

**DRAFT MINUTES OF THE FIFTY-FIRST MEETING OF ACAF HELD
ON 22 SEPTEMBER 2010**

Present:

Chairman	Dr Ian Brown
Members	Dr Paul Brantom Mr Tim Brigstocke Dr Bruce Cottrill Mr Barrie Fleming Professor Stephen Forsythe Professor Ian Givens Professor Nigel Halford Ms Diane McCrea Mr Richard Scales Mr Edwin Snow Mr Marcus Themans
Secretariat	Mr Keith Millar (Secretary) – Food Standards Agency Miss Mandy Jumnoodoo – Food Standards Agency Mr Raj Pal – Food Standards Agency Dr Ray Smith – Food Standards Agency Mrs Stephanie Cossom – Food Standards Agency
Assessors	Mr Tim Franck – Food Standards Agency Mr Simon Craig – Food Standards Agency, Scotland Dr Glenn Kennedy – Agri-Food & Biosciences Institute Mr Stephen Wyllie - Defra
Officials	Mr Gerard Smyth – Food Standards Agency Northern Ireland Mrs Janis McDonald, Veterinary Medicines Directorate
Speakers:	Professor Tim Wheeler, University of Reading/DFID Dr Jo Payne, Veterinary Laboratories Agency Mr Peter Bone, Telsol Ltd

1. The Chairman welcomed visitors to the ACAF meeting and reminded them that there would be an opportunity to ask questions at the close of the meeting.
2. The Chairman then introduced Professor Stephen Forsythe who had recently joined as the Committee's microbiologist. He invited Professor Forsythe

to provide a short background on his career history to date. Professor Forsythe informed the Committee that he is a Professor of Microbiology at Nottingham Trent University and his main research area is foodborne infections. He has been an invited participant and speaker at three FAO/WHO risk assessments on the microbiological safety of powdered infant formula. Professor Forsythe has also been a member on the European Food Safety Authority Additives and Food Contacts Materials Panel and an *ad hoc* member on the Qualified Presumption of Safety and Biological Hazards Panels.

3. The ACAF Chairman then welcomed Jeff Rooker Chairman of the Food Standards Agency who thanked the Committee Members for the advice they freely gave. He said that the Food Standards Agency was dependent on the advice provided by Scientific Advisory Committees.

4. Apologies for absence were received from Dr Dozie Azubike, Heather Headley, Jayne Griffiths (Food Standards Agency, Wales Assessor), and Vicki Reilly (Food Standards Agency, Wales).

Agenda Item 1 – Declaration of Members’ Interests

5. Members of the Committee were asked to declare any relevant changes to their entries in the Register of Members’ Interests, or any specific interest in items on the agenda. Professor Ian Givens declared that he had recently become a Member of the Scientific Council of the Bio-Competence Centre of Healthy Dairy Products. This is a private initiative established by a group of Estonian companies and universities. Nigel Halford confirmed he had been awarded a three year Special Professorship by the University of Nottingham, starting on 1 July 2010.

Agenda Item 2 – Draft Minutes of the Fiftieth Meeting (MIN/10/02)

6. Comments on the minutes of the meeting held on 3 June 2010 were:

- Page 4 paragraph 16 delete ‘a’ between ‘to’ and ‘visit’; and
- Page 5 paragraph 19 last bullet amend to ‘monitoring and measurement (weight) of packaging residues: ’

7. The minutes were adopted subject to the changes referred to above.

Agenda Item 3 – ‘Presentation on ‘Climate Change and its effects on animal forage and feed’ (item taken during afternoon session)

8. Professor Wheeler was asked to outline some of the challenges that climate change posed for future cultivation of crops and the impact this might have on the animal feed sector. He was asked by a member of the Committee to address the following areas that could be affected by climate change:

- forages grown in the UK;
- cereals/proteins that are used as animal feeds;
- feedingstuffs that are available for import into the UK;
- the safety of the feeds for animals and for the consumers of animal produced foods (e.g. increased risk of mycotoxins); and
- the nutritional composition of animal-derived foods.

9. Professor Wheeler referred to projected changes in temperature over a 200 year period (1900-2100) using different models. For example, if emissions of all greenhouse gases (GHG) stopped in 2000 there would still be a temperature increase for 20-30 years. Various scenarios demonstrate uncertainty in socio-economic conditions, and so it was therefore important to state the assumptions when giving projections of climate.

10. Professor Wheeler then spoke about predictions for rainfall, using twelve different climate models. When making statements about climate change, it is important to relate comments to a geographical area, as the predicted change in rainfall can differ depending on location. In some cases, different climate models do not agree in their predictions.

11. A series of projections for the UK annual mean rainfall and summer temperature were shown and discussed. The World Bank has carried out projections showing direct changes to crop productivity by 2050. For example, some areas (mainly in Europe and North America) might show an increase in crop productivity, whereas equatorial countries could be expected to have a decrease.

12. When projecting levels of crop productivity, projections must balance increased levels of carbon dioxide (CO₂) that promote plant growth with other factors such as change in rainfall and temperature. In Northern Europe, an increase in temperature and CO₂ may show a positive effect on crop productivity for the mid-term. Projects suggest that there would be a poleward shift in the geographic range that crops can be grown. UK farmers may adapt to this by using varieties that can take advantage of longer growing seasons. However, beyond 2050, projections for Northern Europe predict reduced productivity. Additionally, some

studies have shown that protein levels in crops might be reduced in feedingstuffs when grown at elevated CO₂ levels.

13. There are a number of biotic and abiotic factors effecting crop contamination with mycotoxins. Projections for increases in temperature give inverted U graphs for levels of fungal growth and aflatoxin contamination; the UK currently sit just below the maxima on these graphs so there is potential for an increase in contamination levels. However, these are complex responses; soil and cropping operation times and harvest practices will also affect contamination levels.

14. Professor Wheeler summarised his view that climate change would affect our sourcing of feed in the following ways:

- increased volatility of supply;
- changed geographical regions of supply;
- new opportunities for sourcing products; and
- threat to current centres of production.

15. It is expected that climate change will cause an increase in the frequency of extreme events such as high temperatures. This is expected to increase the volatility of supply for food and food crops.

16. Changes in atmospheric CO₂ levels will present both challenges and opportunities for agri-business and the livestock industry, and it is important to increase the accuracy of predictions in order to help take opportunities provided by such changes.

Discussion

17. Members of the Committee noted that there was a clear poleward shift of crop productivity. Professor Wheeler explained that the 3-4 degree change in the summer of 2003 caused a European-wide cereal production drop of 10%. This was currently a one in 200 year event, but these types of summer may become more common in the future.

18. Extreme events and their frequency will be a significant challenge for agriculture in the future. The Committee questioned to what extent plant breeding and technology like GM could compensate for crop production decreases. Professor Wheeler noted that there is likely to be a contribution from plant breeding, such as varieties able to tolerate warmer climates.

19. The Defra Assessor asked if some crops would become untenable in the UK in the future. Professor Wheeler said that projections did not show this in the medium-term, but the projections do not extend beyond 2100 as the confidence in the results is too low. The main concern is in regions that will get drier, such as areas around the Mediterranean, but there are also concerns about the quality of feedingstuffs produced, and any knock-on effects on cereal prices.

20. Following questions from the Committee about how the UK agricultural industry should plan for the future, Professor Wheeler commented that the UK cannot avoid some climate change, and technology should be developed to deal with these changes. As extreme events will become more common, it is important to be proactive and for the UK Government to take the lead.

21. A member of the Committee stated that it was important to use this information to guide UK farmers. Another member questioned if livestock could adapt to lower quality animal feeds. Additionally, the observation was made that it was already possible to see the effect of extreme events, as the 2010 summer drought in Russia has significantly influenced cereal prices.

22. The ACAF Secretary noted that the current sources of protein crops from North and South America could come under threat in the future as a result of climate change.

23. Members agreed that this topic would remain on the Committee's forward work plan.

Agenda Item 4 - Copper supplementation in feed for cattle

24. Dr Payne of the Veterinary Laboratories Agency (VLA) stated that ACAF Paper 10/13 and the presentation on this issue had been co-written with members of the mineral industry, Peter Bone (Telsol Ltd) and John Twigg (Frank Wright Trouw). The purpose of the presentation was to inform the Committee of concerns of what appears to be excessive supplementation of copper in the diet of dairy cows and seek its agreement on the preparation of a Code of Practice for the industry, which could be further developed for farmers and vets.

25. Dr Payne pointed out that copper is an essential trace element and most animal forages were low in copper. Copper deficiency has been diagnosed frequently by VLA in beef suckler cattle and occurs when a forage based diet does not meet requirements or when antagonists such as molybdenum, iron and sulphur reduce bioavailability. However, Dr Payne stated that she believed that a modern dairy cow will never receive insufficient copper. Copper is often supplemented to prevent infertility, but infertility can be caused by other factors including:

- poor oestrus detection;
- technical, e.g. incorrect time of service;
- inadequate nutrition, e.g. energy deficit;
- infectious disease;
- genetic selection; and/or
- molybdenumosis.

26. Dr Payne said that copper allowance in diets is always over generous. Diets are supplemented to provide sufficient copper for maintenance, production and during pregnancy. Additional copper also overcomes the effects of copper antagonists.

27. It was explained that Defra had investigated copper toxicity in detail and it was considered that causes of copper toxicity had not changed much in the last decade. Excessive supplementation appears to be the main cause of concern in terms of copper toxicity.

28. Peter Bone cited an example of copper toxicity where a farmer had over-supplemented his cattle as a result of miscommunication of the effects of over-supplementation. He accepted that farmers are responsible for the safety of their animals, but suppliers of copper products and feeds should also be aware of the risks of over supplementation. Dr Payne then referred to a study on molybdenumosis carried out by the VLA between 1999-2003. The study had found that there were no problems with copper antagonists in the soil in most farms. She believed that too many farmers over supplement copper because they think they have an antagonist problem where one does not exist. Dr Payne therefore suggested that farmers adopt good supplementation practice by adopting the following measures:

- assessing the need for supplementation;
- ensuring supplementation is carried out in line with the animals' requirements;
- considering all possible sources of copper in the animals' diet; and
- monitoring copper supplementation regularly

29. The Committee was therefore asked:

- to agree core procedures for the prevention of over copper supplementation; and
- for further advice as to how responsible supplementation could be undertaken.

30. Mr Bone confirmed that the feed industry did not want to decrease the maximum permitted level of copper of 35 mg/kg in complete feeds, rather there was a need to align supplementation with requirements of cattle (18 mg/kg).

Discussion

31. A Member of the Committee asked whether there was any subsequent impact on the food products (meat and milk) from animals suffering from copper toxicity. Dr Payne noted that the Food Standards Agency had raised concerns about products entering the food chain that had been produced from cows that had been given excessive copper. It was also noted that copper levels in livers were not routinely tested, leaving a degree of uncertainty about the extent of the problem. Another Member asked how food safety incidents were investigated and in what form was copper added to animal diets. Dr Payne confirmed that copper was added to diets in many forms, but mainly in the form of inorganic compounds (e.g. copper sulphate). She explained that VLA has monitored copper levels in livers; some of these livers showed very high copper levels, but she reminded the Committee that these were not random samples. In food safety incidents, the VLA informs the Agency when copper liver levels are higher than 500 ppm wet weight and the Agency then instructs the VLA to carry out an on farm incident investigation. Dr Payne noted that liver copper is released into the bloodstream prior to death, so in many cases of copper toxicity the liver concentration will not exceed 500 ppm wet weight and will not trigger a food safety incident.

32. Another member of the Committee said that copper deficiency was recognised and appreciated in the farming community. He recalled he had attended a conference at the VLA in 2004/05 on the same issue; however, there did not seem to have been any progress made in the intervening period. He then stated that there are differing views on the definition of infertility, and care was needed when drawing conclusions. However, there has been significant genetic change in dairy cattle since the Agriculture Food Council developed standard nutritional requirements for cows, meaning that copper requirements may now be different from the position in the past, and that such issues had not been covered in any detail in VLA paper. It was suggested that it would be useful if the VLA could liaise with the Forage Analysis Group on this issue.

33. The Committee agreed that the scale of the issue was unknown because the VLA only analyses a relatively small proportion of results. One Member of the Committee asked for information on the current estimated copper content in the diet of a typical dairy cow. He also noted that cows' consumption of feed had increased compared to five years ago. Consequently, copper intake had also increased. It was suggested that the use of a recommended daily allowance (RDA)

approach would be more appropriate rather than attempting to reduce dietary concentrations.

34. Another member of the Committee pointed to the range of sources of copper that could be introduced into diets. Dr Payne said that there was not a good mechanism in place to work out total dietary input of copper. From the visits carried out by the VLA, it was obvious that farmers frequently did not consider total copper in the diet from all sources.

35. One member of the Committee pointed out that the Veterinary Residues Committee (VRC) took samples of milk and meat as part of its food survey and suggested that the VRC could be asked to look at copper in samples. However, the Northern Ireland assessor confirmed that only heavy metals (e.g. mercury, cadmium and lead) which had maximum permitted limits were currently analysed by the VRC.

36. The Committee agreed that before it could provide advice on this issue, it required more evidence including:

- more information on how much copper is being fed;
- information confirming the optimum intake level;
- information on the size of the problem; and
- more information on the potential human copper consumption from drinking milk, including the potential of transfer of copper from milk into the human diet.

37. The ACAF Secretary noting the Committee's lengthy discussion on this issue, including the potential of possibly working with other Committees, suggested that other Government Departments would have an interest in this subject. He agreed to pursue this topic with other relevant interested parties. Additionally, in liaison with the VLA, the Committee should also pursue production of advice in the form of either a code of practice or leaflet. He agreed to provide an update at the Committee's December 2010 meeting, including whether the issue was restricted to the UK or whether it was a global problem.

Action: Secretariat

Agenda Item 5 – Forward Work Programme Review (including Horizon Scanning)

38. The Chairman reminded the Committee that it had last considered its Forward Work Plan at its meeting in September 2009. He asked Miss Jumnoodoo to introduce ACAF paper 10/14.

39. Miss Jumnoodoo informed the Committee that two new items of work had been proposed to be added to the work plan. The first item had been proposed by a member of the Committee and involved a pilot project being run in abattoirs in Wales involving markers being introduced into feed to identify the presence of *E. coli*. The Committee agreed that they required further information on this before agreeing to the inclusion of this item on the work plan.

Action: Secretariat

40. The second item was sustainability. This item was proposed by the Secretariat, which intends to provide a scoping paper for consideration at the Committee's December 2010 meeting. It was proposed that, during 2011, the Committee will receive presentations from a range of experts in sustainability to help explore this issue, with a view to discussion of a position paper at the Committee's December 2011 meeting. The ACAF Secretary agreed to contact stakeholders to explore and determine relevant sustainability issues for consideration and discussion by ACAF. The ACAF Chairman agreed that a scoping paper should be prepared for the December 2010 meeting which outlined key areas for ACAF's consideration.

Action: Secretariat

41. The Committee then agreed that the following items on the current work plan could be amalgamated:

- primary production and changing demands to be combined with the manipulation of animal feed to enhance the nutritional value of food;
- review of TSE controls and consideration of future risks to animal feed (recent EU reports mention removing some of the TSE controls to improve animal feed supply) to be combined with the feed/food safety implications of meat and bone meal and changes to Animal By-Products rules;
- the Committee to receive regular updates on EU developments as they affect animal feedingstuffs and to advise/comment on UK negotiating lines to be combined with EC proposal on the Marketing and Use of Feed and EC Feed Hygiene Regulation (1831/2003) and related issues;
- climate change impact on feed production to be combined with the global demand for livestock and prices for primary production;
- Under the broad heading - European Food Safety Authority (EFSA) work in relation to animal feed- discussions on future EFSA Opinions on

additives and contaminants in animal feed to be combined with herbal additives; and

- review of feed additives under EC Regulation 1831/2005 to be combined with the use of prebiotics and probiotics in animal feed and the effect on animal health, particularly the use of probiotics to reduce the prevalence of coccidiosis and histomoniasis and the Scientific Advisory Committee on Nutrition's (SACN) Report on Vitamin A. Additionally, other vitamins and nutritional additives to be kept under scrutiny.

42. The Defra assessor volunteered to arrange for the Committee to receive a presentation on aquaculture from policy colleagues at a future meeting. The ACAF Secretary suggested that the presentation should have input from the Veterinary Medicines Directorate (VMD), as the VMD's Animal Medicines Inspectorate had responsibility for inspection of fish farms.

Action: Defra Assessor

43. Finally, the Committee agreed that the following items could be deleted from the current forward work plan:

- non-feed use of additives (boluses, additives in water, etc), including legal categorisation;
- animal welfare implications arising out of the use of certain feeds or feed management;
- proposals for R&D and surveillance projects as the need is identified;
- herbal additives; and
- Commission proposals to establish maximum limits for coccidiostats in non target feed. To review the limits, consider impact on food and the consumer as well as current residue testing programmes for home produced and imported foods.

44. The Secretariat agreed to amend and circulate a revised Forward Work Plan for the Committee to agree and finalise this before the December 2010 meeting.

Action: Secretariat

Agenda Item 6 – Update on GACS Issues

45. The next GACS open meeting is scheduled to take place on 19 October 2010. Items for likely discussions include:

- a discussion on science in the SACs, including a presentation on the Food Issues Survey from the acting Chair of the Social Science Research Committee;
- a brief update from the COT Chair on any follow-up activities in relation to the COT workshop on uncertainty and variability in risk assessment (including any examples of dealing with uncertainty provided by SACs);
- a report from the Working Group that is preparing a response to the Soil Association and Organic Trade Board regarding concerns raised about the Agency-funded systematic review of nutrient content of organic and non-organic foods;
- a report from the Working Group on risk assessment and risk management;
- a report from the Working Group considering the issues in relation to use of data and funding from other sources, such as industry and NGOs; and
- a report from the Agency's Chief Scientist.

46. The ACAF Secretary said that it was important to have regular feedback from the meetings as GACS was the umbrella Committee that helped co-ordinate SACs' work on cross-cutting issues. He added that it would be useful to have feedback on GACSs' discussion on the division between risk management and risk assessment in order to stimulate a future ACAF discussion on this topic during 2011.

Discussion

47. A Member asked whether the emphasis of the Agency Board had changed since the formation of GACS. The ACAF Chairman said that the Scientific Advisory Committee's often discussed risk management, although generally they are only expected to discuss and advise on risk assessment issues. The ACAF Secretary added that it was incumbent on the Secretariat to ensure that the Committee did not stray into areas not within its remit. The Committee could provide suggestions to assist in risk management solutions, but it was for the Agency and Ministers to make the necessary policy.

48. Another Member enquired if the Scientific Advisory Committee on Nutrition would continue to be represented on GACS given the migration of nutrition policy from the Agency to the Department of Health (DH) in England. There was still some uncertainty about SACN's status on the GACS and this would be discussed at the GACS meeting. It will be important for GACS to maintain contact with SACN to facilitate collaboration on cross-cutting food

safety and nutrition issues, and the FSA is exploring administrative options with DH.

Agenda Item 7 – GM issues

49. The ACAF Chairman noted that the GM sub-group had little to report on its activities between ACAF meetings. Therefore, the Chairman of the sub-group agreed that activities will not be reported at every meeting, but as the need arises. On this occasion, it was confirmed that there was nothing to report from the GM subgroup.

50. The ACAF Secretary gave an update on recent GM activities in Europe. He said that at the next Standing Committee (SCoFCAH) on GM issues on 24 September a vote for cotton variety GHB 614 would be taken.

51. The ACAF Secretary stated that the technical solution to low level presence of GM in material was currently under consultation with the view to being presented to Member States in October or November 2010.

52. The ACAF Secretary added that the Brazilian National Technical Biosafety Committee had recently approved Monsanto's Bt Roundup Ready 2 Yield soyabean for planting in Brazil. The company will commercialise this variety in Brazil following completion of global approvals in key export markets.

53. The Committee was informed that negotiations had commenced on a Commission proposal to allow Member States to restrict or prohibit the cultivation of GMOs in their territory. The ACAF Secretary noted that Defra took the lead for this work.

54. The ACAF Secretary reported that there had been five authorisations and one re-authorisation of GM maize varieties in the EU since the June 2010 ACAF meeting,. These were published in the Official Journal of the European Union at the end of July 2010 and cover:

- Bt11 (re-authorisation);
- MON 89034 x NK603;
- Bt11 x GA21;
- 59122 x 1507 x NK603;
- MON 88017 x MON 810; and
- DAS 1507 x 59122.

55. The ACAF Secretary said that the Commission's review of GM food and feed legislation had not yet been published.

56. The ACAF Secretary finally said that the GM dialogue project, which aimed to cover consumer views of the risks and benefits of GM, will not continue in its current format. This project was being co-ordinated by the FSA following a request by the previous Government. The details of the new Government's policy on the use of GM technology in food and agriculture are still being determined.

Discussion

57. The ACAF Secretary stated that the cotton variety Bt11 was authorised for feed use. A member of the Committee asked if Monsanto's Bt Soybean Roundup Ready 2 Yield will be available for use in Europe. The ACAF Secretary replied that the variety would be subject to the usual EU authorisation and assessment process. This process usually takes between three to four years. Once cultivated in Brazil it would be for the company to decide if it wants to submit an authorisation request to the European Commission.

Agenda Item 8 – Matters arising from the minutes of previous meetings.

Guidance on minimisation of packaging material in animal feeds

58. The ACAF Secretary reminded Members that this issue arose following a Mission to the UK in 2009 by the European Commission's Food and Veterinary Office. He noted that industry was keen to reduce the presence of packaging material in animal feeds produced from recycled human food. The recycled food was not waste, but was usually merely out of specification, under/overweight, misshapen or broken and would probably end up in landfill if not recycled into animal feed. The views of the Committee had been sought at previous meetings and, as advised the June 2010 meeting, the ACAF Secretary had written to the European Commission with the Committee's recommendations. A copy of the letter had also been sent to EFSA.

Agenda Item 9 - Any other business

59. The ACAF Secretary noted that the Codex Alimentarius Commission meeting (held in July 2010), agreed to the re-establishment of the Codex Task Force on Animal Feed. The Task Force had been dormant for about 5 years, but had now been given the following two working areas to consider:

- feed safety assessment guidance; and

- development of a global list of feed hazards.

60. The ACAF Secretary said that he was aware that Members had some experience in Codex work and he was keen to have an independent Government view on the way forward; therefore, any advice the Committee could provide would be welcomed. The ACAF Secretary also noted that preparatory meetings for the Task Force would commence early in 2011.

Discussion

61. Following a question from a member of the Committee the ACAF Secretary confirmed that the Task Force would be hosted and chaired by Switzerland, with Panama acting as co-host. He agreed to provide a further update at a future meeting.

Action: Secretariat

Date of the next meeting

62. The ACAF Chairman confirmed that the Committee's next meeting would be held on 15 December 2010 in Aviation House.

Information Papers

63. The ACAF Chairman drew the Committee's attention to the following information papers:

- EU Developments (ACAF/10/15); and
- Update on the work of other advisory committees (ACAF/10/16).

ACAF Secretariat
December 2010

Question and Answer Session

Rick Pendrous (Editor, Food Manufacture) – asked if the Committee saw any reason if Category 2 poultry animal by-products should not be approved for use by the animal fish and food sector?

Mr Pendrous was referred to the Spongiform Encephalopathy Advisory Committee (SEAC) whose remit covered this subject.