

MINUTES OF THE FORTY NINTH MEETING OF ACAF HELD ON 3 MARCH 2010

Present:

Chairman Dr Ian Brown

Members Dr Dozie Azubike
 Dr Paul Brantom
 Mr Tim Brigstocke
 Dr Bruce Cottrill
 Mr Barrie Fleming
 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

Assessors Mr Tim Franck – Food Standards Agency
 Mr Stephen Wyllie – Defra
 Dr Glenn Kennedy – Agri-Food & Biosciences Institute, Northern
 Ireland
 Mr Simon Craig – Food Standards Agency, Scotland

Officials Mr Ron Cheesman – Food Standards Agency
 Dr Ray Smith – Food Standards Agency
 Mrs Vicki Reilly – Food Standards Agency, Wales
 Mr Stephen Nixon – Department of Agriculture, Rural Development,
 Northern Ireland
 Mrs Janis McDonald, Veterinary Medicines Directorate

Speakers: Professor Chris Reynolds, University of Reading
 Mr Stephen Woodgate, Foodchain & Biomass Renewables
 Association

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. Apologies for absence were received from Mrs Heather Headley and Ms Jayne Griffiths (Welsh Assessor).

Agenda Item 1 – Declaration of Members’ Interests

3. 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. Barrie Fleming declared that he had recently become a consultant for Aviagen. Richard Scales confirmed that he is a lecturer on the Diploma in Consumer Affairs and Trading Standards within Trading Standards South East region.

Agenda Item 2 – Draft Minutes of the Forty Seventh Meeting (MIN/09/03)

4. The minutes were adopted subject to the following changes:
 - add Stephen Wyllie to the list of apologies;
 - third sentence in paragraph 25 should read ‘Miss Teladia explained that not all mycotoxins were carcinogenic and ...’; and
 - third sentence, remove ‘should’ between ‘as’ and ‘surplus food’.

Agenda Item 3 – ‘Animals, their feeds and the environment: the inescapable consequence of food production’ - presentation from Professor Chris Reynolds (University of Reading)

5. Professor Reynolds stated that future increases in demand for food, water and energy will have major socio-economic impacts and increase the need for more efficient food production. Regardless of the cause, climate change will add to the challenge of meeting demands for food and resources. In this regard, there are increasing concerns about the environmental impact of animal agriculture, including the contributions of milk and meat production to global greenhouse gas emissions. Professor Reynolds said that some recent reports in the popular press have vilified animal agriculture as having numerous negative effects such as emissions of methane, nitrogen (as nitrates, nitrous oxide, and ammonia), and phosphorus (in manure), effects on water quality and competition for water.
6. Depending on diet composition, 3 to 12 % of the dietary energy consumed by ruminants is lost as methane, which can represent up to 30 MJ/d¹ in lactating dairy cattle. As methane has from 20 to 25 times the global warming potential of carbon dioxide, this is a concern for the carbon footprint of ruminant meat and milk production. Professor Reynolds suggested that agriculture accounts for 43% of UK methane emissions. As emissions from other sources such as landfills have been declining at a greater rate than the decline in emissions from agriculture, an increasing proportion of total UK methane emission is attributable to agriculture. Methane emissions from ruminants are related to the amount of feed they consume. However, diet composition also has an

¹ MJ/d – mega joules per day

impact, as higher fibre diets tend to result in more methane emission per unit of feed dry matter consumed. Numerous approaches have been suggested for reducing the amount of methane produced per unit of feed consumed or milk produced. A variety of feed supplements have shown potential as mitigators of methane emission. In this regard supplemental fats are particularly effective, and especially oils with longer chain polyunsaturated fatty acids. Other approaches include organic acids and plant bioactive compounds, but supplements shown to be effective *in vitro* or in sheep often have had little effect in lactating dairy cattle, perhaps due to differences in rumen dynamics.

7. The efficiency of dietary nitrogen utilization for milk and meat protein production in ruminants is typically low, averaging about 25% for lactating dairy cows. Professor Reynolds noted that nitrogen in animal manures goes into the environment in a number of forms, including nitrous oxide that has a greenhouse gas effect approximately 300 times higher than carbon dioxide. In the UK, agriculture now accounts for some two-thirds of estimated nitrous oxide emissions, in part because emissions from other sources have fallen at a greater rate. Nitrogenous compounds are converted to nitrous oxide by soil microbes, thus nitrogen excretion by grazing ruminants is a particular concern. Historically, protein has been overfed to lactating dairy cows for a number of reasons, and the efficiency of dietary nitrogen utilization increases as dietary nitrogen intake is reduced. There is now considerable pressure on the industry to reduce dietary nitrogen concentrations using more precise formulations of metabolisable amino acids to maintain milk protein levels.
8. Professor Reynolds acknowledged that about 50% of agriculture's emissions of phosphorus are attributable to animal manures. There are differences in the digestibility of various phosphorus sources fed to farm animals, and in this regard there is considerable interest in approaches to increase the digestion of phytate in non-ruminants to help reduce faecal phosphorus excretion. In dairy cows, the incremental efficiency of dietary phosphorus utilisation averages about 40%. As with nitrogen, phosphorus has typically been overfed relative to requirements in dairy cattle, and thus one of the most effective approaches for reducing emissions in manure is to reduce feed phosphorus at levels that are closer to an animal's requirements.
9. In conclusion, Professor Reynolds acknowledged that there are numerous dietary approaches that show promise for reducing the amount of methane produced per unit of feed consumed by ruminants, but reductions observed for sheep are typically not realised in lactating dairy cows. For nitrogen the most effective way to reduce environmental losses is to feed less protein to farm animals, but 'how low we can go' without economic impact needs to be determined. For ruminants the benefits of amino acids and proteins protected from degradation in the rumen may be greater at lower dietary protein concentrations. For phosphorus, as for nitrogen, precision feeding of available phosphorus sources will reduce excretion in manure, as will the addition of phytase to the feed.

10. Multidisciplinary, 'systems' approaches will be essential to controlling environmental pollution from agriculture. As solutions to one environmental pollutant may impact negatively on another pollutant, the mitigation options for individual emissions should not be considered in isolation.

Discussion

11. Following a question from the ACAF Chairman, Professor Reynolds confirmed that the figures he had quoted in relation to water usage were correct. One Member asked whether there were any alternatives to soya bean as a source of protein. Professor Reynolds said ruminants were good at utilising different sources of protein; soya beans were a very good source for dairy cows and ruminants in general. Another Member asked, in relation to nitrates and ammonia, whether anyone had considered nitrogen cycles and actions that can be taken to mitigate the environmental impact. The Member also stated that the costs of cleaning up water to meet the requirements of the EU framework directive were expensive. Professor Reynolds said fertiliser use was a major source of phosphorus and nitrate/nitrous oxide in the environment.
12. The Defra assessor said that anaerobic digestion was a good way of capturing methane emissions. He asked whether this was a positive technology to mitigate other emissions. Professor Reynolds agreed that anaerobic digestion could have a positive impact on methane emissions but noted that growing maize or grass to maximise the efficiency of anaerobic digestion units may not be a sensible use of resources. A Member noted that the demand for livestock products will increase. Therefore, the Committee would need to monitor changes.
13. The Chairman concluded that the Committee continued to have an interest in this subject and therefore the work area would remain in the Committee's forward work plan.

Agenda Item 4 – Presentation on the work of the Foodchain & Biomass Renewables Association (Fabra) – Presentation from Stephen Woodgate

14. The Committee received a presentation from Mr Stephen Woodgate, Chief Executive of the Foodchain and Biomass Renewables Association (Fabra) on the work of this new association which was established in 2009. Fabra is an industry association that represents businesses in the environmentally sustainable foodchain and biomass recycling sectors. Fabra members share responsibility for the majority of the UK's meat by-product processing capacity, providing essential food and environmental services whilst producing a variety of biofuels and renewable energy sources.
15. Mr Woodgate reported that the main processes operated by Fabra members are validated animal by-product processes such as 'rendering' and 'anaerobic digestion'. The former produces products, which may be used directly in the food chain. The latter process, produces fertilisers which may be indirectly

linked to food production. Additionally, Fabra members offer collection and safe processing of food industry by-products, such as ‘used cooking oil’ some of which, after processing and refining, may be suitable for use in animal feed. Mr Woodgate also stated that Fabra members operate in niche markets, such as in the production of ‘blood products’ for use in animal feeds (including aquaculture) and for use in pet foods.

16. Mr Woodgate concluded that Fabra would be willing and able to assist the Committee in two ways. Firstly, by providing information on direct inputs into animal feeds such as glycerol produced during the production of biodiesel. Secondly, by providing indirect inputs, e.g. the use of minerals produced in biofuel manufacture as soil dressings or fertilisers.

Discussion

17. One Member noted that in relation to animal by-products only those produced from Category 3 material were permissible to be used in animal feed and asked about the approval of use of these products. Mr Woodgate explained that the European Food Safety Authority provided risk assessments and the Standing Committee on the Foodchain and Animal Health (SCoFAH) approves products according to risk and validated control tools being in place.
18. The Defra assessor said that until recently the vast majority of the rendering industry was associated with the UK Renderer’s Association (UKRA), but now membership appeared to be divided between the UKRA and FABRA. He asked Mr Woodgate if this was, in essence, a difference in philosophy of approach between the two organisations. Mr Woodgate explained that Fabra was established in order to interface more effectively with the livestock and foodchain sectors and although its core business was rendering, members were keen to extend into other sectors, in particular the renewable energy sector.
19. The Defra Assessor asked Mr Woodgate if the principal sphere of operation of FABRA members remained rendering and disposal of rendered product, and whether Fabra members had the bulk of UK biogas and composting capacity. Mr Woodgate confirmed that some companies in his association were investing in anaerobic digestion units because of energy efficiency gains. There were many drivers in this area and that in the future there will be improvements in both biogas and rendering techniques.
20. One Member suggested that with the demand for the re-introduction of meat and bonemeal to be used in animal feeds for certain species, and the momentum towards anaerobic digestion and pressure to reduce carbon footprints, there will be a time when renderers will not require the food chain to utilise animal by-products. Mr Woodgate commented that Fabra members wished to remain in both the energy and food chain sectors. He confirmed that there was currently a high demand from the aquaculture industry for protein products, as there was demand to replace some of the fishmeal used in this sector. Mr Nixon (DARD) asked whether Fabra had undertaken any studies on consumer perceptions on the use of co-products, particularly animal protein

sources in animal feeds. Mr Woodgate said Fabra had not yet undertaken any such studies, but it will consider this important area in the future.

21. The Committee agreed that as a result of the presentation, it was appropriate for it to update its biofuels position paper which was published in April 2008. One Member suggested that as part of the update it would be useful to have some data on the use of co-products. At the Committee's request, Mr Woodgate agreed to assist in this update exercise.

Action: Mr Woodgate

Agenda Item 5 – Update on GACS Issues

22. The Chairman informed Members that the next General Advisory Committee on Science (GACS) will be held on 4 March 2010. Items on the agenda include a report from the Agency's Chief Scientist on Science in the Agency. Discussions will cover the Science and Evidence Strategy, that was launched at the 'FSA 10' conference² and cross-cutting science and partnerships. There will also be discussions on Science in Scientific Advisory Committees, a report from the Risk Assessment/Risk Management Working Group; assessing the performance of SACs, this item will also include discussion on the quinquennial review of ACAF that took place in the latter part of 2009; and horizon scanning including discussion of actions following the GACS Horizon Scanning Workshop held in June 2009.
23. The Chairman agreed to provide feedback on discussions at GACS.

Action: ACAF Chairman

Agenda Item 6 – Report on the outcome of the Quinquennial Review

24. The ACAF Secretary noted that the quinquennial review undertaken in the latter part of 2009 had been thorough. There is a continuing need for ACAF as it adds value to the FSA, UK agriculture departments and stakeholders. It is important that ACAF maximises the value that it provides and that it continues to demonstrate evidence of its value. The report of the review had highlighted that ACAF had good practices in place including:
- the Chair and Secretariat routinely confirm at meetings that issues to be considered by ACAF are within its remit;
 - holding meetings in open session;
 - ACAF's meetings are an example of good practice in terms of well run meetings which, together with the agenda, papers and minutes of each

² A conference that was held on 24 February 2010 aimed at helping the Food Standards Agency to formulate and implement its strategy for the next five years.

meeting available on ACAF's website, provide a high level of openness and transparency;

- each meeting providing updates on the work of other advisory committees in an information paper;
- a Secretariat held in high regard by members and stakeholders;
- the recruitment procedure of members being in line with the FSA's requirements for the appointment of members to its scientific committees;
- thorough and effective induction of new members; and
- publication of annual work programme.

25. Additionally, the Committee routinely discusses topical issues and works well as a team. Consistent and appropriate scientific support is provided by the FSA's Animal Feed Branch and it is important for that level of support to be continued

26. There were 17 recommendations that the Committee was asked to consider and comment upon. It was agreed that these comments would aid the Chairman during discussions on the quinquennial review at the GACS meeting to be held on 4 March 2010. The Committee's agreed comments are listed below:

i. **It is important that ACAF maximises the value that it contributes and continues to provide evidence of its value.**

The Committee suggested that Recommendations 1, 6 and 9 are related. It agreed to take this recommendation forward and this will be done via annual reports and other opportunities. When the Committee commences work on a topic it will identify and agree desired outcomes.

ii. **The role of ACAF within its overall remit has evolved over time and clarification of the current role at the next ACAF meeting would be beneficial.**

The terms of reference of the Committee are determined by Ministers and the Agency. The Committee considered that these were sufficiently wide-ranging and did not require amendment given the breadth of issues on which the Committee is required to provide advice. The Committee and Secretariat will identify at the start of the year key priorities it wishes to take forward. This will be reflected in the Committee's Forward Work Plan.

iii. **The exact remit with regard to animal health and welfare should be clarified and formal action taken and recorded in the minutes of the meetings with regard to appropriate liaison with Defra for animal welfare issues.**

The Committee contends that its current remit works well. It recognises that although its main focus is on consumer safety, issues are often likely to have an animal health/welfare element.

iv. **The process for determining the work programme should be improved to ensure that the potential value contributed by ACAF is maximised.**

The Committee notes this recommendation but does not think it requires specific action.

- v. **Work should be scheduled for each year so as to avoid ‘light’ agendas at meetings, with the number of meetings reduced if the required work does not warrant four meetings a year.**

The Committee notes this recommendation and will take this into account when planning future work.

- vi. **Completed work should be summarised in terms of outcomes and impact achieved.**

See Recommendation 1 above.

- vii. **The Chair should continue to ensure that the Members of the Committee are aware that they can and should request the commissioning of data from the FSA if the Committee’s view is that it is required in order for them to provide advice.**

The Committee seeks and receives data from the FSA in order for it to provide advice. It is not necessarily the Committee’s role to commission research, but to recommend areas for further research work to be carried out. The Committee will seek clarification from the GACS on the commissioning of research.

- viii. **It is recommended that the Committee takes greater steps to show evidence of scientific rigour by using the FSA’s Science Checklist more explicitly and also routinely considering whether peer reviews are appropriate for work on which the Committee’s decisions are based.**

The Committee will continue to act on this point.

- ix. **A brief summary of the Committee’s outcomes and impact achieved would provide an appropriate summary of the Committee’s activities and achievements for the Board.**

See Recommendation 1 above.

- x. **The Committee should be more explicit in stating the level and type of uncertainty associated with its advice.**

The Committee will continue to act on this point.

- xi. **The FSA needs to ensure that the risk management advice it asks ACAF for does not go beyond advice on risk management options put to them by the Secretariat.**

The Committee will seek clarification from GACS on the role of the Committee in providing advice on risk management.

- xii. **It is recommended that ACAF should work with other committees as appropriate and take proactive steps to consider when that might be appropriate.**

The Committee will continue to act on this point.

- xiii. **The FSA should have internal procedures in place to ensure that any differences of opinion between its own policy units with regard to risk management are handled appropriately.**

This is a generic issue on which the FSA/GACS needs to provide advice.

- xiv. **The FSA should consider an alternative approach to the assessment of ACAF members and introduce an appropriate method of assessing the performance of the Chair.**

This is a generic issue for the GACS Secretariat to liaise with all SACs.

- xv. **There is some uncertainty with regard to the exact roles and responsibilities of officials and assessors on the Committee and it would be beneficial to confirm those at ACAF's next meeting.**

The Chair, Members, Assessors and the Secretariat are all fully aware of their roles. These were clarified at the Committee's meeting on 3 March 2010.

- xvi. **The out-of-London meetings are valued by members and stakeholders. It is recommended however that the FSA continues to monitor and take a view on the value of those meetings compared with the cost of running them and reassesses that approach at regular intervals.**

The Committee considers that, as a UK-wide body, at least one out-of-London meeting should take place each year. This helps to engage a wide range of stakeholders and demonstrates openness and transparency which are the FSA core values. Budgetary considerations will be observed.

- xvii. **ACAF should consider whether it may be appropriate to set up additional subgroups to address specific issues in the future, particularly if only one or two members have specific expertise directly relevant to the issue to be addressed.**

Where circumstances arise, the Committee will endeavour to set up sub-groups, with/or without other SACs.

Agenda Item 7 – FVO Mission to the UK 2009 on Feed Law and Feed Hygiene – Recommendation on packaging materials in feedingstuffs – oral update

27. Mr Franck reminded Members that EU feed legislation prohibits the presence of packaging from the food and agriculture industry in animal feeds. He advised that a number of operators in the UK process surplus human food (e.g. out of specification crisps and bread) into animal feed use. During the Food and Veterinary Office's (FVO) mission to the UK on animal feed in June 2009, it visited a processor of surplus human feed and found that the zero tolerance for packaging in feed was not being achieved. This resulted in a recommendation from the FVO that the UK takes steps to ensure compliance with the legislation.

28. Mr Franck noted that there were both economic and environmental benefits resulting from the processing of surplus human food for feed. However, it is

acknowledged that it was difficult for businesses to comply with the stringent legislative requirements and noted that there had been discussions at the Commission's Standing Committee on the Food Chain and Animal Health (Animal Nutrition Section) on possible changes to the legislation. At its meeting in December 2009, ACAF discussed the possibility of it drawing up a guide to best practice to help businesses minimise the presence of packaging in feed.

29. Following that meeting, the Agency's Animal Feed Branch had given consideration to the issues so that a discussion paper could be prepared for ACAF's June 2010 meeting. Mr Franck sought the Committee's agreement that the paper should include the following items:

- types of packaging material that can/cannot remain in processed feed;
- types of food products that are typically processed;
- arrangements and conditions that can be put in place at premises of food business operators prior to despatch of material for feed use;
- arrangements at intake by feed processors;
- guidance on mechanical processes to remove packaging from material;
- application of HACCP;
- monitoring and measurement of packaging material in feed; and
- end use of material.

30. Mr Franck said that information on processes and practices can be obtained from feed assurance schemes, industry organisations and individual feed companies. The Animal Feed Branch had gathered some of this information and the Agricultural Industries Confederation representing feed compounders was surveying members that process food materials for feed use for further information on practices.

Discussion

31. Members agreed that the items suggested by Mr Franck should be included in the discussion paper. To facilitate discussion and to aid the Committee's understanding of the issues, the ACAF Secretary confirmed that a visit to a food recycle plant would be arranged prior to the Committee's June meeting. Mr Nixon asked whether the scope of the guidance to be produced could be extended to cover other issues such as TSE, contaminants, but in response the ACAF Secretary noted that the priority for the guidance document was to address the issue of packaging material. The Defra assessor suggested that clear instructions and guidance on where to source material was required and Mr Franck could liaise with his colleague Mr Leach on matters relating to animal by-products.

32. The Committee agreed to the suggestion of a visit³ and to the proposed paper for discussion at its meeting in June 2010.

³ A visit was arranged and took place on 5 May 2010.

Agenda Item 8 – GM Issues

33. Dr Brantom did not have anything to report on this occasion.
34. The ACAF Secretary gave an update on recent GM activities in Europe. He stated that the next meeting of the Standing Committee (SCoFCAH) on GM issues was scheduled for 8 and 9 March 2010.
35. The following GM maize varieties had been approved for feed and food use on 9 and 10 February 2010:
- 59122 x 1507 x NK 603;
 - 1507 x 59122; and
 - MON 88017 x MON 810.
36. The ACAF Secretary reported that on 2 March 2010, the Commission adopted two decisions concerning the genetically modified Amflora potato: the first authorises the cultivation of Amflora in the EU for industrial use, and the second relates to the use of Amflora's starch by-products as feed. On 2 March 2010 the European Commission adopted three decisions on the placing on the market of the following three GM maize products for food and feed use, but not for cultivation:
- MON863xMON810;
 - MON863xNK603; and
 - MON863xMON810xNK603.
37. The three GM maize products received a positive opinion from EFSA and underwent the full authorisation procedure set out in EU legislation. As Member States failed to reach qualified majority decisions for these decisions in the Council, the dossiers were sent back to the Commission for decision.
38. In response to a request from a Member, the ACAF Secretary agreed to obtain details of the traits for each of the above GM varieties.

Action: ACAF Secretary

Agenda Item 9 – Matters Arising from the previous meetings*Review of EU Animal By-Products Controls*

39. At the Committee's December 2009 meeting, Mr Neil Leach (Defra) agreed to send Members a link that explained the Animal By-products legislation. The link was sent to Members on 7 January 2010.

Follow up to the GACS Horizon Scanning Workshop – follow up action by ACAF

40. At the Committee's December 2009 meeting, the ACAF Chairman asked the Secretariat to produce a paper which summarised the work the Committee could take forward, which could be presented to the General Advisory Committee on Science (GACS). A contribution towards the horizon scanning paper which will be presented to GACS at its meeting on 4 March 2010 was sent to the GACS Secretariat on 9 February 2010.

Update on mycotoxins issues

41. At the Committee's December 2009 meeting, Mr Edwin Snow agreed to provide the Committee with copies of a report by the Home Grown Cereals Authority (HGCA). On 7 January 2010 the Committee was sent a copy of the HGCA's report.

Agenda Item 10 - Any Other Business

42. No issues were raised under this agenda item.

Information Papers

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

- EC Developments (ACAF/10/03); and
- Update on the work of other Advisory Committees (ACAF/10/04).

Dates of future meetings

44. The Chairman confirmed that the Committee's next meeting would be held on 4 June 2010⁴ in the Hilton Hotel, York.

**ACAF Secretariat
May 2010**

⁴ Subsequently the date has been changed to 3 June 2010.