

## **FOOD STANDARDS AGENCY**

### **REPORT OF THE WORKSHOP ON RESEARCH AND SURVEYS TO INFORM CONSUMER CHOICE BETWEEN ORGANIC AND CONVENTIONALLY PRODUCED FOOD**

**Wednesday 6 November 2002**

#### **Welcome**

1. Professor Sir John Krebs, Chairman of the Food Standards Agency, opened the Workshop. He emphasised that, contrary to press reports, neither the Agency nor he personally was against organic food. Indeed, Sir John has studied biodiversity issues and personally advocates a greener approach to farming.
2. The aim of the Workshop was to put existing positions on organic food to one side and to concentrate on whether further research or survey work could yield more information on safety or nutrition to better underpin an evidence based approach to consumer information. It was emphasised that the workshop would inform the Agency's thinking on its research portfolio, but that no funding decisions would be made at the meeting.
3. Three key questions were posed to the workshop, as the basis for an open and constructive discussion:
  - What issues are of interest to consumers?
  - What is it practicable to study?
  - What are the study design options, their constraints and feasibility?
4. The Workshop programme is at Annex I to this report. The list of attendees is at Annex II and speakers' PowerPoint presentations are at Annex III.

#### **Session 1: Nutrition and the whole diet approach**

5. Professor Alan Jackson of the University of Southampton introduced the morning session on nutrition and the whole diet approach, which he was to chair. He emphasised that a mature society has to embrace a wide range of thought and opinion, and needs to understand the basis for opinions held. He reiterated the need for quality evidence to inform judgements.

#### ***Speaker 1: Simon Wright, The Organic Consultancy Title: FSA Organic Workshop: Setting the Scene***

6. Simon Wright was the first speaker. He set the scene by summarising what organic production standards involved, and the legislation underpinning them. He explained that many consumers would describe organic food as food produced without chemicals. However, organic farming systems are far

more complex. Organic farming is a sustainable system that seeks to avoid the routine use of man-made fertilisers, pesticides, growth regulators and livestock feed additives. Instead, the system relies on crop rotation, animal and plant manures, and some hand weeding and biological pest control. High levels of animal welfare are promoted and no genetically modified organisms are allowed. In relation to food manufacture, there is full separation from non-organic<sup>1</sup> food and full ingredient traceability.

7. Organic production has been underpinned by legislation since 1991. Certifying Bodies, approved by the UK Register of Organic Food Standards (UKROFS), inspect and certify all organic producers to standards that cover how organic food is grown, processed, packed, labelled and sold.

8. Consumers buy organic food for a range of different reasons, but the two that stand out are the perception that organic food tastes better and is better for you than non-organic food. Animal welfare is also important to some consumers. Environmental protection does not appear to be important to most consumers in the UK. This is contrasted to the situation in Denmark where 75% of organic consumers cite the environment and animal welfare as reasons for purchasing organic food.

9. Consumers who regularly purchase more than 5 organic items per week account for about 5% of customers at one major supermarket chain. Demographically they tend to be over 45, empty nesters, upmarket, concerned about food safety, health, fitness and the environment. Another group of customers who also regularly purchase organic food, but less so, tend to be motivated by concerns over particular foods, such as fresh produce, eggs or baby food. To continue to expand, the organic market needs more organic purchases per consumer, rather than more organic purchasers. This is because about 75% of consumers already buy some organic food.

10. The information supplied to consumers by most retailers, especially the major supermarkets, tends not to refer to the key consumer interests of taste and health. This is in part because the Advertising Standards Agency has policed such claims rigorously, but also because retailers selling both organic and non-organic food have to be careful not to undermine confidence in their non-organic products. Instead, information to consumers concentrates on environmental and animal welfare issues. There is therefore a gap between the key consumer expectations (organic food tastes better and is better for you) and the information provided to consumers by producers and major retailers (environmental benefits and animal welfare). This information gap could be where further research might be most usefully targeted.

***Speaker 2: Professor Sue Southon, Institute of Food Research  
Title: Organic and Conventional Food: The Broader Nutritional  
Perspective***

11. Professor Sue Southon covered what research might be useful to consumers from a nutritionist's point of view. She began by emphasising

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<sup>1</sup> Throughout this document 'non-organic' and 'conventional' are used interchangeably to denote food that has not been produced organically.

current nutritional problems. An abundance of high calorie food, combined with a decrease in physical activity, has led to an increasingly obese population. Obesity is strongly associated with serious chronic diseases such as type 2 diabetes, coronary heart disease, high blood pressure and osteoarthritis. The challenge is to reduce energy intake, but to keep up the level of micronutrients in the diet.

12. There is evidence to show that micronutrients obtained through the diet give more health benefits than the use of supplements. There is therefore a need to increase the intake of lower energy, micronutrient-rich food, such as fruits and vegetables. Although there has been some minor increase in fruit intake in recent years, the average intake per week in the UK is what should ideally be eaten every day. To encourage and facilitate increased consumption it is important to provide clear and concise information on all appropriate dietary strategies.

13. The level of nutrients in a food is not always a good guide to nutritional value. Professor Southon explained that the preparation and processing of fruit and vegetables can have very significant effects on the retention of micronutrients and their bioavailability. In some cases processing can significantly improve micronutrient bioavailability. A good example is the increased bioavailability of lycopene in puree tomatoes as compared to fresh ones. The influence of processing on the bioavailability of nutrients is far greater than any minor differences between individual samples.

14. In health terms the composition of the consumer is more important than the composition of food. In the UK, blood plasma selenium levels are decreasing. This is related to decreased levels of selenium in the soil leading to decreased levels of selenium in food, especially wheat. There are an increasing number of papers suggesting that selenium is protective against cancer, and it is certainly an essential trace mineral. It is not clear whether or not the decrease in blood plasma concentration matters, but precaution would suggest that selenium levels should be brought back up. Some countries (e.g. Finland) have started to add selenium to fertilisers in order to raise selenium levels in food plants. This approach is preferable to the use of dietary supplements because plants act as a buffer ensuring that levels of intake do not become too high.

15. Any surveys on the relative nutrient content of organic and conventional food should be on the food that is presented to the consumer, that is, market surveys<sup>2</sup>. Research involving paired field trials could be important to the farmer, but are much less relevant to consumers. However, it is important to note that market surveys are unlikely to show any consistency of nutrient content in either organic or conventional produce. Many factors influence the nutrient content of food plants and consumers cannot be promised a specific nutrient content for a particular fruit or vegetable, or for produce from a particular farming system.

16. Professor Southon ended her talk by emphasising that there are clear health benefits from a diet low in fat and energy and high in fruit and vegetables, regardless of their source. She stated that it is difficult enough to

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<sup>2</sup> Market surveys are surveys undertaken at the point of retail sale.

persuade consumers to eat a more healthy diet and it is not helpful to limit the range of fruits and vegetables from which they can choose.

**Speaker 3: Dr Andy Ness, University of Bristol**  
**Title: Epidemiological Approaches to Studying the Health Effects of Organic Foods**

17. In his presentation Dr Ness outlined the various epidemiological approaches that could be used to study the health effects of organic food. Throughout his talk he emphasised that the key challenge would be to decide on the appropriate scientific question to be answered. That is, we need to know what the health effects are that we are looking for. Is it a specific disease, a continuous trait, or overall health?

18. One problem in any food related epidemiological study is estimating what people eat. Various approaches are possible, including diet diaries (possibly the best approach), food frequency questionnaires, and various national food surveys. However, all of these methods are prone to inaccuracies. For instance, people tend to change their diets, or simply forget what they have eaten. The monitoring of biomarkers might also be a possibility, but this would depend on identifying suitable ones for study. (Dr Ness does not know of any at present that would be suitable for organic food.)

19. There are four possible epidemiological approaches, the appropriate one depending on the scientific question being posed. The approaches are (i) ecological or correlational, (ii) cross sectional, (iii) case control / cohort, (iv) clinical trials. Dr Ness then outlined and assessed each of these approaches in relation to their potential to be applied to organic food research.

20. Ecological studies involve studying populations rather than individuals, for example large cohorts might be compared in different countries. It has the advantage of heterogeneity of exposure, but any association is likely to be highly confounded. A relative lack of data on organic food consumption would pose a problem for this type of study.

21. Cross sectional studies describe the prevalence of exposures and outcomes and the cross sectional associations between them. Carrying out cross sectional surveys with high response rates requires considerable effort. For organic foods it might be possible to collect data on organic food consumption in existing survey programmes, such as the National Food Survey. This would allow the diets of people or households who eat organic food to be associated with the characteristics of the people / households.

22. Case control / cohort studies are observational, analytic approaches. Case control studies look back at past exposures. They are cheap and quick but prone to selection and information bias. They work best for rare diseases. Cohort studies start with a large population of people and then measure exposure and future outcomes. They take a long time, are expensive and can be significantly affected by people dropping out. The key problem with cohort studies is the role of confounding factors. For instance, a study may show that a high level of organic food intake leads to lower mortality. But what might be

happening, for example, is that people who eat a lot of organic food might also tend not to smoke, which in itself will lower mortality rates. There are some existing cohort studies that could be used to look at organic foods, as they already collect some data on organic food consumption. The use of supermarket loyalty cards as a basis for a new cohort could also be investigated, although supermarkets may be reluctant to reveal useful information.

23. Clinical trials are an interventional approach. A typical method involves the use of a randomised double blind controlled trial, where a population is randomly assigned to either a control group or a treatment group. This approach avoids confounding factors, but it can test only 1 or 2 hypotheses at a time. If it is not clear what intervention should be tested trials may fail to demonstrate potentially important beneficial or harmful effects. For instance the wrong dose might be used, the trial might involve the wrong time scale etc. A double blind design would be possible for a trial involving organic food, but it would be very expensive unless a short-term outcome was being looked for.

### ***Discussion***

24. Issues raised during the discussion included the following.

#### Research into organic systems

- Research could look at the relative levels of selenium, and possibly other soil quality measures, in organic and conventional soils.
- The concept of what is meant by “health” within the organic food system should be explored.
- There is some research being undertaken to devise methods to verify the authenticity of organic food. However, “organic” defines a production system, not the end product. The main authentication route at present is via inspection and paper checks.
- Research into the certification system was also proposed, in particular to look at whether a single certification body would be useful. However, it was also suggested that the term “organic” gives more assurance to consumers than the particular certification body, all of which have to certify to at least the legal minimum standard.

#### Epidemiological research

- Life expectancy has risen. However, the quality of life, especially in relation to remaining disease free in later years, is also important. This should be taken into account in framing any questions to be researched.
- Two thirds of all baby food sold is now organic. This might provide an opportunity for epidemiological research. However, there may already be problems for study design given the relatively low proportion of non-organic baby food.

- The possibility was raised of using sperm quality as a biomarker for the health benefits of organic food. However, while it was recognised that sperm and seminal fluid are very sensitive to environmental factors, including food, such a study would be open to confounding factors. Collection of samples would be a sensitive issue, especially in young populations such as that involved in the Avon Longitudinal Study of Parents and Children.
- There is anecdotal evidence to suggest that people converting to a mainly organic diet also tend to buy more fresh, primary products and prepare them in the home. A change to an organic diet might have health benefits as a result of promoting a more balanced diet, and not be related per se to the fact that the food is organic. This is both a potential confounding factor in any study and also something that could itself be worthy of study.
- Food based epidemiological trials would be very expensive and take a very long time. It would be difficult to get groups of people to change their diet for a trial. There is also a danger that the trial would not work, especially if the end points are very subtle. The standard method would involve using high-risk groups. There would also be problems where overall health effects were being looked for, rather than specific end points. The lack of data about metabolic rates would bring added difficulties.
- Genetic polymorphisms might provide a useful approach to investigate organic food. This aspect had not been covered in the session, but might be worthy of further consideration.

#### Food research and surveys (other than epidemiology)

- There is a perception that organic produce has increased shelf life and taste, especially after the farm has been converted for some years. At present the evidence is only anecdotal and might be worth following up.
- Although it would be a very large undertaking it would be useful to have a basic data set about the nutritional values for organic food, in the same way that there is one for conventional food. (A programme to bid for EC Framework VI money is being considered by the Institute of Food Research.)
- There is a hypothesis that plant varieties used in organic farming are more pest resistant and therefore have higher levels of secondary metabolites, some of which may have health benefits. Danish work is looking into this. Preliminary indications are that there may be some initial differences, but that this is removed after a couple of years. Further research in this aspect might be worth considering.
- The usefulness of investigating nutrient differences was discussed. Differences in individual foods are likely to be marginal, non-uniform and crop dependent.

- Taste should not be dismissed as irrelevant as it is important to people in determining what they eat.

#### General study design considerations

- It was argued that it could take more than the statutory minimum of 2 years for organic conversion before the benefits of organic farming are realised. This should be taken into account in any study design.
- Key growth areas for organic food are dairy and processed foods. These might be worthy of study. The absence of (added) hydrogenated fat in organic food was highlighted as a health benefit.
- The robustness of the evidence bases for both health benefits and the nutritional superiority of organic food were questioned. In reply the Soil Association's report, "Organic Farming, food quality and human health" was recommended as a review of the available evidence that does show some differences.
- Consumers are interested in whether or not organic food is "healthier", but it is not clear what they mean. It may involve a mixture of nutrient content and absence of things, such as residues.
- What interests the consumer does not always correlate to the choices that they make.
- The underpinning reason for undertaking any research needs to be considered. For instance, is it to inform consumers, inform producers or for marketing purposes?

#### **Session 2: Whether or not further research and surveys could inform consumer choice about non nutritional aspects of food**

25. Professor David Atkinson, of the Scottish Agricultural College, introduced the afternoon session on non-nutritional aspects of food. He noted that this session would pick up on the morning's discussion concerning whether the real question was whether organic food contained more healthful substances, or whether conventional food contains more potentially harmful substances.

#### ***Speaker 1: Professor Frank Woods, University of Sheffield***

#### ***Title: Can Further Research and Surveys Inform Consumer Choice about Non-Nutritional Aspects of Food?***

26. In his presentation, Professor Woods concentrated on chemical contaminants in food, particularly pesticide residues. Pesticide use is very restricted in organic food production, although a small number are permitted. Consumers are very concerned about chemical contaminants in food, especially residues from pesticides, therefore data about pesticide residues in food could be data that could help inform consumer choice.

27. There are three key questions that consumers might be interested in<sup>3</sup>:
- Is organic produce less likely to have detectable pesticide residues than conventionally grown produce?
  - In those samples containing residues, are conventionally grown foods more likely to have multiple residues than organic foods?
  - When pesticide residues are present in organic foods are they at lower concentrations than those in conventionally grown foods?
28. Information to answer these questions for UK food is not available. Professor Woods presented data from the USA showing that the answer to each question is 'yes'. Organic food is less likely to have detectable residues, it is less likely to have multiple residues and, where residues are present, they are likely to be at lower concentrations, although the USA study did not find that the difference was statistically significant in all cases.
29. Professor Woods pointed out that the USA study had some design problems. These included that the sample sizes for conventional and organic produce were very different. Conventional samples numbered far more than organic ones and this has the potential to introduce statistical problems. It shows the importance of constructing surveys in such a way that they give the right balance, and number of samples. Two other points that need to be taken into account when designing surveys are that certain foods have the propensity to accumulate multiple residues and that you can only find something if you look for it and can measure it.
30. Currently there is a gap in the relative risk comparison between so-called 'natural' pesticide residues and other chemical pesticide residues in relation to residue data. This, coupled with gaps in the toxicological data for 'natural' pesticides has limited the risk assessment for these products. This is a possible aspect for further research. Furthermore, although pesticide residue monitoring in the UK is well organised, it is clear that data sets for some foods, such as organic foods, are very small. Also current surveillance programmes do not include the gathering of representative data for probabilistic exposure assessment. All of these points are worthy of consideration when thinking about further research and surveys that could be undertaken.
31. One important consideration in relation to pesticide residues is what implications they might have for human health. It is important to note that the report of the working group that looked into possible cocktail effects of multiple pesticide residues concluded that, 'the balance of evidence so far suggests that consumers do not need to change their eating habits but should continue to eat a diet which includes plenty of fruit and vegetables'. They did, however, recommend that changes be made to the approval system so that all sources of exposure are considered (including non-food sources); that a framework should be developed to decide when to undertake combined risk assessments of exposure to more than one chemical; that appropriate toxicological approaches should be taken when carrying out risk assessments of potential combined exposure; and that there should be more formal analysis and

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<sup>3</sup> Taken from Baker et al, Food Additives and Contaminants, 2002, Vol.19, No.5, 427 – 446.

possible experimentation into the potential for combined toxic action due to the cocktail effect.

***Speaker 2: Mr Christopher Stopes, Eco-Stopes Consultancy***

***Title: Factors for Research &/or Survey to Inform Consumer Choice – Implications and Relevance to Consumers***

32. Beginning his presentation, Mr Stopes emphasised that consumers' perception of food safety includes important factors that are outside of the Food Standards Agency's (FSA) remit. This is especially so in relation to trust and authenticity. The aspects outside of the Agency's remit should perhaps be given the greater attention. Furthermore, the EU Organic Regulation (2092/91) restricts advertising claims that can be made for organic food so that claims in relation to a 'guarantee of superior organoleptic, nutritional or salubrious quality' cannot be made. (Although, interpretation of 'guarantee' is important.) Otherwise, there is a contradiction between undertaking research to show taste or health benefits and the fact that the results could not be used to promote organic food.

33. People choose organic food on the basis of being a citizen, not just a consumer. This influences responses to consumer surveys and polls. Although the Agency's remit is restricted to safety and nutrition, people are interested in environmental matters, animal welfare, trust and authenticity. All of these contribute to the diverse reasons for purchasing choices.

34. Research and surveys can be used to study different aspects. Surveys are best used to study the extent of difference in things, such as additives, residues and other contaminants. Surveys can also be used to study consumer attitudes and values, including purchasing preferences, both in terms of the food and the shopping outlet (eg supermarket versus farm shop). Research is necessary to show the significance of the difference. For instance the long-term health effects of low level intakes of pesticide or other residues. Research approaches could also be used to investigate food safety aspects, including microbiological safety and environmental contaminants. Research into what consumers perceive as constituting food safety might also be useful.

35. Consumers of organic food tend to consume more fruit and vegetables and pulses than other people, and they tend to have a healthier diet. But why is this so?

36. Mr Stopes then took the audience through the range of non-nutritional factors in food that could potentially be the subject of survey or research work. These included environmental contaminants, such as dioxins that are likely to affect all types of agriculture equally. Another factor is microbiological contamination where the organic sector agrees with the FSA position that there is unlikely to be any significant difference between organic and conventional foods. In relation to pesticides, Mr Stopes emphasised that in his view there is significant uncertainty about the risks posed by residues in food, and also the risks associated with pesticide use in the field (eg operator /

bystander effects). For veterinary medicines the risks are contentious, however there is little doubt that antibiotics do have adverse impacts.

37. Genetic modification was another area where Mr Stopes argued that there is a substantial uncertainty. He agreed, however, that mycotoxins are no more likely to be present in conventional than in organic food. In relation to additives it was said that those additives that raise significant concerns are not used in organic foods, organic standards prohibiting the use of the majority of additives. Thus there was little point in undertaking survey or research work in relation to additives.

38. Environmental and animal welfare are both important non-nutritional factors, as are trust and authenticity. It was questioned whether trust and authenticity are within the FSA's remit. If they are, it was argued that the FSA should be more interested in authenticity than it is. Choosing organic food for many people is being precautionary. People's values are also important.

39. A case study, based on pesticides, was then presented. The risk assessment for pesticides is both positive and systematic. However, it is still based on assumptions and entails uncertainty, particularly in relation to long term health effects (for instance a possible link with Parkinson's Disease). The assessment system only assesses the pesticide as 'safe enough' only. Consumers therefore may prefer risk avoidance and want pesticide use to be minimised, which has led to the FSA's developing policy in this area.

40. Although Mr Stopes agreed with the FSA policy of pesticide minimisation he explained that he was aware that the Advisory Committee on Pesticides had been critical of the policy, arguing that it was scientifically meaningless since levels of detection might continuously be lowered<sup>4</sup>.

41. It was argued that current sampling regimes for pesticide residues are inadequate. They could be usefully supplemented by data collected by retailers, but most retailers treat this data as confidential. Mr Stopes also emphasised that he believes that the current safety assessment system is not sufficiently precautionary and that better monitoring systems are needed. A key question is whether a definitive epidemiological study would be possible to decide whether pesticide residues in food are harmful or not.

42. When the FSA was preparing for their submission to the Policy Commission on Farming and Food it undertook a comprehensive round of surveys and focus groups to find out what concerns and interests consumers have in relation to food. A long list of issues of importance to consumers was drawn up, including aids to choice, information on production systems, UK and local food, organic, environmental and animal welfare issues, range, safety, time, convenience and price. It was noted that many of these matters fall outside of the Agency's remit, and to a greater or lesser extent, organic food production and processing met the desires of consumers expressed in these focus groups.

43. To conclude, Mr Stopes listed six key aspects of the quality of organic food that should receive further attention: authenticity; functionality (i.e. fitness for purpose); nutritional and biological effects; sensual and cultural issues that

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<sup>4</sup> Note added by way of clarification: the views referred to were in an ACP discussion paper, but at the time of the workshop they were not accepted by the Committee.

enhance the food for the consumer; and ethical value, including things that the consumer can relate to. It is important to see if organic diets are different in term of health than conventional diets, but he argued that ideally research should return to the origins of organic food production.

## ***Discussion***

44. Before commencing the discussion proper, the session chairman Professor Atkinson introduced Professor Tom Humphrey, of the University of Bristol, who would be joining the panel to provide microbiological expertise and invited him to say a few words to introduce microbiology as a topic for discussion.

45. Professor Humphrey stated that he agreed in general with the view that organic and conventional food are unlikely to be any different in terms of microbiological safety. However, he argued that this position fails to recognise improvements in animal production in relation to microbiological safety. He then very briefly referred to data from both a Danish study into *Campylobacter* in chickens, where 50% of the conventional chickens were infected compared with 100% of the organic chickens and similar, preliminary results, from the UK from work funded by the FSA. During discussion it was clarified that the conventional chickens being referred to were housed indoors and that the work was to investigate how different production methods, such as free-range and permanently housed, might affect *Campylobacter* levels. The work was not a direct organic versus conventional comparison. Conventional free-range chickens had similar levels of *Campylobacter* infection to organic flocks. The influencing factor was that the organic and free-range conventional chickens were more likely to pick up *Campylobacter* infections from the environment than housed chickens.

46. Issues raised during the discussion included the following.

### Systems

- Consumer interest is wider than the FSA's remit and therefore it would be in consumers' interests for the Government to set up a national panel on organic research covering Defra, DH and FSA.
- Stakeholders should be involved in designing any experiments.

### Research priorities

- If it is believed that it is important to demonstrate a difference in chemical residue content between organic and conventional foods a survey could be designed. However, the real question is how do you detect damage to the consumer, and that is unanswerable at present. There are no good markers of exposure and no good markers for health effects.
- There is a research need for a safety audit of the extensification of farming systems.

- The value of shopping basket surveys or duplicate diet research was questioned. Instead, a much more complex research programme was suggested, to look at the organic farming system as an integrated whole. Otherwise nothing useful will be learned. The crucial area to research is to investigate fully the concept of organic 'health', which is fundamental to organic agriculture, in a holistic way. Organic agriculture is built on the hypothesis that there is a link between the health of the soil, its fertility, the health of crops, the health of animals that consume those crops and the health of people. In the face of this, simple comparisons of foodstuffs are pointless.
- It was important to know what research or survey work the FSA was already undertaking in relation to organic food. A list should be attached to the meeting report<sup>5</sup>.
- There are deficiencies in data relating to residues from pesticides used in organic agriculture. However, it was argued that apart from copper, pesticides are little used in organic systems and not prone to leaving residues.
- There is anecdotal evidence that fungal infections are higher in organic crops and this might lead to higher mycotoxin concentrations. This could be investigated to see whether or not this is true.

### General

- The UK might use evidence of environmental benefits in order to argue in Brussels that the Common Agricultural Policy should give more support to organic agriculture.
- It is important that consumers can access information about chemical risk assessments and other safety matters.
- Decisions should not be put off by calling for further research. A more precautionary approach should be taken. The example used to illustrate this point was the FSA's calling for more research following the Isle of Wight study of children's behaviour in relation to additives. However, it was also pointed out that single scientific papers do not prove that something is true and that scientific papers vary in both design and quality.

### **Summary and close**

47. **Dr Richard Harding** of the Food Standards Agency then explained how things would be taken forward. A report of the meeting would be produced and circulated. The Agency will be carefully considering all of the points made at the workshop and will then consult on any potential areas for research and survey work before deciding what might be included in the

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<sup>5</sup> Details about the Agency's Research and Survey work can be found in the Research Annual Report 2002, [www.food.gov.uk/news/newsarchive/researchannual](http://www.food.gov.uk/news/newsarchive/researchannual) . This report covers the complete remit of the Agency, including projects looking at authenticity methods relating to organic food.

Research Requirements document. He also announced that he would be handing over responsibility for the co-ordination of organic policy within the FSA to Rosemary Hignett of the Food Labelling and Standards Division.

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**WORKSHOP ON RESEARCH AND SURVEYS TO INFORM  
CONSUMER CHOICE BETWEEN ORGANIC AND CONVENTIONALLY  
PRODUCED FOOD**

Wednesday 6 November 2002 –Programme

**Registration and coffee** 09.15 – 09.50

**Welcome**

**Professor Sir John Krebs** 09.50 – 10.00  
*Chairman, Food Standards Agency*

**Session 1: Nutrition and the whole diet approach**

**Session Chairman: Professor Alan Jackson**  
*Professor of Human Nutrition, Director of the  
Institute of Human Nutrition, University of  
Southampton.*

**Session to cover:** Whether or not further research or surveys could be developed to establish whether organic and conventional diets have different health outcomes, including issues in relation to study design, feasibility, and interpretation of results. The implications there would be for health should any nutrient differences between organic and conventional food be found.

**Speaker 1: Simon Wright** 10.00 – 10.30  
*The Organic Consultancy*

**Speaker 2: Professor Sue Southon** 10.30 – 11.00  
*Enterprise Manager & former Head of Organic  
Micronutrients Group, Institute of Food Research*

**Speaker 3: Dr Andy Ness** 11.00 – 11.30  
*Senior Lecturer in Epidemiology, University of Bristol*

**BREAK** 11.30 – 11.50

**Panel led discussion** 11.50 – 13.10

**LUNCH** 13.10 – 14.00

**Session 2: Whether or not further research and surveys could inform consumer choice about non nutritional aspects of food**

**Session Chairman: Professor David Atkinson**  
*Vice Principal and Academic Director, Scottish Agricultural College*

**Session to cover:** the range of factors that could be subjected to research or survey work, including chemical and microbiological contaminants, and nitrates. Issues in relation to interpretation of results, their implications for health and relevance to consumer choice. Study design and analytical options.

**Speaker 1: Professor Frank Woods** 14.00 – 14.30  
*Sir George Franklin Professor of Medicine, University of Sheffield*

**Speaker 2: Christopher Stopes** 14.30 – 15.00  
*Eco – Stopes Consultancy*

**TEA** 15.00 – 15.15

**Panel led discussion** 15.15– 16.15

**Summary and close**

**Dr Richard Harding** 16.15 – 16.30

## Attendees

First Name	Last Name	Organisation (if any)
David	Atkinson	Scottish Agricultural College
Chris	Atkinson	
Nick	Ball	Tesco
Kevin	Barker	Co-Operative Group (CWS) Limited
Peter	Bassett	Direct Laboratories
Jon	Bell	FSA - Director Food Safety Policy Group
Nicole	Berberian	
Sarah	Bernard	Safeway Stores plc
Adrian	Blyth	Lloyd Maunder
Jurgen	Boltz	Ergo Communications
Margaret	Borrill	Womens Food & Farming Union
Richard	Bosly	Organic Food Federation
Mary	Brennan	University of Newcastle upon Tyne
Paul	Brereton	CSL
Jennifer	Britt	Organic Business
Kieran	Brown	H.J Heinz
Jean	Burke	Organics Studies Centre
Judy	Buttriss	British Nutrition Foundation
David	Casemore	FSA Advisory for Wales
Peter	Challands	Deans Foods Ltd
Brian	Clarke	The William Price Group
James	Cleeton	Soil Association
Nick	Cooke	Scottish Organic Producers Association
Bill	Cormack	ADAS Consulting Ltd
Peter	Costigan	DEFRA
David	Couper	Organic Trust Ltd
Peter	Crofts	DEFRA
Peter	Czarnobaj	Wealmoor Ltd
Anthony	Dayan	
Richard	Dillon	World Organics News
Siarl Siviyer	Dixon	SGS (UK) Ltd
Oliver	Dowding	NFU (England)
Elizabeth	Dowler	University of Warwick
Wendy	Doyle	British Dietetic Association
Robert	Duxbury	Sainsbury's Supermarkets
Claire	Ettinger	FSA - Communications Division
Catherine	Fookes	Sustain
Susan	Fowler	University of Wales
Paul	Garland	Friends of the Earth
Fiona	Gately	Duchy Originals Office
John	Godfrey	Foodaware
Keith	Goulding	Rothamsted
Noel	Griffin	FSA - Food Labelling Standards Division
Richard	Harding	FSA - Food Chain Strategy Division
Nigel	Harrison	FSA - Food Labelling Standards Division
Gerard	Hayes	Yeo Valley

Brian	Hendley	Food Matters
Roemary	Hignett	FSA - Food Labelling Standards Division
Geraldine	Hoad	FSA - Microbiological Safety Division
Sue	Hornibrook	Centre for Food Chain Research
Tom	Humphrey	University of Bristol
Alan	Jackson	University of Southampton
Andrew	Jedwell	Organic Centre Wales
Derrick	Jones	FSA - Economics & Analytical Division
Steven	Kay	Huntapac Produce Ltd
Graham	Keating	Yeo Valley Organic Company Ltd
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Helen	Miller	Foodaware
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Phil	Morgan	FSA - Wales
David	Mortimer	FSA - Food Chain Strategy Division
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Tom	Murray	FSA - Nutrition Division
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Paul	Nicholas	Organic Farm Foods
Patrick	O'Flanherthy	RDA Organic
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Sue	Southon	Institute of Food Research
Alison	Spalding	FSA - Food Chain Strategy Division
Richard	Stanley	CCFRA
Samantha	Stear	The Sugar Bureau
Elizabeth	Stockdale	FSA - Food Chain Strategy Division
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Helen	Taylor	Soil Association
Brian	Thomas	Horticultural Research International
Roger J	Unwin	DEFRA
Ray	Vale	The Grower
Julian	Wade	Organic Food Federation
W M	Waites	Nottingham University
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Keith	Warriner	Nottingham University
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Steve	Wearne	FSA - Chemical Contaminants and Animal Feed
Alette	Weaver	FSA - Nutrition Division
Jacqui	Webster	FSA - Corporate Secretariat & Consumer Issues
Sandy	Whitehead	Imperial College
Marcus	Williamson	
Michael	Wilson	Horticultural Research International
Frank	Woods	The University of Sheffield
Lawrence	Woodwood	Elm Farm Research Centre
Simon	Wright	The Organic Consultancy
Steven	Yates	Huntapac Produce Ltd