARENCY

A. What a committee should publish

2. ***The ACMSF agrees with the proposals detailed in this section of the consultation document.*** The ACMSF already publishes annual reports in which can be found an explanation of the genesis of the Committee, its terms of reference, membership details and a register of members' interests. The Committee operates under a code of practice embodying the Seven Principles of Public Life set out by the Committee on Standards in Public Life. This too has been made public through the medium of its annual reports.

3. Agendas, minutes and papers are routinely published in the way envisaged in the consultation document.

B. Publication of confidential information

4. ***The ACMSF accepts that information should be made publicly-available to the maximum extent possible*** and that, before documents are withheld on grounds of commercial or other sensitivity, the need for such protection should be rigorously tested. The Committee's working practices already reflect this principle.

C. Reporting levels and types of uncertainty

5. ***The ACMSF accepts in principle this part of the consultation document.*** In advising Government, the Committee explains the parameters within which its advice applies and endeavours to offer a range of options for any Government action which may be required.

D. Communication to the public

6. ***The ACMSF is committed to increasing openness***, and seeks to increase public awareness of its work through the publication of agendas, minutes, papers, press releases, and annual and subject-specific reports. Information is also made available through the information bulletins and website of the Food Standards Agency.

7. The Committee is keen to develop its links with the public through enhanced media contact, as well as through making its outputs more consumer-friendly and more specifically targeted. It welcomes proposals for the provision of appropriate training and hopes that the Government's aspirations in this area will be reflected in the allocation of the necessary resources and funding.

AN INCLUSIVE APPROACH

E. Approaches to consultation and dialogue

8. **The ACMSF is fully committed to the principle of open meetings**. It will be holding its first open meeting in December 2000. The Committee has, since its inception, regularly co-opted external expertise to help it deal with specific issues where necessary, has regularly invited advice on such issues and has, through the Secretariat, sought external expert scientific advice on an *ad hoc* basis. When conducting in-depth investigations of particular issue, the Committee habitually invites a wide range of interests to provide both written and oral evidence and to participate in discussion of these issues.

THE CHAIR

F. Responsibilities of chair

9. ***The ACMSF fully supports the principles set down in this section of the consultation document*** and already takes all possible steps to operate within them.

G. Training for chairing a committee

10. ***The ACMSF welcomes the emphasis on the provision of relevant training*** and hopes that Government will ensure the provision of necessary resources.

THE MEMBERS

H. Members' duties

11. ***The ACMSF fully supports this principle.*** Appointments to the Committee are made, and the Committee already operates, on this basis.

J. Members' understanding of their role

12. ***The ACMSF agrees that these arrangements are wholly appropriate***. Relevant guidance is provided to ACMSF members through the Chair and the Secretariat. Members are encouraged to participate fully in the Committee's business (often through "tours de table" during discussions of particular issues) and to seek clarification of what is expected of them where necessary. The ACMSF accepts in principle the need for members, particularly lay representatives, to receive appropriate training. We look to the Government to undertake and/or fund such training.

K. Balance of expertise

13. ***The ACMSF agrees in principle with this point.*** Membership is drawn from a wide range of relevant disciplines and interests. In addition, external expertise is co-opted as and when necessary to supplement "in house" expertise. Members are encouraged to draw attention to any lack of expertise likely to impact adversely on the work of the Committee. However, it should be borne in mind that responsibility for appointments to the Committee rests with the Food Standards Agency (FSA) and not with the ACMSF itself.

14. I should mention, incidentally, that the ACMSF membership includes 2 lay/consumer representatives. In the view of the Committee, the proposed Code of Practice could usefully highlight the importance of lay/consumer representation on all scientific advisory committees.

L. Changes

15. As stated above, appointments to the ACMSF are made by the FSA. In normal circumstances, the periods of appointment of a proportion of members falls to be reviewed annually. ***The Committee would welcome the opportunity for appropriate input, through the secretariat, to the review process.***

M. Conflicts of interest

16. ***The ACMSF supports the need for provisions for dealing with potential conflicts of interest.*** As stated earlier, the ACMSF operates under a Code of Practice reflecting the Seven Principles of Public Life which is publicly-available through its annual reports, as are registers of members' interests. Declarations of interests in any items due to be discussed are called for at the beginning of all of the Committee's meetings. Individuals declaring particularly important interests may, if deemed appropriate, leave the room during discussion of relevant issues (as has occurred on occasions). Such interests and actions are recorded in the minutes of the meetings concerned.

THE SECRETARIAT

N. Duties of the secretariat

17. ***The ACMSF agrees that its secretariat should operate in the manner suggested in the consultation document.*** The Committee is satisfied that it does so.

18. The Code of Practice might usefully also reflect the Secretariat's role in advising committees on the process and procedure of their work.

O. Other officials

19. ***Similarly, the Committee supports the views expressed in the consultation document about the role and conduct of officials who have contact with committees or attend their meetings.***

P. Use of research

20. ***The ACMSF recognises the value of research to its work and supports the principles set out in this section of the consultation document***.

Q. Early identification of issues

21. ***The ACMSF supports the need for committees to have in place mechanisms to allow them to identify emerging issues likely to be of public concern.*** The Committee's annual reports contain a "Forward Look" section; members regularly bring to the Committee's attention emerging issues in their particular fields of expertise; and the Committee is examining additional means of strengthening these arrangements through, eg, extending invitations to external bodies and experts to provide it with regular reports on developing trends.

R. Risk assessment

22. ***The ACMSF recognises the importance of properly structured risk assessment*** and participated in the recent review carried out under the chairmanship of Sir Robert May. The Committee will continue to make appropriate use of available expertise and relevant guidance.

S. Procedures for arriving at conclusions

23. ***The ACMSF agrees with what is proposed in the consultation document.*** It is the Committee's practice to report and publicise the essential elements of its work through the minutes of its meeting and through its published papers and reports. The Committee's aim is always to produce a balanced account of its deliberations, giving appropriate prominence to divergent opinion amongst members.

T. Information exchange

24. The ACMSF recognises the advantages of exchanging information with other relevant committees. Its agendas, minutes and papers are readily accessible through the FSA

website, as is the corresponding documentation from other advisory committees. Secretariats are in regular touch with each other. Material is provided for information summaries prepared for other advisory committees. And there is some cross-membership between committees.

Conclusions

25. I hope that you will find this information useful. I can confirm that the ACMSF has no objection to its response being published. I am copying this response to the ACMSF Chairman, Professor Georgala, and to all members of the Committee.

Yours sincerely

COLIN MYLCHREEST
Administrative Secretary

ANNEX X

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