

SUBMISSION from the food standards agency TO THE NATIONAL ASSEMBLY FOR WALES' AGRICULTURE & RURAL DEVELOPMENT COMMITTEE REVIEW OF ORGANIC FARMING

May 2002

Overview

1. The Food Standards Agency is independent of industry interest, has no food or farming industry sponsorship role, and has no view on the relative merits of organic food production, although clearly organic food must meet the legal safety standards set for all food. Further, the Agency takes no position on the appropriateness of organic standards. The Agency does however have responsibility for ensuring that consumers are in a position to make an informed choice.
2. On the basis of current evidence, the Agency's assessment is that organic food is not significantly different in terms of food safety and nutrition from food produced conventionally. A more detailed explanation of the Agency's position on each of the key issues is set out below.

Pesticides

3. One of the principal differences between organic and conventional production of crops is that the rules of organic production allow few pesticides. The general approach of organic agriculture also militates against their use. The fact that pesticides are allowed in organic production means that, while the number and prevalence of pesticide residues in organic produce is likely to be considerably lower than in conventional produce, it is not possible to state categorically that all organically produced food will be residue free.
4. The general position of the Food Standards Agency is that it does not object to the use of pesticides and veterinary medicines for crops and animals for food use, in either conventional or organic production, provided any residues are kept as low as practically possible, do not pose a threat to health and comply with statutory limits. The key issue therefore is whether or not the presence of pesticide residues constitutes a risk to public health.
5. Pesticides are assessed for environmental, operator and consumer safety by risk assessments performed by independent expert committees based on toxicological data. The general principle on which consumer safety assessments are made is that proposed by Paracelsus, namely

'All chemicals have the capability to cause injury to living organisms provided the dose is

sufficient'

Toxicity therefore lies not in the presence or absence of any particular substance, but in the dose consumed. Consequently, the approach to the safety assessment of pesticides (and also food additives and contaminants) is to establish a safe level of intake from animal tests.

6. The Agency has two initiatives in relation to pesticides. The first is a study commissioned by the Committee on Toxicity to investigate whether there are any grounds for the public concern about the so-called "cocktail effects". A draft report was circulated widely for comment and was well received, the final report is due to be published shortly. The second initiative is to engage stakeholders in open discussions on the scope for reducing pesticide residues in food. This work recognises that consumers have a right to expect pesticide residues to be as low as practicably possible, even if higher levels would be within safety limits. It is not being undertaken because the Agency believes that residues within the current limits are harmful. In short, although conventional produce may be more likely to have pesticide residues, the Agency does not consider this to be a safety issue.

Veterinary Medicines

7. The prudent use of veterinary medicines in the treatment of animal disease is part of good husbandry in both organic and conventional agriculture, although as with pesticides the organic approach militates against their use. Unlike conventional agriculture, organic production does not allow antibiotics for prophylactic use or as growth promoters. The Agency does not object to the use of veterinary medicines for animals intended for food use as long as any residues are kept as low as practicably possible, do not pose a threat to health and comply with statutory limits.
8. As with pesticides, veterinary medicines must be assessed for the safety of any residues. Further, their use does not imply that residues remain in meat, dairy products and eggs, and nearly all samples tested are free of residues.
9. There is concern that the use of antibiotics in animal production gives rise to antibiotic resistance, which is a wider public health problem rather than solely a food safety issue. The antibiotics currently permitted in conventional (but not organic) agriculture for use in feed and water as growth promoters are carefully regulated, and a number have been banned from use in the European Union because of the concern that their use might give rise to resistance to antibiotics used in human medicine. The European Commission has proposed that the remaining four growth promoting antibiotics be withdrawn by 2006. The Agency strongly supports this proposal.

BSE

10. The main measures in place to protect the public against the risks associated with Bovine Spongiform Encephalopathy (BSE) in relation to the food chain are the over thirty month rule for cattle, the ban on the feeding of processed animal protein to all farmed animals, and the removal of specified risk material from slaughtered cattle, sheep and goats. They were reviewed by the Food Standards Agency in 2000, involving a widely-drawn stakeholder group. They apply equally to organic and conventional production.

GMOs

11. The Agency is satisfied that the current safety assessment procedures are sufficiently robust and rigorous to ensure that approved genetically modified (GM) foods are as safe as their non-GM counterparts. In carrying out the scientific evaluation of food safety we take advice from the Advisory Committee on Novel Foods and Processes.
12. The Agency welcomes the recent agreement by the Codex Task Force on Biotechnology on draft guidelines for the safety assessment of foods produced from GM plants. Having been assessed for safety before approval, there is no reason to expect that GM foods would lead to long term effects or rare adverse events. Of course, as with any food (GM or not), such effects cannot be completely ruled out although these would be very difficult to detect. Nevertheless, the UK and other countries are funding research to examine the feasibility of setting up a mechanism for post-market monitoring. The Agency is also funding a new research programme to look at the applicability of emerging techniques for the safety assessment of novel foods, including GM foods, which might be developed in the future.
13. The Agency recognises that some consumers wish to avoid GM foods, and therefore its policy is to ensure that consumers have the necessary information (through labelling and other means) to make an informed choice. The European Commission has issued proposals to extend GM labelling to include any food produced from a GM organism, regardless of the presence or absence of novel genetic material. The Agency is not convinced that these proposals can be delivered in a way that can be enforced, is practical and affordable. Instead, the Agency considers that labelling should be confined to products that actually contain GM material (novel DNA or protein). This, together with the introduction of clear rules on GM free labelling would better inform consumer choice.

Mycotoxins

14. Mycotoxins are toxins produced by a range of moulds growing on food crops in the field and in storage. Some commentators have suggested that organic food may be more prone to contamination by mycotoxins than conventional food because less anti-fungal treatments are used. However, this view is not supported by evidence. Furthermore, the EU's Scientific

Committee on Plants has advised that there is insufficient evidence to show whether anti-fungal chemicals are effective in preventing the production of mycotoxins by moulds when they are used. It is therefore not possible to conclude that organic food is more prone to mycotoxin contamination than conventionally grown food.

Dioxins, polychlorinated biphenyls (PCBs) and heavy metals

15. Dioxins are produced during various combustion and incineration processes and are also unwanted by-products in the manufacture of certain chemicals. PCBs have been used since the early 1930s, mainly in electrical equipment. The manufacture and general use of PCBs is no longer permitted in the UK, which is committed to destroying the remaining identifiable PCBs in existing electrical equipment. Both dioxins and PCBs are very persistent in the environment, and as a result are ubiquitous in foodstuffs, especially in fat-containing foodstuffs. Since dioxins and PCBs are environmental contaminants and contamination of food is adventitious, there is no reason to believe that there is any difference in the level of contamination in organic and conventionally produced food.
16. Similarly, heavy metals (e.g. lead, cadmium and mercury), are ubiquitous in the environment, and agricultural techniques cannot control them. It follows that there is no reason why using different farming systems should influence levels of heavy metals in food.

Nitrate

17. It is sometimes argued that nitrate levels in the diet are harmful, and that organic crops contain less nitrate than those conventionally produced. On the first point, the evidence indicates that there are no concerns over current levels of dietary consumption of nitrate in the UK. On the second, the data put forward in support of this is not convincing. There is a very wide variation in nitrate levels in both organic and conventionally produced fruit and vegetables. Other factors, notably sunlight, have a much greater influence on the nitrate level.

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Microbiological safety

18. There is no firm evidence at present to support the assertion that organic produce is more or less microbiologically safe than conventionally farmed produce. The microbiological safety of food depends essentially on controlling the hazards that arise in production and preparation. This applies equally to organic and conventional food production. A number of claims have been made that organic produce is more likely to cause food poisoning than that produced conventionally because of the pathogen transfer from manure used as fertiliser, although of course manure is used in both systems. Good management of manures, including the use of

composting and appropriate timing and application, can significantly reduce risks. This applies equally to organic and conventional agriculture. The Agency is currently consulting on good practice guidance, "Managing Farm Manures for Food Safety", that deals with precisely these matters.

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Nutrition

19. The most important and over-riding point is that the nutrient balance of the diet as a whole is what matters, and differences in nutrient composition of different foods are relatively unimportant. A varied and balanced diet which includes plenty of fruit, vegetables and starchy foods should provide all of the nutrients that a healthy individual requires, regardless of whether the individual components are produced by organic or conventional methods. Consequently any differences in the nutrient content of organic and conventional foods are relatively unimportant. However, it has been suggested that organic food is nutritionally superior to that produced conventionally. The Agency view is that this assertion is not supported by the available evidence.