THE FOOD MAGAZINE

INCLUDING CONSUMER CHECKOUT

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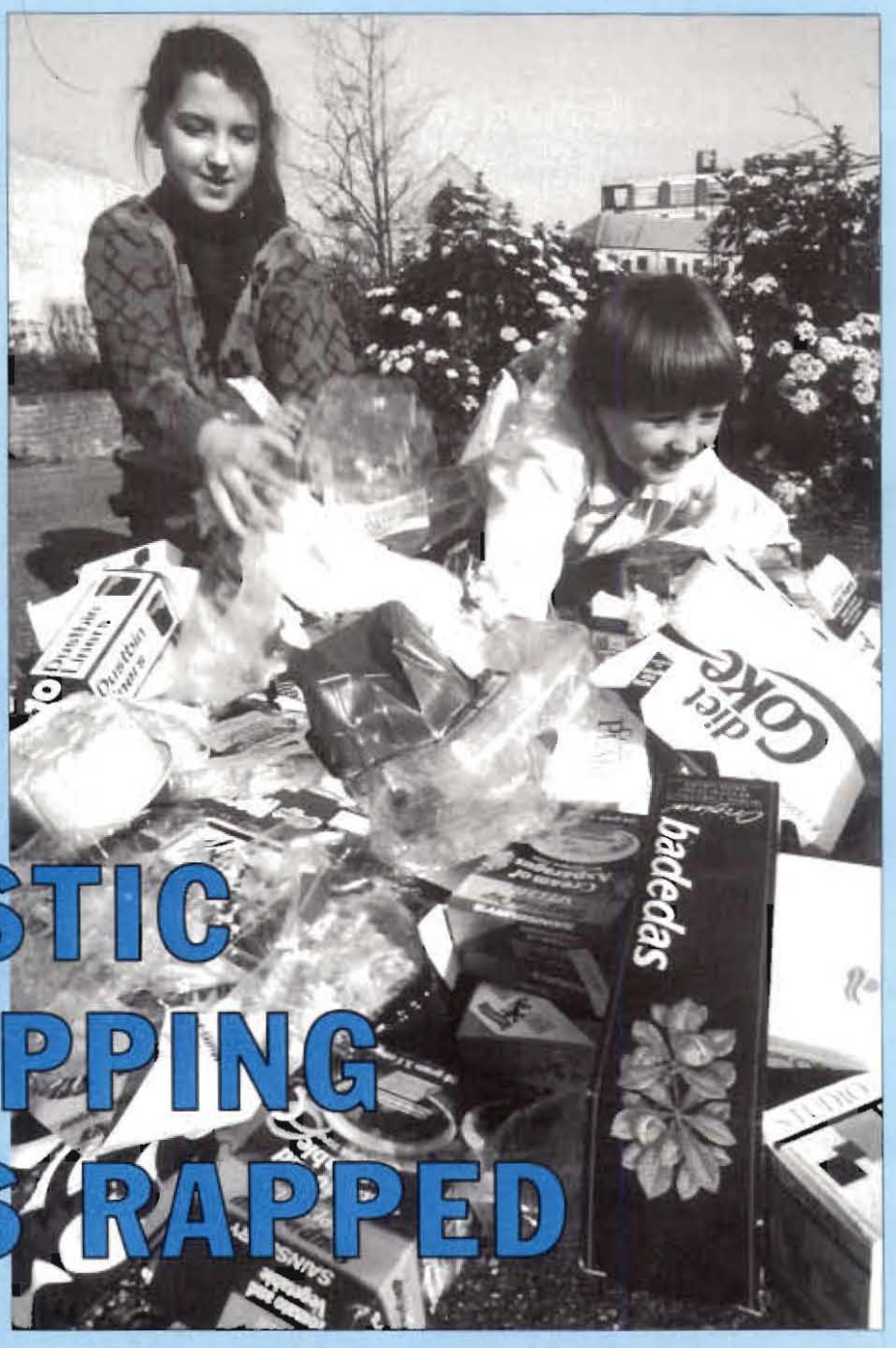

PLASTIC WRAPPING GETS RAPPED

SPECIAL REPORT: THE PLASTICS THAT CAN GET INTO OUR FOOD

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THE FOOD MAGAZINE

The Food Magazine is your consumer watchdog on food. We are independent of the food industry and government and rely on subscriptions, donations and grants for our funding. We aim to provide independently researched information on the food we eat to ensure good quality food for all.

The Food Magazine is published quarterly by The Food Commission, a voluntary organisation providing research, information, education and advice on food.

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CONTENTS

NEWS

CONSUMER CHECKOUT SUPPLEMENT

FEATURES

REGULARS

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EDITORIAL

Opening the box!

Opening some modern food packets is like a game of pass the parcel, but without the surprise. You already know what is in the middle, it is just a matter of getting there.

Take some tea bags. First there is the cellophane wrap which can defeat all but the long finger-nailed. Then comes the box. Opening it you find ... a foil packet. This leads to another struggle until lo and behold at last you have a little paper sachet containing a teaspoon of the magic leaves.

You need a cuppa after all that unwrapping.

Earlier this year the Women's Environmental Network launched its campaign against over-packaging. Food packaging is a major target of their campaign. Whilst the packaging plays an important role in ensuring hygiene and protection from damage, only two thirds of packaging fulfills this role. The rest is purely cosmetic.

And it all ends up in the dustbin to fill the landfill sites around the country.

Not only do our recycling schemes lag behind our European neighbours', but quite rightly environmentalists are saying we should consider re-use as the first option rather than recycling. Unfortunately glass bottles — easy to re-use — have largely been replaced by plastic.

In this issue we take a look at plastic food packaging — not just their effects on the environment but the possible migration of chemicals from the plastic into our food. It is not reassuring to discover that full toxicity tests are not available for most of these chemicals.

Throughout Europe a new wave of consumer and environmental organisations are joining together to press for tougher environmental and public health controls. As the EC introduces major legislation on migration of substances from plastics into food, we ask whether this goes far enough to protect consumers.

Poor Mr Gummer

What else could he do? Told by his senior advisors not to do an 'Edwina' by casting doubts on beef production, told by scientists (themselves largely selected by the same advisors) that the risk to humans was, probably, remote, and told by the meat industry, the animal feed industry and livestock farmers that they all knew what was best for business, poor Mr Gummer had no choice. What other advice could he take?

He could perhaps have turned to his colleagues in parliament for their views, reflecting as they might the needs of their constituents. But MPs have more than their constituents to concern them: scores have farming interests, many have links to food businesses, agrochemical companies and public relations agencies with food company clients.

He could have invited submissions from consumer organisations and from other scientists, as the Commons Select Committee has subsequently seen fit to do. But could he afford to be seen to take their advice? It would mean political suicide. Better not to ask for it. His predecessor (John MacGregor) admitted that in the year of the salmonella in eggs affair he had meetings with consumer groups three times and with industry and farming organisations 44 times.

But by not listening to genuine concerns and fears — some of them expressed over a year ago in this magazine — Mr Gummer has reaped a harvest of disrespect and mistrust which even his deputy, the presentable David Maclean, is finding hard to overcome.

Food Bill completes parliamentary process

The Food Safety Bill has now completed its remaining stages in the House of Commons, and is expected to receive royal assent within weeks.

The Bill does little to give food safety and consumer interests a higher priority in MAFF's operations.

The Bill gives new powers to local authorities to carry out food safety enforcement. Their work on food safety is crucial as is the amount of money they have available to do their work. The government has said that £30 million will be taken into account in the revenue support settlement for the extra powers they will have under the Bill. Under pressure, the Minister made a commitment that this extra money would be available for local authorities from central government. However, with the shambles of the poll tax in many authorities, it may well be that this money will be siphoned off to what may be seen as areas of higher priority such as care for the elderly or mentally handicapped or sheltered accommodation.

There is also the question of the allocation of the money between different local authorities. Should the urban areas receive more because they have a higher population and more catering establishments? Or should rural areas receive more because of the extra costs of maintaining such a service in a remoter area which may well have more food manufacturing establishments?

The most controversial aspect of the Bill was the provision to give the government powers to control the process of food irradiation so paving the way for the lifting of the existing ban. The arguments for and against have been debated on a number of occasions in the House of Commons, with the government still convinced it must go ahead. There was, however, some dissent on the Tory benches. Winston Churchill, MP, spoke out and voted against it. On the safety of irradiated food for humans he said: '...no one knows one way or the other... Surely, the path of caution is the only sensible course for the government to take.'

Despite the fact that 19 Tory MPs signed an early day motion taking the National Federation of Women's Institutes and the Consumers Association line, calling on the government not to lift the ban on irradiation until many questions had been answered about the safety of the process, eight of them voted with the government against Labour's new clause opposing its introduction. Ten of them did not vote at all.

Fight against food secrecy

An oppressive secrecy clause in the Food Safety Bill has been drastically cut as a result of amendments proposed by the Campaign for Freedom of Information.

Under the original Bill an inspector who publicly revealed details of an unsafe food manufacturing process could have been jailed for two years. The Bill has now been amended — an environmental health officer who releases information about an unsafe process no longer faces prosecution. But action against unsafe food can still be concealed from public view. An inspector is still under no duty to reveal such information and the public has no right to it.

No details of notices ordering food to be withdrawn, or improvement notices where food regulations are breached would be made public. Under the Environmental Protection Bill pollution authorities are required to establish public registers of equivalent enforcement notices but the government has rejected similar provisions in the Food Safety Bill.

Maurice Frankel, director of the Campaign for Freedom of Information says: 'There can be no possible justification for failing to alert the public to the fact that an order prohibiting the use of food "likely to cause food poisoning" has been served. Publicity will help ensure that people avoid the premises; seek appropriate medical attention if they become ill after consuming food from these premises; and ensure that remedial action is taken with the greatest possible speed.'

Accompanied by nine coffins representing nine million babies who have died through bottle feeding in underdeveloped countries since 1981, baby-milk campaigners gathered outside Nestlé UK headquarters on May 21st. They marked the ninth anniversary of the World Health Organisation's marketing code designed to protect mothers and babies from commercial pressures to bottlefeed.

Citing cases of Nestlé's continued violations of the WHO code, the campaigners called on supporters to maintain the boycott of Nestlé products. Further details from Baby Milk Action: Tel 0223-464420.

Australians question WHO irradiation safety claims

The Australian government is calling for a fresh investigation by the World Health Organisation (WHO) into the safety of food irradiation. This follows criticisms that the WHO has endorsed fraudulent and inadequate research.

During June the Food Commission organised a European tour for Peter Milton, the former chair of the Australian Parliamentary Committee which spent two years investigating irradiation. His meetings with government departments, MPs, MEPs and policy makers throughout Europe will increase pressure on both the UK government and the European Commission to delay moves to permit free trade in irradiated food by 1992.

In Britain too, opposition to food irradiation continues to grow. MAFF appears to remain unmoved by consumers' concerns, publishing at tax payers' expense its Information Kit to persuade us that there are no problems with irradiation.

But recent revelations are an embarassment to ministers. Scientists working on a test to detect whether food has been irradiated, have evidence that irradiated spices are being illegally imported. 'This highlights the continuing problems of controlling the use of irradiation to cover up bad hygiene practices,' says Tony Webb of the Food Irradiation Campaign.

The International Union of Foodworkers has called for irradiation to be banned until there are adequate safeguards for worker protection and better evidence on consumer safety.

The International Food Irradiation Network has now published its second newsletter (£2.00 inc p&p) and a report *Outstanding questions about the safety of irradiated food* (£3.00 inc p&p). These are available from the Food Irradiation Campaign, The Food Commission, 88 Old Street, London EC1V 9AR.

Health campaigners call on IBA to see sweet reason

Consumer and health bodies have called upon the Independent Broadcasting Authority (IBA) to introduce tighter controls on the TV advertising of sweets and sugary foods to children. This follows the Food Commission's report on junk food advertising (see *The Food Magazine* Issue 9), which found that four-fifths of food and soft drinks advertised on children's TV would be unlikely to encourage a healthy diet.

In May Joan Lestor, MP, Labour spokeswoman on Child Welfare led a delegation from the Dietary Sugars Liaison Group and Action and Information on Sugar (AIS) to the IBA. They called for a revised code of practice for ads and sponsorship to be enforced by the IBA's successor body the Independent Television Commission (ITC).

Under new proposals laid down in the Government's Broadcasting Bill, the ITC will only investigate ads if someone complains. By then the misleading claims may have been widely broadcast. Campaigners would like to see new adjudication procedures and sanctions including fines and injunctions for ads breaking the code of practice; greater consumer representation on adjudicating bodies and easier access to the regulatory bodies.

In April the national Consumer Congress with a membership of 150 consumer bodies endorsed these proposals at its annual congress in Liverpool. Jack Winkler, Chair of AIS told the congress: 'Already TV ads push fatty and sugary food and are the main source of new information about food, overwhelming nutriton eduction by government and health professionals. Therefore, we need tighter rules on both advertising and sponsorship.'

The recent government COMA report on *Dietary Sugars and Human Disease* and the Health Education Anthority's policy document, *The Scientific Basis of Dental Health Education* both state without qualification that sugar causes dental caries and recommend that the whole population should eat less sugar and eat it less often. Campaigners say this policy cannot be put into practice without addressing how such foods are advertised.

Tooth-friendly molar man

Food is the single most advertised product category in Britain today, with over 90 per cent of food advertising on television. Sweetened products account for more than half of all food and soft drink advertising. The expansion of television capacity and the creation of new commercial satellite channels, one of which is specifically dedicated to children, will further increase the volume of both advertising and sponsored programmes.

Health experts say this intensity of promotion helps create and sustain the pattern of excessive sugar consumption which is not only injurious to individuals, but makes dental caries the second most costly disease for the NHS at over £1 billion a year.

As health educators attempt to put into practice official government advice to eat less sugar, the sugar industry, in June, launched a £12m advertising campaign promoting sugar as a natural and healthy product. Tate & Lyle and British Sugar have joined forces in a campaign they anticipate will run for three years. TV, newspaper and magazine ads, they say, will try to correct 'unfair criticism' of their products. AIS has lobbied the advertising watchdogs warning that the campaign is likely to mislead the public.

■ Tooth-friendly logos may in future appear on 'low tooth decay' sweets. The scheme, already in use in West Germany, Austria and Switzerland, was being promoted in the UK in May.

Dr Albert Bayer of the scheme met with British dentists to discuss ways in which manufacturers could participate.

Currently manufacturers pay about £2,000 to the Zurich Dental School to test whether their brands can be awarded the 'molar-man' logo. In Switzerland such products have captured 15 per cent of the market.

The British Dental Association is believed to be keen to back the new scheme. But UK confectionery manufacturers are less than enthusiastic. The scheme has, though, found one industry ally — the sugar substitute manufacturers who see the potential with such a scheme for opening up new markets for their products.

Joan Lestor is this issue's *Food Magazine* guest diarist — see page 32.

Canthaxanthin — it's no yolk!

Do you know what makes egg yolks yellow or farmed salmon and trout pink? Dyes added to chicken and fish feedstuffs fool consumers into believing that it's all done naturally. And you won't find these secret ingredients listed on the label, either.

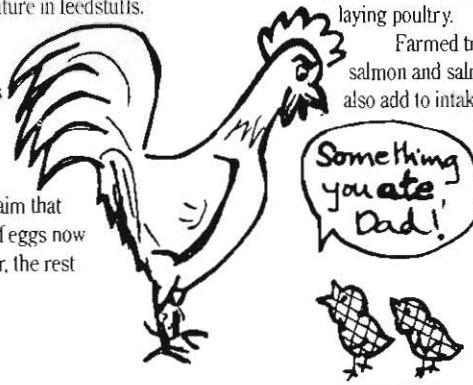
But now, there are doubts about the safety of one dye, canthaxanthin (E161g), often added to fish and chicken feeds. Canthaxanthin, at high intake levels, is known to cause deposits in the retina of the eye reducing vision in low light. After re-evaluating the safety data, the government's Committee on Toxicity decided that they could not set a safe level for this dye.

The Committee's move follows a decision by the Joint WHO/FAO Expert Committee on Food Additives to withdraw its temporary ADI (acceptable daily intake) for canthaxanthin, used as either a food additive or a feed additive. Consumer groups want to see the use of canthaxanthin prohibited in feedstuffs. MAFF have indicated that Canthaxanthin will be banned from direct use in food — as an additive it is used in soups, pickles, sauces, confectionery, biscuits and soft drinks. But they have yet to decide about canthaxanthin's future in feedstuffs.

Until recently about 75 per cent of egg-laying hens were fed with canthaxanthin enriched feed. Producers now claim that only 25 per cent of eggs now contain this colonr, the rest having substituted other colourings. If chickens are given an adequate diet with a wide range of nntrients and sufficient carotene, added colours are not necessary.

It is not only eggs that contribute to dietary intakes of canthaxanthin via feed. Hens which have come to the end of their egg- laying days usually end up in soups and stocks. Even 'corn-fed' poultry, often marketed with a more 'natural' image, have canthaxanthin added to their feed — and at higher levels than for egg-laying poultry.

Farmed trout and salmon and salmon pâté also add to intakes. Almost all UK trout are now mented — over 90 per cent with canthaxanthin. Residues in salmon and trout have been found to be higher than in eggs.



There are approximately eight colourings that can be used in feeds but only some of these have E numbers. Consumer groups are calling for all colour additives used in feedstuffs to be declared on food labels. They also want declarations to include other additives such as extract of marigold and paprika, as well as those colourings with E numbers.

Egg producers claim that consumers want identically coloured deep yellow yolks whilst fish farmers say sales will plummet if canthaxanthin is banned. Colours are cheaper, they say, than natural foodstuffs. But if consumers knew exactly what was in their food, they would probably be less inclined to demand the bright colours producers say they currently insist on.

NEWS

Secret files cast doubts on BST

Leaked files from the US Food and Drug Administration show that the safety of milk, and the welfare of the cows producing it, may be affected by the use of bovine somatotropin (BST). BST is a genetically engineered growth hormone being tested on dairy farms in the UK. Its licensing has been delayed because of public concern, both in the USA and Europe.

The new evidence came to light shortly after the sacking of Dr Richard Burroughs by the FDA. Burroughs, a senior vet who had reservations about the BST trials, headed the animal safety evaluation of the hormone until his dismissal for alleged incompetence in 1989. The evidence, culled from research reports submitted to the FDA by Monsanto, shows that BST levels in milk are raised considerably following injection of the hormone, contrary to previous reports. The significance of this is uncertain, since BST is not normally active in humans. The data also show's that BST-treated cows suffer from enlarged organs, possibly a sign of stress. Adrenal glands, hearts, liver and ovaries are affected. Udder infections also seemed more frequent in treated cows.

Further evidence from a study in Britain shows that levels of the hormone IGF-1 (insulin-like growth factor 1) in cows' milk are raised as much as four-fold by the use of BST. IGF-1 is a potent cellular growth-promoting hormone which is active in humans, and is believed by some scientists to affect the gut of milk drinkers.

Monsanto, which has a major financial interest in seeing BST licensed for commercial use, has recently been accused of fraudulent manipulation of the results of a study of cancer among workers exposed to dioxins by Dr Cate Jenkins, of the US Environmental Protection Agency. Monsanto claims that the evidence from the Illinois state court case had been misrepresented.

The European Commission's moratorium on BST will be reconsidered towards the end of 1990.

Food pallet pesticide poses toxic risk

Timber pallets used to store food are still being treated with the highly toxic wood preservative, pentachlorophenol (PCP). Three years ago a World Health Orgnisation body recommended that food should not be allowed to come into contact with wood treated with this chemical. Even wrapped food is at risk since the chemical can seep through paper and cardboard. It has been estimated that up to 80 per cent of PCP may evaporate from treated wood within 12 months.

But the UK government has carried out no studies on the migration of PCP from pallets into food, and has led efforts within the EC to defer a proposed restriction on the use of PCP. Last year the Lords Select Committee criticised the government over its failure to promote a rapid switch to less toxic wood preserving chemicals. Chemicals are necessary because timber pallets used in the UK are made from pinewood, a material most susceptible to rotting and insect infestions.

The World Health Organisation classifies PCP as a highly hazardous chemical and a known carcinogen due to the presence of dioxins. It is associated with birth defects and disorders of the nervous system, liver and skin disorders.

Uses of PCP cause widespread environmental contamination. It is highly toxic to marine life and accumulates in the food chain.

WHO estimates that direct food contamination with PCP could amount to between 0.1 and 5µg per person per day.

PCP residues have been found in chickens (and their eggs) reared on woodshavings. About 30 per cent of laying hens are reared on woodshavings, before the majority of them are transferred to batteries.

Cargo contamination

An Australian report* argues that separate shipping containers should be set aside solely for the transportation of non-hermetically sealed foods. It reports that food and food raw materials continue to be intermittently contaminated with traces of PCP. The cause is the pinewood timber flooring in ship's containers which are purposefully treated with pentachlorophenol-based wood preservatives. High levels of residues have been found which have been known to contaminate cargoes of foodstuffs.

However containers with floors made from hardwoods or plywood were also found to be contaminated. Whilst levels of contamination were low they would still be high enough to cause musty off-flavours in many non-hermetically sealed foods.

Relatively high concentrations of PCP were found in one container which had been contaminated by hides treated with preservatives. The researchers found high residual levels of preservatives even after the container was cleaned. The authors recommend that all containers with pinewood flooring should be regarded as suspect and those used to transport hides should never be used for foodstuffs.

They conclude that some shipping containers should be set aside solely for the transportation of non-hermetically sealed foods, though they uote that on many trade routes this is not an economically viable proposition. As a protective measure they recommend the covering of container floors with a metal-plastic laminate film as a barrier.

* 'Shipping container floors as sources of chlorophenol contamination in non-hermetically sealed foods, Whitfield, et al, *Chemistry & Industry*, 17 July 1989.

TIME TO CELEBRATE!

The London Food Commission has been awarded a special 1990 Glenfiddich Award for its campaigns to improve the quality of food. The judges acknowledged the Commission's tireless campaigning and it's continued ability to create public awareness of issues of concern in the food business.

The Awards are presented annually to those who have helped to raise the standard, and our knowledge, of what we eat and drink. Pictured above is Tim Lang collecting the award on behalf of the Commission.

NEWS

'Sell-by' dates to go

The Ministry of Agriculture, Fisheries and Food are proposing an early move to bring UK 'sell-by' date labelling into harmony with European practices.

Subject to possible objections, they are proposing to abolish the 'sell-by' date for perishable foods on 20 December 1990, and introduce a 'use-by' date in its place. There will be exemptions for long-life foods, deep frozen foods and ice cream until June 1992.

The 'sell-by' dates carry no legal penalties — food can be sold beyond its 'sell-by' date provided it meet the requirements of the Food Act as fit for human consumption.

But under proposed regulations it will be an offence to sell food beyond its 'use-by' date.

Beware the 'No Tartrazine' claims

Additive sensitive children and their parents should look closely at some of the claims being made on coloured food.

Some products boasting that they are free of the notorious colouring agent Tartrazine, may nevertheless contain one or more of the sister chemicals in the family of colourants known as azo dyes or coal tar dyes.

Originally developed in the nineteenth century as textile dyes, the azo dyes have proved very popular with food manufacturers. They dissolve well in foods, are more stable and take a long time to fade, especially if anti-oxidants are added. But there have now been several well-documented cases of children showing reactions to these chemicals, and manufacturers have started to look for alternatives. Most have turned to so-called 'natural' colourants such as annatto (which themselves may bring new problems in their wake). But occasionally — as we show — manufacturers' cynically swap one azo dye for another.

'NO TARTRAZINE' is featured on the front of the product

Quinoline Yellow (E104) and Sunset Yellow (E110), both from the same family of chemicals as tartrazine, are hidden in the small print. (Incidentally E407, carrageenan, a seaweed extract, has been reported as associated with birth defects, ulcers, colitis and possible damage to the immune system.)

Restrictions placed on US health claims

White House approval for restrictions on food manufacturers making specific disease-prevention claims was granted earlier this year.

Food companies in the USA have made a variety of disease-prevention assertions for items such as margarine, fruit juice, breakfast cereal and vitamin supplements, and are facing an influx of new Japanese food products also making specific health claims (see page 20 in this issue of *The Food Magazine*).

The new proposals will continue to permit claims in six areas: that calcium helps prevent osteoporosis, low salt helps prevent hypertension, low fats help prevent heart disease, low fats help prevent cancer, fibre helps prevent cancer and fibre helps prevent cardiovascular disease.

In a second series of proposals, new regulations are being suggested which would require all packaged food to carry nutrition information, including statements on cholesterol, saturated fat, dietary fibre and calories from fat. Even unpackaged food such as loose fruit would have a nutrition display or available booklet.

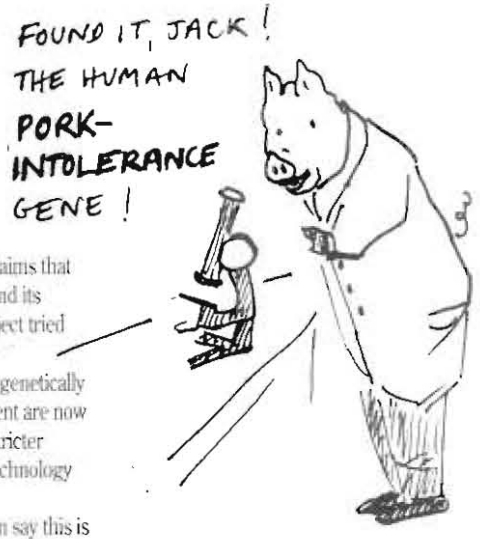
If implemented — and critics say this could take several years — the USA would be ahead of EC countries and Canada in making manufacturers declare nutritional information on all products, not just those making nutritional claims. As reported in the last issue of *The Food Magazine*, the European Commission has now agreed to follow Britain's poor example, which does no more than suggest to manufacturers a variety of labelling formats which manufacturers are free to ignore unless they make a nutritional claim.

This bio-piggy went to market

The revelation that Australians have been eating genetically engineered pigs containing extra growth hormone genes has caused uproar down under. The slaughter for human consumption of the fifty-three pigs breached voluntary guidelines on the release of genetically engineered organisms. The public was not informed that the meat they were buying came from genetically altered pigs.

The pigs were designed to grow 30 per cent more quickly, while eating less food. The Australian Conservation Foundation claims that the University of Adelaide and its company partner in the project tried to cover up the unauthorised release of the genetically altered pigs. The government are now under pressure to impose stricter controls on Australia's biotechnology industry.

The UK Genetics Forum say this is the fifth incident worldwide of an unauthorised release. This case, they say underlines the need for proper provision of information by companies and government. They are calling for the establishment of a Public Biotechnology Commission which would have the power to advise ministers on new biotechnology developments.



Lessons we can

Since *The Food Magazine* first publicised consumer fears about BSE early last year, 'mad cow' disease has achieved national notoriety to rival salmonella. But in this case the problem has gone far beyond the hygiene problems faced by egg producers. Tim Lobstein examines outstanding concerns.

As with salmonella, there has been no shortage of people offering opinions on the safety of British beef. Government ministers, MAFF and DoH officials, Farmers' Union representatives, scientists, medical doctors and consumer groups have all contributed their point of view.

Ministers in particular have been fond of using phrases like 'There is no evidence whatsoever of a risk to human health' (Maclean, January 1990). This is an empty claim, as the sort of evidence that would merit scientific acceptance would be quite unethical — for example the innoculation into humans of diseased cattle brain to see if spongiform disease develops.

The lack of confidence in bland government reassurances has led to consumers voting with their purses. Had ministers only been advised to listen to consumer concerns and show some appreciation that there was genuine room for doubt, they may have won some sympathy. But they didn't, and thereby helped to feed the alarm expressed in the national media. The result is that beef sales have slumped, export markets have turned sour, farmers' incomes have taken a knock and only the EC's intervention scheme has saved the British beef industry from near disaster.

MEAT INSPECTION

Meat cannot be exported to the EC unless it has been slaughtered at an approved abattoir, where all animals have to be inspected by a qualified vet. Less than ten per cent of the UK's 940 abattoirs have such a vet present.

The Preston report into red meat inspection called for all abattoirs to have vets. That was back in 1985, before BSE had first been diagnosed. Junior Agriculture Minister Donald Thompson finally gave government support to the idea and said it would be introduced for all but the smallest abattoirs. That was in 1987, and it has not been implemented.

Meanwhile the number of ministry vets who can inspect animals prior to slaughter have been cut by 20 per cent in the last six years, to less than 450.

What can consumers do?

There are few hard facts about the potential hazards of eating infected meat. From what is presently known you can minimise your risk by:

- Avoiding any meat product where the nature of the meat is not easily identifiable — eg pies, sausages, burgers, pâtés, pastes, stocks, canned meats and meat soups. Calves' brains are still permitted in human food, for example, and could be present. Some other savoury items like vegetable soups sometimes include a meat stock.
- Even red meat is a potential risk, while abattoirs remove brain and spinal cord tissue with band saws, spraying all meat with a fine aerosol of fatty brain tissue, so the ultra-cautious eater might want to avoid it.
- Equally the ultra-cautious eater might want to avoid pig and poultry meat, until suspect cattle and sheep offal is banned from pig and poultry feed. There is no evidence that pigs or poultry can develop the disease, but these animals are slaughtered soon after they reach adulthood, with little opportunity to show symptoms of any spongiform disease they may be harbouring.
- Consumers should be told that cooking does not destroy the infective agent. The cooking involved in meat canning is not sufficient either. Food irradiation (if it were permitted) would not destroy the disease.
- Milk from dairy cattle showing BSE symptoms was banned from our milk supply in 1988, but there is no control over the milk from pre-symptomatic cattle. In experiments with the sheep disease, scrapie, lymph and neural tissue has been shown to carry the disease but not muscle, udders or milk. A dairy-free diet is difficult to achieve, so the balance of risk weighs in favour of continued consumption of milk and milk products which, for children especially, can be a valuable part of the diet.
- Cautious meat lovers who still want to eat beef could search out the few sources of 'organic' beef that can be found. Because of the potential transmission of BSE from cow to calf, it is only worth paying the high premium charged if there is a guarantee that the meat comes from known pedigree stock.
- In the meantime, consumers must push for better labelling laws. At present a whole range of meat products including pork sausages, turkey burgers, chicken stock cubes, tinned lamb casserole, even instant chicken chop suey, can all legally contain beef. You might, if you search carefully, see a phrase like 'other meats' on the ingredients list. But if you are not eating at home there isn't even an ingredients list to look at.
- Lastly, there is one further measure an ultra-cautious meat-eater might want to take. Despite last November's ban on certain cattle offal being put into human food, there is still plenty of food on sale that was manufactured before this ban. Nothing was withdrawn from the shelves or warehouses last November. Canned meat products, preserved meats, instant dehydrated products and even frozen meat products made earlier may still be found in the shops.

PHOTO: ROGER BAMBER

DUMPING THE PROBLEM

What is happening to the increasing number of BSE-infected cattle carcasses (over 14,000 so far)?

Some are incinerated, some are burnt in the open. But some, with full MAFF approval, are being dumped rotting into the ground (usually after decapitation, so that the head can be taken for examination). Carcasses have been buried under MAFF supervision at landfill sites, including over 700 carcasses at a site at Everleigh, Wiltshire.

Over 300 carcasses were dumped in a licensed tip in Welford, Northants, until a public outcry about the potential contamination of water supplies alerted local councillors to the problem. They in turn pressed the local environmental health officers to negotiate a suspension of the burials.

learn from BSE

Cows may have little time for reading scare stories in the popular press. But according to US researcher Orville Schell, cattlefeed can include newspaper and cardboard, chicken litter, woodchips, sawdust and, in one trial, cement dust and, in another trial, cattle manure.

MAFF's scientific advice

For such a key ministry, combining as it does both producer and consumer interests, the quality of advice given to MAFF's decision- makers appears to be alarmingly poor. The first clinical cases of BSE were described in 1985 yet it took ministry vets over one and a half years to diagnose the disease as a form of spongiform encephalopathy similar to that found naturally in sheep, goats, mink and man.

It then took MAFF another year and a half to decide that the disease should be reported whenever it occured. Thus for three years there was no requirement for farmers to report the disease, nor for vets to notify the ministry. A lot of valuable information about how the disease was spreading was completely lost.

Only in April 1988 did the Ministry begin to seek informed professional advice, when it appointed Sir Richard Southwood and three other scientists to produce a report. This they did, though it took them ten months.

Their advice was suitably cautious — though they were perhaps a little too aware of the need to prevent public anxiety. Their general conclusions were contained in four paragraphs: one was purely descriptive; one focussed on animal feeds, and the other two start with carefully constructed soothing phrases. One reads 'Assuming there is no vertical or horizontal transmission (in cattle), the strict adherence to the regulations ... should lead to a fall in the number of new cases ... after about nine years the disease is likely to be extinct in Great Britain.' Yet in the body of the text they openly admit they do not know whether such transmission can occur and call for an extensive research programme to find out, as '... the results will have a critical bearing on whether there is sufficient understanding of the disease to be able to control and eventually eliminate it'.

The second of the two key paragraphs starts: 'From present evidence, it is likely that cattle will prove to be a "dead-end host" for the disease agent and most unlikely that BSE will have any implications for human health.' This is the one that government politicians have been so keen to repeat. But the very next sentence states, 'Nevertheless, if our assessments of these likelihoods is incorrect, the implications would be extremely serious.'

Indeed the report itself considered evidence which should have made the authors hesitate to suggest the disease would end in cattle. In laboratory conditions scrapie can be spread from sheep to goats, mink, mice, guinea-pigs and monkeys, while the human forms of the disease (CJD and Kuru) can be spread to mink, goats, guinea-pigs, mice, hamsters, cats, monkeys and apes.

Following the publication of the Southwood Report in early 1989 the Ministry announced the formation of an advisory committee under Dr David Tyrell, Director of the Common Cold Unit at Salisbury. Whether or not the minister has been acting on Dr Tyrell's advice during the subsequent year and a half is uncertain. But given the quality of the advice it is quite possible the minister himself doesn't know whether he is acting on it or not!

Take for example the vital question of whether cattle can pass the disease on to their offspring. Here is the Tyrell Committee's findings on the matter, published this May:

'The Spongiform Encephalopathy Advisory Committee under Dr David Tyrell says that there is no scientific evidence currently available to support official advice against the use for breeding of the offspring of cows suffering from BSE, even if infection can pass down from cow to calf, a possibility that cannot be excluded at present. Decisions about breeding should be left to individual farmers and their veterinary advisers.

'Because the likely origin of the epidemic has been eliminated, the outbreak in cattle will be self-limiting unless infection can be spread freely between cattle — in which case restricting breeding would be pointless. So at best, restricting use of the offspring of BSE cattle would accelerate the decline that was likely in any case. Because of the possibility that sub-clinically infected animals might infect their offspring, not all potentially infected calves might be identified, which would reduce any benefit. Other possible consequences might even be unhelpful, since it could lead to the increased dispersal of infected animals to other herds, and to the loss of valuable genetic material. We support MAFF's intention to impose more stringent requirements to secure better records of cattle, their offspring and their movements. In any case, vertical transmission, if this is found to occur, would make no difference to the remoteness of the hazard for humans.

'This viewpoint may need to be revised in the light of new scientific information.'

This must surely be a candidate for the Caroline Walker Sock and Sausage Award for unhelpful waffle.

Ecological consumers call for a new European agenda

Thirty-six organisations from 14 countries met in April, in Bonn, to discuss how European consumers will be affected by 1992 and the removal of barriers to trade within the European Community. It was, reports Tim Lang, an extraordinary meeting.

Throughout Europe in the 1980s new consumer groups have sprung up — most recently in Eastern Europe. What distinguishes this new wave of organisations from the older consumer organisations is their questioning of the more conventional 'value for money' consumer approach. The Bonn meeting agreed that comparison of products should include not just economic, but also environmental and long term public health (as opposed to immediate health and safety) criteria.

In the 1980s, this more critical approach has been enormously influential — spawning many responses, from 'green consumerism' through to new forms of anti-consumerism. It is undoubtedly behind the current debate about the so-called Fourth Hurdle. This term, heard increasingly frequently, signifies growing consumer concern about the social, environmental and economic impact of products. The new eco-sensitive consumers ask questions like: is this product or technology needed? By whom? For what?

The Bonn meeting, in its Declaration, urged the new consumer movement to increase its international liaison. 'Networks are not enough,' said one participant. 'If we share the same problems, we can only tackle them by sharing the same information.' The meeting agreed that the fundamental changes in Europe — 1992, the re-orientation eastwards, and the much-vaunted concern for quality of life — all underline the need for the new wave consumer groups to experiment with better liaison. Fax technology helps, of course!

If the Bonn meeting is anything to go by, the 1990s will undoubtedly see radical changes and increasing pressure for improvements in democracy and decision-making. Even the older consumer groups are beginning to take up the new wave's concerns. In support of these positive trends, the Bonn meeting agreed to improve liaison between groups on a number of key ecological consumer issues. These include:

- **Pesticides and dangerous chemicals** A working group set up in Bonn has already published a detailed *European Consumers Pesticide Charter*, with support from ten European organisations.
- **Biotechnology in food production** Bovine Somatotropin (BST) has yet to be given clearance in the EC. At the last vote, only the UK was in favour of it, and since then there have been further developments in the USA with two milk-producing states banning BST temporarily.
- **Irradiation** (on which readers of *The Food Magazine* are well versed).
- **Product liability** The Bonn meeting agreed to urge all European consumer groups to push for tougher laws to protect consumers.
- **Consumer information** Although the EC is considering an environmental labelling scheme, the Bonn meeting felt uneasy about the 'hype' factor in eco-labelling. West German participants reported their mixed experience with the 'Blue Angel' scheme, an 'environment-friendly' symbol used on supermarket products. Unless properly enforced and independently assessed, such schemes can be a license to misinform consumers.

Copies of the *Bonn Declaration of the Meeting of Ecological Consumers Groups* published on 22 April 1990, and the *European Consumers Pesticide Charter* published on 31 May 1990 are obtainable at £1.00 each. Send a large stamped addressed envelope to Parents for Safe Food, Britannia House, 1-11 Glenthorne Road, London W6 0LF, UK.

Eastern promise

The green movements of Eastern Europe have had a long, uphill struggle. Simon Wright took a day out in Prague with Dr Lida Ruskova, a leading figure in the Czechoslovakian 'Friends of Natural Foods' movement.

Dr Ruzkova's obvious enthusiasm showed as she explained how she first became interested in diet when she was prescribed cortisone drugs to treat her eczema. Knowing the adverse effects of the drugs she had looked for an alternative treatment which she found in a macrobiotic diet. Now her enthusiasm is being used to fight for a healthier diet for all Czechs, through the campaigning group, Friends of Natural Foods.

Before the revolution last November, Dr Ruzkova explained, the Friends of Natural Foods were prevented by the Czech government from publicising their meetings. This hostility stemmed from the Friends' criticism of the Czech national diet, based on meat and dairy products. This has contributed to Czechoslovakia having some of the highest European rates of coronary heart disease and cancer of the large bowel. Apparently even her support for vegetarianism has led to Dr Ruzkova being branded a subversive by some of her medical colleagues.

The Friends of Natural Foods was formed in 1981 to campaign for better food in Czechoslovakia. The Friends are concerned with both the nutritional implications of the national diet and the ecological implications of an agricultural system heavily dependent on artificial fertilisers and pesticides. Their suggestion that over-use of pesticides was causing biological problems has been criticised for being unpatriotic.

But all this, she feels, is changing. I met Dr Ruzkova on One Earth Day (22nd April), a day when ecology groups all over the world held meetings and demonstrated their concern for the state of the planet. This year, for the first time, 'green' groups were permitted to take to the streets of Prague to voice their concerns. A Friends of Natural Food stand proved very popular with passers-by eager to sample the healthy foods on offer and take the information and recipe sheets available.

Poor get little allowance for food

Sean Stitt, lecturer at Newcastle Polytechnic, examines the food allowances estimated in current benefit levels.

In the Autumn 1987 edition of the *London Food News*, I wrote an article on the food element in the Supplementary Benefit (SB) scale rates which exposed the inadequacy of benefits to meet even basic minimum dietary requirements. I showed that the amounts 'allowable' by the then DHSS for nutritional needs in the scale rates from November 1985 were: £11.30 per adult; £5.50 per 16-17 year old; £4.40 for an 11-15 year old; and £3.00 for a child aged under 11. For a family of two adults and two primary school children, their food allowance at that time would have been £28.60 per week.

In 1979, another branch of the DHSS produced the booklet *Recommended Daily Amounts of Food, Energy and Nutrients for Groups of People in the UK* (commonly known as the RDAs). At 1986 prices, the London Food Commission suggested that the same family would need at least £48.04 a week for a low-cost diet to meet these RDAs. Thus the SB food element was less than 60 per cent of the estimated figures needed to satisfy the dietary requirements of the poor.

In February, 1987, a study by community dietitians Katy Watt and Fiona Smith planned a week's menu for a family of four in Paisley in Scotland, using 'economical, everyday foods ... (taking) great care to plan and prepare the meals as economically as possible.' Their diets also conformed to the RDAs and to the NACNE guidelines. The minimum cost for the whole family was put at £45 per week. At that time, such a family would have received in their SB entitlement £30 per week for normal food requirements — only two-thirds of the necessary minimum estimated figures.

The consequences of such income deprivation have been well documented — the London Food Commission's *Tightening Belts; Nae Bread* by the Argyll and Clyde Health Board; and, *Jam Tomorrow* by Manchester Polytechnic. But what has been the impact of the changes in social security (1988/9) when SB became Income Support (IS) and government ministers claimed that the needs of the poor would be adequately met?

To find out, I undertook a fresh study. Firstly I identified the 'food element' in the IS scale rates based on the proportion it represented of the SB levels for different individuals and families. Secondly I up-rated the nutrition budget standards to April 1990 prices. Then I compared these in the same way as in the earlier study. Once again the stark inadequacy of the new benefit levels to afford modest and minimum nutritional standards was revealed.

The LFC's November 1986 estimate of the minimum dietary costs of a family of four was £48.04 a week. At April 1990 prices that has risen to approximately £59 (based on increases in the food element of the Retail Price Index). The price of healthier foods has, if anything, increased at an even greater rate than the price of less healthy foods. At November 1985 the basic SB food element for this family was approximately 45 per cent of their total weekly benefit entitlement. Converted into IS at April 1990, this would represent £40.34 (ie 45 per cent of £89.65). Thus the food element in the poor relief scales in April 1990 was still only 68 per cent of the estimated minimum amount required to meet the government's own nutritional guidelines.

Watt and Smith's February 1987 estimates of the minimum nutritional costs for a family of two adults and two children, aged seven and 13, at April 1990 prices, would be approximately £53. The corresponding IS amounts would be £39.18 — or 74 per cent of Watt and Smith's estimated minimum weekly requirement for food.

Thus it is quite clear that, for all the government's claims that the new system targets those most in need, little has changed. In particular the inability of the poorest sections of the population to afford basic, nutritionally balanced food, which conforms to the government's own guidelines, is virtually as stark and gross now as it was under SB. In the Green Paper to the Commons in 1985 on restructuring the social security system, Norman Fowler wrote: 'There have been many attempts to establish what would be a fair rate of benefit for claimants. But it is doubtful whether an attempt to establish an objective standard of adequacy would be fruitful.' Instead, as we've shown, the government seems to have set new standards of inadeqnacy.

Dough-less need a rise to afford nourishing food

Low income families *can* budget their expenditure effectively, but a lack of cash means having to buy not only cheaper foods but foods that reflect worse value for money. So argues a report by Jo Malseed of the University of Lancaster. Based on surveys of subsistence families during 1987-1988, the author calls for changes in government policy combined with local support for low income families. Benefit take-up should be encouraged and improved and planning policies should give low income families access to low-cost, nourishing food, the report concludes.

Bread Without Dough: Understanding Food Poverty by Jo Malseed, January 1990. Available from Horton Publishing (tel: 0274 306245) price £65 (£15 for professionals in health and education services).

Welsh Consumer Council calls for cheaper, healthy food

A survey by Cyngor Defnyddwyr Cymru, the Welsh Consumer Council, found that consumers choosing a 'healthy' diet would have to pay more for their food and would have to search harder to find it, especially in rural areas.

The Council's report *Shopping for Food* studies prices and availability of 14 'healthy' foods compared with 'standard' equivalents in various parts of Wales. In all but three cases, the healthier items were more expensive. The report also found that saving money by going to large supermarkets may not be feasible for people in rural areas.

Chair of the Council, Ms Rhiannon Bevan, called for an increase in benefit levels for low income families and for health workers to work closely with grocery retail outlets. 'Low income shoppers make their choice of food on the basis of cost, rather than the information available about healthier ways of eating. Low income families should not be prevented from enjoying a healthy diet, either on the basis of cost or restricted choice.'

Shopping for Food, available from the WCC, Castle Buildings, Womanby Street, Cardiff CF1 2BN, price £3.

More than a serv

This summer sees the publication of The Food Commission's long-awaited guidelines for caterers wanting to increase their service for black and ethnic minority customers. Tim Lobstein dips into the report and finds a world of culinary culture.

There is certainly a lot more to catering for minority tastes than simply serving up a dish of rice and peas. These caterers' guidelines examine in detail a wealth of different cuisines — not as you might find them in their original country, nor as you might see them reflected in glossy recipe books, but as they are actually found and experienced in communities throughout Britain.

Author Sara E Hill, herself a Spanish-speaking Colombian settled in London, won a grant from the Commission for Racial Equality to research minority eating habits with the London Food Commission. Her work has resulted in a unique collection of information and suggestions which will prove invaluable to anyone involved in serving meals, snacks or drinks, especially to clients from multi-cultural backgrounds. Hospital services, school meals, welfare and social service catering will all benefit, as will factory and office canteens and catering students.

For each of the cultural groups she examines, Sara Hill gives details of the sorts of dishes that would be expected to make up a meal, a range of typical snack foods and drinks, and the special dietary needs and beliefs that group may have. She then looks at the different groups' specific recipe ingredients and cooking methods including tips on cooking implements, the use of spices and the ways in which alternative ingredients can be used if traditional ones are not available.

Users of St Thomas' Hospital, London, are being encouraged to try the extended menu now available, featuring a range of dishes from black and ethnic minority cuisines.
For more details contact.
Pauline Walfall,
Consumer Affairs,
St Thomas' Hospital,
London SE1
(Tel: 071-928 9292).

PHOTO: VICKY WHITE/PHOTO CO-OP

ing of rice and peas

This wonderful compilation forms the heart of the report, but there is plenty more besides. The theory of multicultural catering would mean little without useful guidance to everyday practice. Alongside details of the cooking and serving needs of people from different communities, there is page after page of addresses of organisations which can give further advice and information, as well as suggested sources for ingredients and even firms who can offer made-up bulk meals to order.

Chapter Five lists numerous pilot schemes where multicultural catering has been tried and a range of lessons has been learned. In each case the contact names and addresses are given.

The crowning glory of this substantial report must be the glossary which lists dozens of terms used in different communities for food implements and ingredients. This alone is worth the price, for it demonstrates the breadth and variety of opportunities an enterprising caterer could develop. In a concentrated form it reflects the key to the whole report: that once a caterer actually starts to implement a multicultural policy, he or she will discover the vast resources and fascinating potential that minority cuisines can offer. The conscientious caterer will realise, within minutes of starting this report, that simply adding rice and peas to the menu is not only an insult to the customers but a sign of ignorance of the world of multicultural cooking in Britain today.

More than Rice and Peas: Guidelines to Improve Food Provision for Black and Ethnic Minorities in Britain, by Sara E Hill. Published by The Food Commission (UK), price £17.00 inc p&p, available from Food Commission Publications, 88 Old Street, London EC1V 9AR.

GET INVOLVED

The Black and Ethnic Minorities Food Working Party, initially set up by the London Food Commission, continues to promote better food awareness and multicultural approaches to food issues.

If you would like to join or want further information, please contact:
Sara E Hill
The Black and Ethnic Minorities Food Working Party,
c/o National Community Health Resource,
57 Chalton Street,
London NW1 1HU.
Tel: 071-383 3841

A world of taste

Here we reprint a small section from the glossary in 'More than Rice and Peas'.

BANANAS — some of the varieties are:
- Gros Michel, Governor or Lacatan — the largest and often cooked as a vegetable when green
- Matabooro — has a red skin and is usually cooked before eaten
- Morocco plantain — cooked before eaten
- Plantain — always cooked
- Silk — eaten raw when ripe
- Sucrier — the smallest kind eaten raw when ripe, cooked when green

BAND GOBI — cabbage.

BANH BAO — Vietnamese term for wheat flour buns filled with meat or vegetables.

BEAN SPROUTS — can be sprouted from mung beans (Chinese bean sprouts), also aduki beans and chick peas.

BEIGELS — or Bagels, are ring shaped rolls of a sweetish, slightly heavy bread. They are eaten at traditional Jewish funeral feasts.

BENGAL GRAM — Pulse called also channa or chick peas. Used to prepare dhals, then is called channa dhal or bengal gram dhal. When roasted is called sakala channa.

BENSAU — chick pea/gram flour.

BHAJI/S — dry vegetable dishes eaten by Bangladeshi and Bengali communities. One or more vegetables are fried very quickly in a little fat and then allowed to stew in their natural juices. A very small amount of water may be added to keep it from burning. Any vegetable can be prepared in this way.

BHINDI — or bindi, called also lady's fingers, or okra. Has a bitter taste when uncooked.

BITTERGOURD — or karella, vegetable (Indian cuisine).

BLACK — term used to refer to people whose skin is black, regardless of whether they have been born in the UK or not. It is also used in the general 'political' sense to define all those people who are non-white and do not belong to the ethnic majority (white indigenous population). Some people are very sensitive to being called 'black' and may object.

BLACK AND ETHNIC MINORITIES — this term is used throughout the text in these guidelines. It refers to all those people who consider themselves 'black' as defined above and also people from ethnic groups, who do not identify themselves as 'black', but whose ethnic origin and differences in culture, religion and language with the indigenous population makes them share a common experience of discrimination and inequality.

BLINZES — pancakes stuffed with sweet or savoury fillings.

BOODIC — Indian marrow.

BODI — white cowpeas, or string peas. Cooked like a vegetable when green and as peas when dried.

BOMBAY MIX — Mixture of fried chick peas and lentils used as a snack.

BORTSCH — or borsch, soup made of beetroot and cabbage (Jewish, eastern Europe cuisine).

BRINJAL — Asian term for aubergine or egg plant.

BULLA — a round flat cake made with wheat flour and molasses or dark brown sugar (Afrocaribbean cuisine).

BUN — sweet bread, prepared with aniseed oil, cloves and allspice (Caribbean cuisine).

BUSH MEAT — term used by African people to describe game, rabbit, duck, grass cutter.

BYRIANI — pilau or patna rice boiled with spices, small quantities of lamb, beef or chicken, or vegetables until dry.

CCT — compulsory competitive tender. See chapter VI.

CALLALOO — eddo or dashen leaves very similar to spinach.

CANTELUPE — or cantaloup/e. Fruit, small round ribbed melon with orange flesh, grown in the Caribbean.

CARIBBEAN — this term refers to people born in any of the Caribbean islands, or to their descendants, regardless of their African, Asian, Chinese or European ascendancy. See also Afro-Caribbean. The Caribbean is made up of the following countries: Antigua, Barbuda, Commonwealth of the Bahamas, Barbados, Belize, The Virgin Islands, The Dominican Republic, Grenada, Guyana, Jamaica, Montserrat, St. Christopher-Nevis, St. Lucia, St. Vincent and The Grenadines, Surinam, Trinidad and Tobago, The Turcs and Caicos Islands.

CASSAVA — is also called manioc or camioc.

CAVALI — fish.

CHA GIO — Vietnamese term for a dish like a Chinese spring roll.

CHALLAH — special loaf of bread for Sabbath and festivals, (plural Challot) used by the Jewish community.

CHANNA — pulse also called bengal gram or chickpeas. See bengal gram definition above.

CHAPPATIS — rotali or roti, are circles of soft unleavened bread made of wheat flour, traditionally cooked in a hot plate. They are used to accompany curries and dhals.

CHAROSET — mixture of nuts, fruit and wine eaten at Passover Services by Jewish people.

Going organic in the 1990s

The Soil Association aims to convert 20 per cent of Britain's agriculture to organic methods over the next decade. A realistic scenario or impossible pipe-dream? Nigel Dudley presents the Soil Association's case.

Judging from recent media coverage, you might well think that organic agriculture was already well-established in Britain. Unfortunately, you'd be wrong. Although land under the Soil Association Symbol has increased sevenfold over the last five years, organic farms still cover less than one per cent of agricultural land. Sadly the growth in consumer demand is being met mainly by imports.

So what's going wrong? Organic produce already represents a buoyant market, with support from most of the major food retailers. Organic farming is seen by policy makers as a solution to a range of agricultural 'problems', such as nitrate pollution. And the government has announced extensification grants for conversion to an organic system. There ought to be floods of farmers wanting to change.

The truth is that, despite high interest amongst farmers, there are still enough problems, uncertainties and plain lack of information to prevent most farmers from making the effort. For this reason, the Soil Association has launched a new campaign: The 20 per cent Organic by the Year 2000 Campaign.

Why 20 per cent?

People are divided as to whether they think the goal of 20 per cent organic by 2000 is impossibly optimistic or overly cautious. But the figure wasn't just plucked out of a hat. It is roughly the market share which *retailers* think could be organic by the turn of the century. Admittedly, such predictions are notoriously difficult. Consumer surveys suggest that over half the population is already prepared to pay extra for organic food. But this isn't followed through when people are actually handing over money at the cash desk. However, demand is still rising steadily and market-watchers seem confident that the trend will continue.

Twenty per cent was also chosen because it is approximately the proportion of agricultural land already facing radical changes by 2000. Nitrate sensitive areas, environmentally sensitive areas, agricultural sites of special scientific interest, set aside and extensification areas, land being managed for conservation purposes and (perhaps) land especially prone to soil erosion represents somewhat over a fifth of Britain's agricultural land. Organic production offers a positive option in all these areas.

What would 20 per cent mean?

The chemical industry has often argued that organic farming simply can't deliver and that large scale conversion would mean food shortages. These views have found echoes elsewhere, most recently exemplified by Sir Derek Barber of the Countryside Commission. However, they are gradually falling out of favour. A recent study by the National Research Council in the USA compared production from organic and non-organic farms and found little difference. In some cases output was higher on organic farms. Although these figures aren't directly applicable to Britain, they mark an interesting shift in official statistics and attitudes.

More recently, Nic Lampkin of Aberystwyth University calculated the impact of both 20 per cent and 100 per cent organic conversion in Britain. As the table shows, there are few appreciable effects for the 20 per conversion, and even total conversion doesn't have an enormous impact. Of course, these figures are preliminary. But then modern organic farming is still fairly new and yields will rise as management practices and growing techniques become more sophisticated.

Such a large-scale switch would also have appreciable effects on the environment. Charlie Arden Clarke of the Political Ecology Research Group has shown that organic farming increases wildlife and reduces air and water pollution. This view is increasingly echoed by Nature Conservancy Council staff and academics. Many animal welfare groups support organic methods (and this opens up more potential sales outlets).

However, such a conversion can only come about if the huge changes in public attitudes towards food are mirrored by both government and the major farming bodies. At the moment, despite some encouraging signs, this still seems a distant prospect. The recent vote by the National Farmers Union AGM expressing distrust of 'non-chemical methods' shows that the farming bodies themselves have a considerable task of re-education. The government too, is still tinkering with a few minor policy adjustments in the hope that the overall philosophy of chemical agriculture can be continued indefinitely. The Soil Association's campaign, which is being run in conjunction with British Organic Farmers and Elm Farm Research Centre, aims to challenge this complacency and prove that organic farming is a major policy option, and not just an idiosyncracy appealing to a tiny minority of rich consumers.

The policy document *20% Organic by 2000* is available, price £1.50 from the Soil Association, 86 Colston Street, Bristol, BS1 5BB, telephone 0272 290661.

Nigel Dudley is the project director of the Soil Association.

POSSIBLE CHANGES IN THE UK AGRICULTURAL OUTPUT OF THE 20 PERCENT BY 2000 OPTION

Land uses	Absolute change in output ('000t)	Relative change output (percentage)
Cereals	-1,472	-6.02
Potatoes	-158	-2.58
Sugar beet	-950	-11.62
Grain legumes	+162	+34.84
Oil seed rape	-106	-12.10
Milk (m litres)	-586	-3.80
Beef (GLU)	-95,752	-2.62
Sheep (GLU)	-88,840	-3.70

PHOTO V MILES/ENVIRONMENTAL PICTURE LIBRARY

CONSUMER CHECKOUT

The Food Magazine's special supplement and guide to brand name products

WRAPPING GETS RAPPED

We investigate plastic packaging materials for food

In this Consumer Checkout special investigation we examine plastic food packaging. We reveal that many substances used in plastics have not yet been thoroughly tested for safety and may be migrating from packaging into food. We ask whether proposed EC limits are tight enough to provide sufficient consumer protection.

We also take a look at how clingfilm manufacturers have responded to government warnings about migration of chemicals. We find containers for takeaway foods melting in microwave ovens. And we look at the environmental impact of plastic packaging.

Plastics are now the most important material type used in food packaging, at least in terms of contact area. New technologies such as the microwave oven have spawned new packaging concepts. Our desires for 'convenience' and for food that looks fresh yet lasts longer have led to developments such as modified atmosphere packaging for meat, fruit and vegetables.

Packaging can help to protect and preserve food and drink. It helps prevent food spoilage and provides convenience in handling. But the packaging industry says that only two-thirds of packaging is necessary for protection and hygiene.

PHOTO: V MILES, ENVIRONMENTAL PICTURE LIBRARY

Some trends are more likely to suit the needs of retailers rather than shoppers. The supermarket's need to reduce costs by stacking shelves easily and quickly may mean overpackaging and added costs for you the shopper.

Booming fast food restaurants use vast quantities of packaging materials . It may save on washing up and cut their costs, but who pays the cost of disposal of all those cartons and wrappers?

Packaging is much more than pure function, it is often the embodiment of the product itself. Not only does it contain and protect the product and ensure you can carry it home conveniently, but it gives the product its image. Just think of the Marmite jar or the Coca-Cola bottle. The image that the packaging exudes is essential in marketing the product. Indeed, many product relaunches are just a question of redesigning the packaging, to convey a new image for the contents.

Many people are now asking whether we've gone too far. Today there are few foods that aren't packaged in some way — often several times over in boxes, bottles, wrappers, plastic films, cartons and bags, which all end up in the dustbin. Overpackaging not only adds extra costs to the product but is wasteful of resources and damaging to the environment.

Here we look at plastic packaging in particular — in future issues we'll examine other packaging materials.

In this issue of Consumer Checkout we look at:

- The plastics in our food
- Additives in booze — the secret ingredients
- Up to five sugar lumps in a strawberry yogurt — we check out the children's brands
- Low calorie water?
- Functional foods — the Japanese lead the way

ALL WRAPPED UP?

MAFF's key committee on food packaging materials is its Working Party on Chemical Contaminants from Food Contact Materials. Of the nineteen individuals who sit on that committee, fifteen are employed by the industry and three by MAFF. There are no consumer representatives and with the exception of one consultant there are no independent scientific experts on the committee.

Plastics in your food

Plastics are now probably the largest group of materials used in food packaging. With over thirty types, plastics' versatility allow them to be used for bottles, tubs, bags, films, wrappers, trays and cartons. Plastics have replaced many more traditional packaging materials such as glass — even plastic ring-pull cans have begun to appear on supermarket shelves.

Plastics are chemically very complex — their exact composition is often a closely guarded trade secret. A variety of additives may be added to provide the range of properties that we have come to expect from plastics. But plastics are far less inert than one might imagine. Given the enormous amount of direct contact, interactions with food are sufficient to justify serious consideration. To date the whole science of studying migration from packaging is very complex and not fully developed, and for most of the chemicals involved, full toxicity data is not available. Much more research is needed before we fully understand how some of these materials interact with food.

Migration is usually dependent upon exposure time and temperature — and upon the type of food the packaging is in contact with. For example many chemicals have an affinity for fatty foods. Moreover testing for small amounts of unknown contaminants in food is almost impossible. As Dr Leo Katan, one of the UK's leading experts on the subject of migration has said: 'Analysing for a plastics migrant in food is like looking for — and trying to measure — a needle in a haystack, when the needle is made of straw. And the hay is rotting.'

Packaging for the microwave

The rapid growth in microwave oven sales has led to their use in nearly half of all UK households. Many new products have been developed specifically for use in microwave ovens. A large number of these oven-ready foods use plastic containers in which the food is stored and heated. But little is known about how these materials cope with microwave heating.

Polyethylene (PET) compounds have been found to migrate from microwave packaging. But higher levels of migration have been found in research by the USA's Food and Drug Administration (FDA) from dual-ovenable trays when used in a conventional oven.

Any possible risk to consumers is unclear but the independent Center for Science in the Public Interest advises that to be completely safe consumers should transfer food from dual-ovenable trays to non- plastic cookware before baking in a conventional oven.

Heat susceptors

Another microwave packaging development, the heat susceptor plate has also raised concern over its ability to withstand microwave oven temperatures. Heat susceptors are thin metalised plastic-film strips that absorb microwave energy to help brown and crisp such foods as microwave pizzas, chips and popcorn. The plates can quickly reach temperatures as high as 500°C — far higher than ever envisaged when the FDA set its guidelines.

FDA tests found that every package released chemicals into corn oil as the susceptors or other parts of the packaging partially melted. These included trace amounts of benzene, toluene and xylene (all known or suspected carcinogens) probably from the adhesives. But plastic solids were also found to migrate into the food at levels six to ten times higher than previously found. 'There is no question that chemicals end up in the food', said FDA research chemist Timothy Begley. 'It's a question of what they are and how much gets in.'

We do not know whether microwave packages here in the UK contain the same potentially harmful substances. MAFF are currently funding research into migration from PET trays and from susceptor pads during microwave cooking.

Plastics — the problems

The building blocks of plastics are simple chemicals known as monomers. These are chemically linked together by heat and pressure to form chains, or polymers, which make up the major plastics components. Polymers are generally but not always inert and usually insoluble in food. Problems can however arise with the migration of monomers which may remain unattached; or with the migration of various additives which are often added to give the plastics particular characteristics.

Monomers themselves can be extremely toxic. For example the monomers acrylonitrile (used iu ABS for margarine tubs) and vinyl chloride (used in PVC for a wide range of food containers and wrappers) are extremely toxic. In the 1970s it was found that unacceptably high levels of these monomers were leaching into food so the industry took action to reduce the residual levels in packaging materials to a level that MAFF considered safe.

A variety of additives may also be used in plastics manufacture to provide particular characteristics to the end product. These include plasticisers, catalysts, stabilisers, lubricants, release agents, antistatics, antioxidants and colourants. Some of these additives are known to migrate spontaneously. Others may interact with certain foodstuffs to leach the substance out of the packaging. The rate of migration is complex, affected by time, temperature and the nature of the packaging and food.

Not all these substances necessarily present a risk if migration occurs. But at present we know far too little about them. Much more research is required to understand fully the processes and assess the risks.

Unsafe containers used in microwave ovens

Is it safe to use any domestic plastic cartons, tubs and trays to reheat foods in a microwave? In 1987 the Australian Consumers Association reported that the indiscriminate use of plastic containers in microwave ovens was a cause for concern. They reported that the labelling of a product's suitability for use in a microwave was inadequate and it would be impossible for members of the public to know whether a product was safe.

Back in 1984 the Australian Government issued a statement recommending that only plastic containers labelled 'recommended for microwave use' be used in microwave ovens. According to this statement, containers manufactured from polypropylene, polycarbonate and polysulfonide were suitable for microwave use, while PVC, polystyrene and polyamide containers were unsuitable. No mention was made of polyethylene.

Here in the UK, MAFF has issued no guidance on suitable plastics for the microwave and there is no onus on manufacturers to label containers as suitable or unsuitable for microwave use. We believe all containers should state whether they are suitable for microwave use. If in any doubt it is always safer to use a ceramic container.

The melting take away

Consumer Checkout found take-away food in polystyrene containers was being heated in microwave ovens. The containers themselves showed signs of melting. The British Plastics Federation told Consumer Checkout that polystyrene should never be used in a microwave — it would melt, they said. Styrene is known to be a toxic carcinogen. These kinds of containers should be clearly labelled so caterers know they are unsuitable for use in a microwave.

REGULATORY CONTROL

Plastics and their uses

Low density polyethylene
Most common plastic. 90% used as packaging film (eg polythene bags, sacks and bin liners, pallet wrap, shrink film).

High density polyethylene
Bottles, crates, bottle caps and closures.

Polyethylene terephthalate (PET)
Fizzy drinks bottles, oven-ready meal trays.

Polypropylene
Tubs for margarine and salads, bottle caps and closures, film wrappings for biscuits and crisps, sweet wrappings, microwave trays for ready meals, clear jars for pickled onions.

Polystyrene
Yoghurt pots, clear egg packs, bottle caps, closures, lids, vending cups.

Acrylonitrile butadiene styrene (ABS)
Lids, tubs for salads and margarines.

Foamed polystyrene
Food trays, egg boxes, fresh produce cartons, take-away cartons

Poly-vinyl chloride (PVC)
Food trays, lids, cake and sandwich packs, bottles for fruit squash, cooking oil, mineral water, shrink wrap, clingfilm.

Although problems of migration of substances from plastics has received attention since the 1970s, UK regulatory control over the use of plastics in contact with food has remained seriously inadequate.

There are currently very few specific regulations controlling the migration of substances from plastic packaging into food. The Materials and Articles in Contact with Food Regulations (1987) merely states that these should be manufactured in accordance with good manufacturing practice, so that they do not transfer their constituents into food in quantities which could endanger human health or bring about unacceptable changes in the food. Apart from limits set on migration of the carcinogenic vinyl chloride monomer and restrictions on the use of regenerated cellulose film (RCF), these regulations place no limits on use or migration levels. So increased consumer protection in the form of legislation is long overdue. The EC is introducing a new Plastics Directive which will come into effect from January 1993. This will set an overall migration limit of 10mg/dm^2 or 60 mg/kg concentration in food for substances migrating from plastic packaging materials. Plastics will be further controlled by 'positive lists'. Any material not on these lists will be prohibited.

This new Directive aims to cover not only food packaging, but the whole range of plastics which come into contact with food, such as kitchen utensils, machines and instruments as well as food-production processors.

But while setting limits on overall migration is a step in the right direction, the EC's limits do not go far enough. Plastics are being used more and more so that even if migration levels are decreasing, overall contamination could be increasing. Migration should be kept to a minimum and more rigorous standards are not only feasible but desirable. There are too many unknowns to assume that products are safe until proven otherwise. Even today toxicity studies are often incomplete, as government advisors admit, and problems arise when extrapolating from animal tests to humans.

John Potter of Embalex International, manufacturers of non-PVC products, says there are plastics now on the market for all uses which can meet an overall migration limit of 2mg/dm^2. This lower limit would not find favour with some elements of the powerful plastics manufacturers' lobby, who he suggests were influential in persuading the EC against setting a lower overall migration limit.

Even now some plastics will only meet the new EC standards by the use of what have been described as 'fiddle factors'. This allows test results from some products to be divided by a reduction factor. Migration test results of 40mg/dm^2 become 'acceptable' when divided by a reduction factor of four, for example when using olive oil as a test simulant for fresh meat. It is assumed that the simulant is more effective at extracting migration substances than the food itself, but John Potter says he has not seen, and believes the EC has not seen, any scientific justification for these reduction factors. A number of other assumptions also place doubts on the validity of the EC limits.

So much for the limits. What about the Directive's positive list? So far this only includes monomers and other starting substances. The EC has divided these into two categories: Section A, which it fully authorises; and Section B, which it only temporarily authorises because of inadequate migration and toxicity studies. Manufacturers have been asked to supply the information within a specific period of time.

A positive list of plasticisers and other additives that may be used in significant quantities is being completed. A whole range of other substances used in packaging such as surface coatings, silicones, epoxy resins, adhesives, printing inks and products made by bacterial fermentation are yet to be included.

COT has now recommended that any new substances proposed for use in food packaging materials, be they monomers or additives, should not be utilised until proper toxicological testing and evaluation has been performed. This is a very welcome statement. For too long substances about which little is known have been allowed to contaminate our foods.

Boil-in-Bag

Boil-in bags are widely used for cooking foods such as fish blocks in sauces. Whilst temperatures are limited to 100°C migration can occur from the nylon used in the laminated packaging material or possibly from adhesives. In the USA legal limits for migration are already in place; in the UK research is still being carried out.

Irradiating plastics

Some packaging materials are already subject to irradiation — for example some plastics used for aseptic packaging. If government plans to permit food irradiation go ahead, many foods are likely to be irradiated whilst in their packaging.

MAFF acknowledges: 'Little is known about the chemical effects of irradiation on the additives used in the plastic packaging'. Whilst there is evidence that irradiation does affect packaging materials, not enough is yet known about whether irradiation may result in migration. One study on the effects of irradiation on anti-oxidant additives found that at 10kGy, the dose most likely to be used, half of the antioxidant leached from the packaging.

EXAMINING CLINGFILM

Was there life before clingfilm? Whether in the home or the supermarket clingfilm now seems indispensable. But three years ago a government report raised questions about some plasticisers used in clingfilm to produce its flexible and clingy properties. Consumer Checkout looks at how manufacturers have responded to government advice.

In 1987 the government report *Survey of plasticiser levels in food contact materials and in foods*, found that dietary intakes of one plasticiser, known as DEHA was considerably higher than for other plasticisers. DEHA was the most commonly used plasticiser in PVC films. Products such as meat, cheeses, sandwiches, cakes and confectionery were often wrapped in this film. Migration levels were particularly high with fatty foods. Individual dietary intake was estimated as high as 16mg/day — higher than some people's vitamin C intakes.

There was some evidence that DEHA caused cancer in mice, but the Government's Committee on Toxicity (COT) concluded that the cancer risk to humans was remote. Nevertheless DEHA and other related plasticisers did produce changes in the livers of test animals which caused COT concern. The committee concluded it would be prudent to avoid high intakes of DEHA.

The government advised that plasticised PVC film (clingfilm) should not be used for cooking in conventional ovens and it should not be used in contact with food in a microwave oven. Clingfilm and microwave oven manufacturers were advised to provide clear information and instructions on their packaging and literature.

While attention focused mainly on DEHA because of its apparent high rate of migration and high intake levels, COT also pointed out that the toxicological data on other currently used plasticisers was incomplete and inadequate. Manufacturers sought to introduce alternative cling-films for use in microwave ovens, such as VDC copolymer films (containing the plasticiser ATBC). COT warned: 'Given the lack of toxicological data, there is no evidence from which to conclude that films containing ATBC are likely to be safer for microwave oven use.' One MAFF-funded study found that up to 51 per cent of ATBC migrated from VDC co-polymer films when used in a microwave oven, producing contamination levels of up to 80 mg/kg.

Research by PVC clingfilm manufacturers in 1986 found all the non-PVC (polyolefin) films they tested melted when wrapped around sausages cooked in a microwave oven. PVC films exhibited only a small degree of breakdown by comparison.

Since the government report PVC clingfilm manufacturers have generally moved away from using DEHA plasticisers in domestic wraps to others for which migration is slower and less complete. But when used at higher temperatures in a microwave oven these plasticisers may migrate just as quickly.

Supermarkets

Many supermarket delicatessen counters no longer use PVC wraps. But there has been little change in the films used for automatically wrapped meat products.

PVC wraps used for this purpose are generally thicker and contain more plasticisers. But retailers have been reluctant to invest in new packaging machinery that a change in wrap would require.

WE CHECK OUT THE BRANDS

To see how manufacturers and retailers have responded to government advice on clingfilm, Consumer Checkout looked at 21 different plastic clingfilms and wraps now on the market. We found that all the products we looked at did give some information, but in some cases this was confusing and possibly misleading.

It is important that labelling should give clear advice on correct uses of a product as well as warning against situations to be avoided.

This isn't always the case. Londis Clingfilm says it is not recommended for direct contact with food during long-term cooking. But we felt it was unclear whether this product was safe to use in a microwave oven or not. Several products say they are suitable for covering foods while re-heating in a microwave oven but are not suitable for *cooking* in a microwave oven. This is potentially confusing as many people are likely to be unaware of the difference between re-heating and cooking foods in a microwave.

Two of Woolworth's products, Waveware Purecling and Purecling Film, claim they can be used in microwave ovens but are not suitable for temperatures above 100°C. However it is quite possible that temperatures in an efficient microwave oven may well exceed 100°C for some foods. Cooks are unlikely to know when this will occur.

Superdrug Clingfilm said it was ideal for picnics and parties and conld be used for food — but it gave no indication as to whether it was suitable for wrapping fatty foods or for use in a microwave oven.

Clingfilm should not be used in a conventional oven, but not all the products warned against this.

Only four out of the 21 products identified the plastic material used in the wrap. A further seven claimed to be non-PVC bnt gave no indication of what they were made of. The remaining ten gave no information on the kind of plastic used.

Two of the products made claims that we would suggest are confusing or meaningless. Woolworths Purecling said it was 'EEC approved for food use'. Boots Clingfilm advertised its 'extra safe formula', while adding elsewhere on the pack that it was not suitable for cooking foods in a microwave oven.

Consumer Checkout acknowledges that manufacturers and retailers of clingfilm have sought to provide consumer information. But in many cases there is plenty of scope for clearer information to ensure products are used safely.

Clingfilm labelling survey

Consumer checkout examined over twenty cling film packs and found great variation in the guidance and warnings given:

PRODUCT	TYPE OF PLASTIC	LABEL GUIDANCE	LABEL WARNINGS
Gateway 'Horizon'	not stated	Suitable for use in microwaves, to cover dishes and cover plated meals during reheating.	It is not recommended to use this film in direct contact with food during microwave cooking. Conforms to H M Government regulations.
Sainsbury 'Clingfilm'	PVC	Use with plastic/paper containers. For general food use.	For covering fatty foods use Sainsbury's Food Wrap. Can be used for defrosting/reheating food in microwave ovens but for cooking use Sainsbury's Microwave and Freezer Wrap.
Sainsbury 'Food Wrap'	Non-PVC	Suitable for covering and wrapping foods with a high fat content, such as meat, cheese and dairy products. Ideal for use in the fridge. For general food use.	Do not use in conventional or combination ovens. Do not use in conventional, microwave or combination ovens.
Sainsbury 'Microwave and Freezer Wrap'	Polyvinylidenechloride (PVDC)	Specially formulated for microwaves. Ideal for freezer to microwave cooking. For general food use.	Do not use with microwave browning units, combination or conventional ovens.
Tesco 'Microwave and Freezer Film'	not stated	Safe for use in microwaves. Food can be transferred straight from freezer to microwave.	Do not use with microwave browning units, combination or conventional ovens. Do not use in microwave or conventional ovens.
Tesco 'Non-PVC Clingfilm'	Polyethelene film not containing PVC	Suitable for wrapping cheese, chicken, sandwiches etc. Use to wrap food for storage in the fridge, cover and wrap sandwiches and cakes. Safe for use with high fat content foods.	Do not use in microwave or conventional ovens.
Tesco 'Clingfilm'	not stated	Use in fridge, cover salads, leftover fruit and vegetables.	Do not use to wrap food with a high fat content.
Marks and Spencer 'Perforated Clingfilm'	not stated	Use for wrapping and covering food to be stored in or out of the fridge. Use as a splash cover during microwave defrosting and reheating	Use in freezers for brief periods only. Avoid direct food contact by microwave ovens as the film may melt. Do not use in conventional ovens.
Woolworth 'Clingfilm Non-PVC'	Non-PVC	Suitable for general use in a microwave, use for defrosting or reheating.	When cooking use for covering container but do not use for wrapping or lining dishes. Not for use in conventional ovens.
Waveware 'Purecling'	Non-PVC Contains no plasticisers	Microwave, freezer, kitchen use. Microwave: use for covering and reheating plated meals. For use in the fridge/freezer: double wrap.	EEC approved for food use. Not for use with a browning unit, hot fats/sugars or where temperature will exceed 100°C.
Woolworth 'Purecling film'	Non-PVC Does not contain any plasticiser	Suitable for microwave use and covering food during cooking.	Not for use with microwaves with a browning unit. Not for use in a conventional oven or with hot fats or sugars or above 100°C.
Woolworth 'Freezer & Microwave Purecling'	not stated	For use in microwave for covering containers and reheating plated meals.	Do not wrap around food during cooking. Not for use in conventional ovens or under the grill.
Polylina 'Microwave & Freezer Wrap'	not stated	Designed for use between –40°C and 140°C and can be transferred straight from freezer to microwave.	Do not use in gas, electric or combination ovens, or microwaves with browning units.
Superdrug 'Clingfilm'	PVC free	Keeps food fresh and contains food odours. Ideal for picnics and parties. For food use.	(None)
Superdrug 'Clingfilm, PVC-free'	PVC free	Suitable for use in fridges. Suitable for wrapping all foods including those with a high fat content.	Allow hot dishes to cool before wrapping. NOT suitable for freezers, microwave ovens or conventional ovens.
Co-op 'Non-PVC clingfilm'	Polyethylene, free from plasticisers (low density polyethylene PE petroleum-based)	For food use and wrapping. Use for covering and wrapping food for storage in fridges/freezers.	Not for use in microwaves, combination or conventional ovens or with microwaves with browning units.
Londis 'Clingfilm'	not stated	Suitable for reheating and defrosting in the microwave.	Not recommended for direct contact with food during long-term cooking. Not for use in conventional ovens.
Boots 'Clingfilm - extra safe formula'	not stated	Low migration film. Safe for use with all foods including those with a high fat content, eg cheese, bacon etc. For food use: Seals in freshness and flavour without tainting.	May be used for covering meals for reheating purposes ONLY in a microwave oven. Not suitable for use in electric or gas ovens.
Safeway 'Microwave & Freezer Wrap'	not stated	Reheat food straight from freezer. Specially designed for microwave ovens. Suitable for freezer use. Keeps flavours and odours out. Designed for use between –40°C and 140°C.	Not for use in gas, electric, combination ovens or microwaves with a browning unit.
Safeway 'Clingfilm Food Wrap'	not stated	Ideal for fridge, suitable for general use. In microwaves use for defrosting or reheating.	When cooking, use for covering the container but not wrapping food or lining dishes. Not for use in conventional ovens.
Safeway 'Perforated Clingfilm non-PVC Food Wrap'	Non-PVC	Suitable for wrapping all foods. Helps retain freshness, flavour and smell of foods. Ideal for picnics and in the fridge.	Not recommended for use in microwaves or conventional ovens.

Plastics and the environment

We throw out 18 million tonnes of household waste a year. The government has said we should aim to recycle half of all household waste in the next ten years. Fine sentiments but on our present record it's an unrealistic target. Despite consumer willingness, environmental groups claim government and industry have been slow, compared with our European neighbours, to support the schemes that would be needed to achieve this target.

There is no such thing as truly environmentally-friendly packaging — all packaging uses resources and energy in its production and disposal. Consumer Checkout would like to see supermarkets adopt a minimum packaging policy and refuse to stock goods from manufacturers that are over-packaged.

Recycling plastics

Plastics are fairly stable and inert and will not readily degrade when disposed of. Indeed the plastics industry say a benefit of plastics is that they provide stability to landfill sites.

Plastic's basic raw material, oil, is a finite resource. Friends of the Earth say the energy and raw materials used in the production of plastics should not be wasted by burial in a landfill site. Sadly, UK plastic recycling schemes are in their infancy, with only a handful of pilot schemes for recycling plastics from domestic waste. Consumer demand has led to a few supermarkets now providing collection points for the recycling of plastics.

Manufacturers who put recyclable logos on plastic bottles are generally misleading shoppers — the bottles will still end up on rubbish dumps. Even burning plastics for energy production can cause air pollution and there are particular problems with some plastics such as PVC (see box).

The potential for collecting and recycling plastics could be greatly improved if products were designed to take into account their final disposal. Making plastic bottles from single polymers, including the base, body and cap, would ease sorting for potential recyclers. So would labelling of the plastic type on the packaging.

PHOTO: V MILES/ENVIRONMENTAL PICTURE LIBRARY

Biodegradable plastics

Environmental groups claim these are misleading and don't get to the root of the problem. The promotion of degradable plastic encourages a wasteful, throw-away culture rather than putting more effort into possible re-use and recycling.

Tests on photo-degradable plastic show that the break-down process is very slow except in exceptionally sunny conditions. So-called biodegradable plastic using starch to bind the polymers together, leaves the plastic intact when the starch degrades.

Sources for this report include:

Migration of Substances from Food Contact Materials into Food, *Food Surveillance Paper No 26*, HMSO, 1989.

Survey of Plasticiser Levels in Food Contact Materials and in Foods, *Food Surveillance Paper No 21*, HMSO, 1987.

How safe are plastic containers? *Choice*, Australian Consumers' Association, July 1987.

Commission Directive relating to plastics materials and articles intended to come into contact with foodstuffs (Directive 90/128/EEC). *Official Journal of the European Communities*, 21 March 1990.

US *Federal Register*, Vol 54, No 173, September 8, 1989.

Nutrition Action, Jan/Feb 1990, Center for Science in the Public Interest, Washington, USA.

PVC TO GO?

European consumer and environmental organisations are calling for PVC plastics to be replaced with more environmentally friendly plastics. From 1 July this year Swedish industry has agreed to phase out PVC packaging. Austria is also proposing a ban on PVC packaging, and the Dutch are withdrawing PVC films from September this year. Sweden also prohibits the use of the toxic heavy metal, cadmium, which other countries sometimes use as a stabiliser and pigment in some plastics.

According to the German consumer and environmental group, Katalyse, a growing catalogue of environmental and health problems are associated with PVC. They are calling for more re-usable packaging and for plastics such as PVC to be replaced by more environmentally friendly types such as polyolefins (polyethylene and polypropylene).

They say PVC manufacture uses 25 per cent of the world's chlorine, the production of which creates serious air and river pollution. In Germany whilst PVC accounts for less than one per cent of household rubbish, incineration of this waste accounts for between 50 and 80 per cent of the chlorine released during all rubbish combustion.

Dioxins, which are some of the most toxic substances known, have also been associated with the burning of PVC waste, although the plastics industry deny the link with PVC.

PVC is also particularly difficult to recycle. Katalyse report that during the decomposition process large quantities of air pollutants, dioxins and furans are created. Plasticisers are now widely found in the environment and waste disposal of soft PVC is expected to add to this pollution.

Only two per cent of polyolefin plastics contain additives, compared with up to 50 per cent for PVC. Heavy metals, catalysts and softeners are not generally used in PET and pollution from combustion is much lower with no production of dioxins and furans.

Katalyse say polystyrene is not a suitable substitute for PVC and consumers should beware manufacturers' 'PVC-free' claims when polystyrene is used as a substitute.

Source: *Katalyse Nachrichten*, May 1990. Katalyse, Engelbertstr 41, 5000 Koln, Germany

Consumer Checkout takes a close look at what you're taking off the shelf

Additive cocktails

We check out additives in booze

Unlike most packaged foods, alcoholic drinks carry no ingredient labels on their bottles or cans. Indeed, where other countries require a declaration concerning one ingredient — sulphites — UK importers cover over the offending information with a secondary label, denying consumers even that crumb of knowledge.

Despite legal requirements to ensure packaged foods are properly labelled with a list of ingredients, there is still a large part of the modern food store where no ingredients have to be declared: the alcoholic drinks section. Soft drinks must show their contents; low-alcohol drinks are labelled; but full-strength drinks can keep their secrets to themselves.

However, the growth in the market for organically-grown wines and the long-running real beer campaigns have together raised drinkers' awareness of the potential cocktail of chemicals they are sold by the glassful. Two recent studies of the drinks industry give an insight into the history and current practices of a multi-million pound industry.

Take cider. Once a simple fermentation of windfalls, it now boasts the addition of sulphites (see box) during crushing and sterilisation, sorbic acid (not a known hazard) to adjust the acidity during fermentation, pectolase enzyme to clear the haze, more sulphites to clean the containers and some antioxidants to prevent its colour fading during its shelf life.

Wine enjoys even more attention from the chemical industry. Over 20 chemicals can legally find their way into wines, including colourings such as cochineal (a red dye derived from insects) and ammoniated caramel, as well as the sulphites which find their way in during the mashing of grapes, the racking of the wine and the bottling.

But it is probably beer where the most complex cocktails can accumulate. Kilning and malting may include hydrochloric acid, and/or caustic soda, the mash tun may include sulphuric acid, plaster of Paris and Epsom salts. Ammoniated caramel gets thrown in to colour the mix, along with gums and seaweed-derived salts to clear away the haze, and the anti-foaming agent dimethylpolysiloxane which is added during fermentation. Sulphites, or sometimes benzoates — known to provoke intolerance and allergic reactions — are added as the mix is put into the casks.

Last night's hangover may simply be from too much alcohol, but the chances are that it came from ingredients that didn't have to be there at all. There are many reports of people suffering bad hangovers from low-alcohol or alcohol free beers, which contain most of the same additives. Without proper labelling, though, none of us will know what to watch out for.

■ *Name Your Poison: A Guide to Additives in Drinks* by Ted Parratt, (Robert Hale) 1990, and *Additives, Adulterants and Contaminants in Beer* by Jeffrey Patton, (Patton Publications) 1989.

Diet water

Being launched in the USA — so not far from our shores too — is a new concept for the health conscious: a bottle of 'light' water.

Light (or 'lite') products usually mean reduced calories but there is no legal definition of lite, and an enterprising Brazilian, Edson Queiroz, has spotted a gap in the bottled water market for his Minalba Light water.

While Europeans value their spring-bottled, mineral-rich waters, Minalba Light boasts lower calcium, lower chloride and fewer dissolved solids than competing brands. 'Americans drink water for what's not in it' quipped Queiroz.

SULPHITE HAZARD

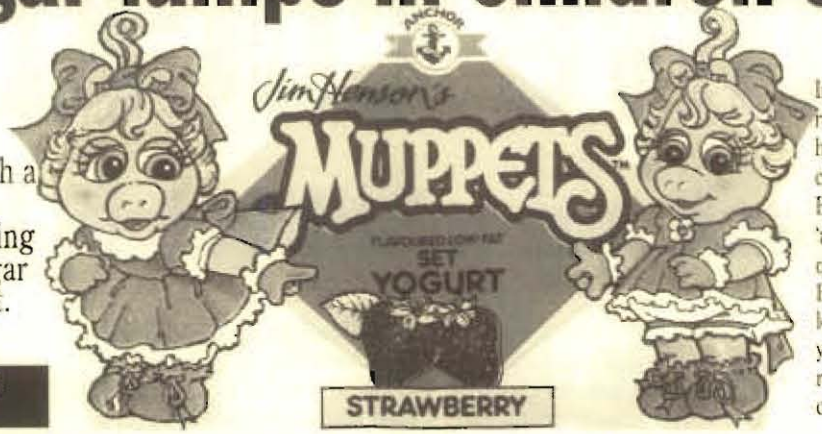
The only permitted food additive known to have caused death, sulphur dioxide — one of a family of sulphite additives — is used widely in beverages to sterilise containers, inhibit yeast growth and prevent colours from fading.

Sulphites are known to provoke asthma attacks in up to ten per cent of asthma sufferers. Highly susceptible individuals have to learn what to watch out for — and several deaths from fatal attacks have followed the consumption of sulphite-sprayed food in US restaurants.

Recent US legislation now requires the labelling of alcoholic drinks with the words 'Contains Sulphites' — but drinks imported from the USA into the UK often have these labels removed or covered over (see *The Food Magazine*, Issue 4).

Five sugar lumps in children's yogurt!

Think healthy, think yogurt. But are children's yogurts such a healthy choice? We found yogurts containing up to five lumps of sugar and many with no fruit.



Muppets yogurt with fruit on the label but not in the pot.

HOW THE STRAWBERRY YOGURTS COMPARED

Brand	*Manufacturer*	*Estimated added sugar in sugar lumps (2.5 grams)*	*Fruit*	*Thickeners/stabilisers*
Munch Bunch (set)	Eden Vale	over 4	No	none
Munch Bunch (stirred)	Eden Vale	over 3	Yes	modified starch
Munch Bunch Wobblers (jelly with yogurt)	Eden Vale	5	No	gelatine
Fiendish Feet (stirred)	St Ivel	4	No	gelatine, modified starch
Muppets (set)	Anchor Foods	over 4	No	none
Mr Men (stirred)	Sainsbury	5	Yes	pectin

In last issue's consumer checkout we reported on the lack of fruit and the high sugar content of Munch Bunch children's yogurts. The manufacturer, Eden Vale, wrote to point out to us it 'aims to provide the best possible, top quality products' and that its Munch Bunch stirred yogurt contains 'the lowest sugar content of any children's yogurt'. So in the interests of objective reporting we went shopping to see what children are being sold.

To make comparisons we stuck to just one flavour, strawberry. We looked at the amount of added sugars and we also looked at the other additives being used to thicken or stabilise the yogurt and whether there was significant real fruit present. It turned out that Munch Bunch Wobblers and Sainsbury's Mr Men were the sweetest we found at five sugar lumps per pot, while Munch Bunch stirred yogurt came lowest – but still with at least three lumps of sugar. Modified starch adds nothing but empty calories to the nutritional value of the product while giving the impression of a thicker creamier yogurt.

Only two out of the six strawberry yogurts we surveyed contained any fruit. Three products, two Munch Bunch yogurts and Muppets set yogurt, illustrated fruit on the label but contained none in the pot.

NEW FOODS OFFER NUTRITION BY DESIGN

'We hope to stimulate a whole new area of preventative medicine,' says the USA's National Cancer Institute toxicologist Dr Herbert Pearson. He heads up a team of investigative scientists which is trying to keep one step ahead of the Japanese in the booming 'functional food' market. 'We will experiment with a number of prototype food vehicles. Yogurt might be one, fruit juice might be another,' he adds.

Preventative medicine is the name of the game. Searching through the full range of food materials for key natural food extracts that can be sold as affecting specific health functions, the Japanese have taken to the concept of 'functional foods' in an extraordinary way.

Over 240 million bottles of Fibe-mine, a sparkling vitamin and soluble fibre drink were sold in the year of its launch. Sales are booming for chewing gum with added calcium for the teeth and cinnamon for digestion; cheese with added dietary fibre; salad dressings impregnated with anti-cholesterol eicosapentanoic acid; coffee whitener laced with oligosaccharides to reduce the risk of cancer; and after-sport soft drinks laced with replacement electrolytes.

It will all be arriving in Europe very soon. Japanese milk and dairy giant Meiji has joined with the second largest French food company Beghin-Say to provide the research base needed to convince European governments that their food can carry health-promoting claims.

Despite a general crackdown by the European Commission on foods carrying medical claims, the companies are confidant they can market the products and have already started lobbying the UK Ministry of Agriculture, Fisheries and Food.

As the marketing agencies see it, functional foods present an attractive combination of added value, high margins and a strong purchasing motivation in the form of consumer fear of disease.

The truth is that people eating a healthy well-balanced diet have little need of any 'functionally designed' foods, just as they have little need for food supplements or vitamin enriched products. Whether the manufacturers can get away with claiming a general health benefit for foods which may benefit only a small proportion of consumers remains to be seen.

FOOD FROM THE PAST

An Easy Way to make good Soup

All you require is a packet of Symington's Soup—any one of the thirteen kinds—and water. Boil for 15 to 20 minutes, and you have a delicious wholesome soup.

SYMINGTON'S SOUPS

cost but a few pence, are much more nourishing and easier to digest than meat.

Tomato, Oxtail, Mulligatawny, Lentil, Kidney, Hare, Mock Turtle, Green Pea, Celery, Pea, Scotch Broth, Onion, White Vegetable.

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PURE DRIED EGGS

The early days of food processing. The need for long shelf-life products for military supplies during the First World War helped create the technology for processed foods, which were sold – in this case through Mrs Beeton's Cookery Book – to the domestic market during continued food shortages after the end of the War.

School meals – how will children fare after ILEA?

In April 1990, when the Inner London Education Authority ceased to exist, the twelve inner London boroughs inherited a school meals service providing a million meals a week. Robin Jenkins asks whether children will gain from the transfer.

The circumstances under which the boroughs took on the massive Inner London Education Authority (ILEA) catering service, with its 8,000 staff and £40 million budget, left much to be desired. The school meals catering operation dwarfed the catering run by the boroughs, which in most cases was less than ten per cent of the size of the ILEA operation.

Three months after abolition, most of the initial confusions have been dealt with. Staff are now getting paid, though some weekly paid staff had to wait ten weeks in certain boroughs. Food supplies are being delivered and although transported meals are still not arriving on time, at least they are getting through.

Now that things are settling down, the boroughs will have to put their food policies into sharp focus and decide how they are going to implement them. It is widely assumed that the ILEA was a centre of excellence and progressive development in many areas, school meals included. Many people believe that so long as the boroughs continue ILEA policies and practices, the children will be well served. Unfortunately this is not the case.

For example, the ILEA never was a particularly responsive bureaucracy and during its decline into abolition it failed to respond adequately to new legislation like the Social Security Act, or to manage the cuts made in its budget by the government. Well before the end, the organisation became politically and organisationally incoherent and the school meals service had to bear more than its fair share of the burden.

In 1980, before the Education Act of that year deregulated the school meals service, the ILEA provided a meal giving 33 per cent of the recommended daily allowance of nutrients, plus a free 1/3 pint of milk that provided roughly another seven per cent. So children at school had access to 40 per cent of their daily food needs from the school meals service.

The decline since 1980 has happened in three stages:

- When the Social Security Act came into force in 1988, banning free school milk except to children of parents receiving Income Support, the ILEA also faced massive cuts in its budget. Instead of keeping within the law by charging 5p or 10p per term for milk — as is the practice in many education authorities round the country — the ILEA decided that it would have to collect 5p per day.

This proved unworkable — eventually the authority ended up with a voluntary scheme which operated in about 15 per cent of primary schools where the headteachers cared. Most ILEA pupils simply lost their milk.

- When the ILEA was preparing itself for competitive tendering (before abolition was proposed) the nutritional contribution of a school meal was arbitrarily reduced from 33 per cent to 30 per cent of daily needs, without even going to a committee. By the end of 1988 the authority was providing only 75 per cent of the nutrients it had provided in 1980.
- In the final year, as the ILEA budget became tighter, the food allowance for each meal was allowed to fall behind the rate of inflation. At abolition the ILEA allowed 24.5p for a primary meal and 29.5p for a secondary meal. The cost of the food for the average ILEA recipe to provide 30 per cent of daily nutrients has been calculated as 33p for primary pupils and 43p for secondary pupils. In other words, at abolition the ILEA could provide less than half the nutrients provided in 1980.

The ILEA legacy is woefully inadequate, especially when one considers the statistics on need in inner London. Just over 40 per cent of all meals provided by the ILEA were free — some 65,000 meals per day. But averages like this obscure the large differences between boroughs:

Proportion of school meals served free	
Hammersmith and Fulham	39%
Kensington and Chelsea	34%
Westminster	38%
Camden	36%
Islington	40%
Hackney	50%
Tower Hamlets	56%
Greenwich	32%
Lewisham	32%
Southwark	44%
Lambeth	44%
Wandsworth	34%

All the inner London boroughs will be compelled to put their school meals service out to competitive tender at some stage during the next 18 months. When they draw up and publish their specification for the service, they will have a unique opportunity to ensure that the service is actually meeting the needs of the children.

There is no acceptable reason or justification for schools to provide less than 40 per cent of a child's daily food needs, no reason why milk should not be available almost free and no reason why the meals should not be balanced and healthy.

Hungry children do not learn.

PHOTO: IVAN MATHER/SYGMA

National Curriculum puts home economics under threat

With the arrival of the National Curriculum, professionals concerned with home economics teaching are uncertain of the future. Home economist Jenny Ridgwell investigates.

Professor Naismith, head of food and nutritional science at King's College London, is concerned about the disappearance of home economics. In the National Curriculum, which has been introduced for state educated pupils aged five to sixteen in England and Wales, the subject is not listed as a separate core or foundation subject. 'If home economics disappears then young people will have less opportunity to learn to cook properly. They will become more reliant on ready-made food, which can be just as nutritious but costs more. So people on fixed budgets will end up with inferior quality food and this will lead to a deterioration in their diets.' Professor Naismith claims.

Food and health are everyone's concern, so where will pupils learn about food issues within the framework of the National Curriculum? There are certainly opportunities in technology and science, and personal and social education (PSE), but what guidelines are being offered?

Technology will be taught for the first time from September 1990 for all state pupils aged five to eleven. At secondary level, home economics is a contributing subject where pupils can design and make 'food'. The technology document makes no reference to the quality of food to be used.

Diana Marks is home economics advisory teacher for Croydon. 'The technology document should state that pupils must learn about healthy food and food hygiene. At the moment they can use any type of food for designing so they could make sugary sweets or high fat biscuits and cakes. As home economists we need to build in teaching about nutrition and food hygiene into Technology, and help primary colleagues with this area too.'

How can food be studied in science? The document makes no mention of 'healthy eating' or 'nutrition'. Only three phrases relate to healthy eating, one of which states pupils should 'know about the factors which contribute to good health and body maintenance, including the defence systems of the body, balanced diet, oral hygiene and avoidance of harmful substances such as tobacco, alcohol and other drugs'. Valuable teaching material, but food is only a small part of the issue here.

And such teaching is restricted. In a science laboratory, with its chemical dangers, no food can actually be eaten. The ultimate test of the nutritional value of food is consumption. Clean, hygienic home economics rooms must be used — along with their resident experts — if real food is to be prepared and investigated.

Nutrition may also be taught through PSE. However, this subject is non-statutory, so each school must decide if and when it fits into the timetable. Teachers from several subject areas will contribute to PSE. A report investigating health education in secondary schools found that no teacher in the survey had 'degrees, diplomas or other qualifications associated with health education'.

Today too few home economics teachers are being trained. Philip Robinson is Dean of Roehampton Institute, which has trained nearly one hundred secondary teachers this year. Yet no students in the secondary sector are leaving with any expertise in food. He feels 'there is a real danger that healthy eating and food issues could be marginalised from the curriculum'.

Education publishers too are wary of producing material on healthy eating and food. Sue Walton publishes home economics textbooks: 'We are not commissioning anything at the moment since we don't know where food and healthy eating will fit in the National Curriculum.'

Teachers will be expected to use newspapers and magazines to keep pupils informed about nutrition and other food issues. However, as professor Naismith points out: 'Many statements about healthy diets are often simplistic and misleading. We need more popular books on nutrition written by experts, but scientists often just don't have the time nor the ability to write in such a way. Nutrition teaching is essential for pupils otherwise they have to rely on sensational information from the press.'

So what is the way forward? Pupils need to be knowledgeable food consumers if they are to decipher package labels and understand the politics of Britain's cheap food policies. Brenda Smith is the president of the National Association of Teachers of Home Economics (NATHE) which represents 4,500 of Britain's home economics teachers: 'Faculties in schools must sit down and plan together how they will cover healthy eating and food issues across the curriculum to make sure they don't slip through the net. We need to lobby to make sure food has a place, but we also need to be backed up with plenty of good, relevant educational resources.' And June Scarborough, NATHE's senior vice president adds: 'The Education Reform Act, 1988, means that governors have the power to insist that nutrition, health and basic living skills are taught in their schools. It is up to teachers and parents to lobby to get things done.'

The quality of the nation's diet is a major social issue. A place must be secured on the school timetable to deal regularly with such questions. Outside speakers such as health visitors, dietitians and environmental health officers could visit schools and share their expertise with pupils and teachers. Parents, teachers and governors could ensure that their schools have a clear policy for food and health education. Schools must publicise successful projects and share their good practices and enthusiasm with others. Relevant resources and materials must be produced, backed by unbiased sponsorship from the food industry. Home economics teachers should draw strength from the technology and science documents and ensure all pupils have experience of working with and learning about food.

Testing times for

Food packaging has a history of several millennia, but since the last world war there has been a revolution in food packaging technology. Dr Leo Katan, an advisor to MAFF, looks at the problems of testing packaging materials.

Food carriers have an ancient history. In fact they are one of the very earliest types of human artefact, as you will see in any museum. Interestingly, many of the earlier food carriers served also as cooking utensils — a dual function now reappearing with the advent of the microwave oven.

Early humans were glad enough to get food, and they were initially more concerned with leakage and breakage (ceramic being the predominant material) than inadequate preservation or contamination. Experience soon taught them to recognise the health hazards of food which had 'gone off'; and preservation methods were developed, such as salting, drying and smoking.

Laws on food quality can be traced back as far as the Hittite civilisation (3500 - 1200BC) which flourished in what is now the Turkish province of Anatolia. But in the commercially conscious Greek and Roman civilisations which followed, prime attention shifted to trading regulations: food contamination did not attract attention until the Middle Ages, when alloys were widely used for drinking and cooking vessels, with their resultant effects.

In the 19th century, partly associated with the Industrial Revolution, wet foods began to be stored for considerable periods (dry foods, such as grain, had been stored since Egyptian times). Domestic Kilner jars made their appearance; then the metal can was invented. Food packaging developed steadily, and in the early 20th century paper-board joined the well-established glass bottles and metal cans. Ceramics continued to decline.

Suddenly, plastics burst on the scene. Between 1950 and 1970, they moved from exotic to commonplace. In one ten year period their use quadrupled. The pace of change still continues very fast, in terms of diversity and sophistication.

So the technology of food packaging, especially in plastics, has galloped ahead, to some extent leaving science behind. It is therefore reasonable and prudent to pause and consider whether any unacceptable health or other risks arise.

One doesn't have to delve very far before things get difficult. What, for example, is 'acceptable' risk (there being no such thing as zero risk)? If risk is the probability of a hazard, what is the hazard of packaging? The hazard from a hand gun is easy to see and the source easy to detect — a smoking gun. But for food contamination, the effects are more subtle, often long term, and the source difficult to find. *There is no smoking gun.*

So it is not realistic to depend on consumer complaints — which, in any event, would always arise after the damage was done. It is now generally accepted that protection must be regulatory (legislation or codes of practice) and preventive; and should be based on a sound scientific foundation.

I give below a very brief outline of the framework in which this takes place. In practice it is fleshed out with detailed theory, testing, and toxicology.

There are five vectors (ie groups of means or substances) which are connected with food containment, packaging or contact, which can affect food safety.

MACRO-ORGANISMS are living creatures big enough to see with the naked eye. They are the classical pests and vermin which eat more than a quarter of all food produced before it can meet the consumer. Rats, mice and other small animals and birds are important in third world countries; insects in industrialised countries such as the UK.

MICRO-ORGANISMS are living entities which can only be seen when magnified. They include the classic causes of food poisoning, such as botulinus and salmonella. Less deadly, but also significant, are slimes and moulds which, with some important exceptions, are seldom toxic but drastically ruin food quality. Since the sources are all around in the environment, waiting to settle on any nice piece of food, the main causes of trouble are loss of package integrity (eg bad seal) or unhygienic food handling either before containment, or after opening.

VAPOURS AND GASES include oxygen and nitrogen which are ubiquitous, carbon dioxide from food respiration and also from modified atmosphere packaging, and water vapour. These can have major effects on food quality (but are seldom toxic). Atmospheric contaminants in general such as petrol fumes, sulphur dioxide, wood preservatives, etc can taint food

RADIATION comes in many forms, from nuclear fall-out to television:

- Accidental: After nuclear disasters, such as Chernobyl, packaging protects food from both direct radiation and fall-out. Some penetration is unavoidable, but the majority of direct radiation and all fall-out is likely to be filtered out.
- Adventitious: Like everything else on earth, food packages are exposed to solar radiation by day, and artificial light at night or in-store. Both can affect food quality, depending on the transparency of the container.

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food packaging

■ Irradiation: If irradiation is used for food sterilisation in package, the latter will both filter out and absorb some of the radiation.

■ Microwave: Much food packaging is now likely to go into the microwave oven, and hence be exposed to microwave radiation.

MIGRATION is the general term used to describe contamination of food by components of containers or packaging or other surfaces contacting food.

Any of the above vectors may be important or not depending on the package, the food, and the storage situation. The remainder of this article will concentrate on migration because it is the most difficult to detect and evaluate; it derives exclusively from the package (the other four vectors involve other forces), and it is the main subject of much legislation, especially EC Directives coming into force up to 1992.

Although retail packaging is the most obvious, widespread, and usually most important source of migration, it is far from being the only one in the long journey of modern food from source to consumer. To ensure safety, it is necessary to consider all possible sources of migration.

Starting at the farm, sea, lake or salt mine, food comes into contact with collection and transport facilities, bulk packaging and vehicles, handling and processing machinery including in-manufacturing plant surfaces, before it is put in a retail package where it may stay for some time.

In the consumer's own home it may go into ambient temperature store, refrigerator or deep freeze; and it may be opened or not for varying times prior to cooking, presentation and eating.

This last part of food's life is as adventurous as the first, with contact surfaces varying from bread baskets and boards to meat mincers, food processors, and the whole range of cookware, crockery and cutlery. Food consumed outside the home goes through many other contact systems, from beer pipes in pubs to conveyer belts for fast foods.

If every contact item were to be the subject of study in depth to a level acceptable for drugs, for example, it would take all of the world's relevant scientists 20,000 years. So there's a pressing need to prioritise the items, dealing with the most important first.

The list has been mulled over by the Strategy Sub-group of MAFF's Working Party on Chemical Contaminants from Food Contact Materials and extended, using advice from all available sources. It was also decided to include topics on methodology (ie how to assess risks). One project of this kind aims to establish a mathematical model so that calculations can be made. A market research project is also producing data on consumer exposure (related to diet).

The final list to date dealing both with general topics and plastics with its priorities, was published in Food Surveillance Paper No 26* and covers seven pages (45 – 51).

Some topics were already under investigation, either in the UK or elsewhere (mainly EC and USA) and work is well under way, or a start made on, many others. Some have been completed and necessary measures implemented.

But in such a wide ramified subject, who can guarantee no errors or omissions? So, if any reader spots one please write and let me know.

*Migration of Substances from Food Contact Materials into Food, *Food Surveillance Paper No 26*, HMSO, 1989

Dr Leo Katan, an independent consultant, has been Chairman of BIBRA Research Policy Committee, and member of the BPF Biological Safety Committee and the government Waste Management Advisory Council packaging and container group. He is a member of the Institute of Packaging, Fellow of the Institution of Chemical Engineers; and is currently a member of the MAFF Working Party on Chemical Contaminants from Food Contact Materials and its sub-groups.

The government's Adult Nutrition Survey reveals new data on our diets

We are what we eat

With data on the dietary behaviour, nutritional status and physiology of 2,197 men and women aged 16 to 64 across Britain, the Adult Nutrition Survey is a world first and potentially a quantum leap for public health. But, as Eric Brunner reports, the policy messages which emerge are far from being implemented.

The government's Adult Nutrition Survey, published in June, confirms that the diet of those on low incomes is low in many nutrients. Whether a poorly paid manual worker, a single parent living on Income Support or unemployed, the dietary data provided by those in the poverty trap suggests that lack of money is a major factor limiting intakes of vitamins and minerals, particularly for women (see table 1). The case for reviewing benefit levels to promote better nutrition is greatly strengthened by the report.

The negative findings of the survey for fat intakes between regions and social classes are just as significant as those for vitamins and minerals. It is not uncommon to encounter the view amongst those working in the nutrition field, that, as Edwina Currie put it, ignorance is responsible for poor diet and consequent ill-health. The ANS suggests that as far as fat intakes are concerned, the image of the greasy diet 'up North' is a travesty of the truth (see table 2).

Average total and saturated fat intakes showed no regional differences for women (see table 3), while it was men in the South East region who reported the highest fat intakes.

These results are adjusted for age, social class and levels of unemployment so that real comparisons can be made between regions. There are small differences in total and saturated fat intakes regionally for men, but they do not correspond to the long-standing regional differences in death rates from heart disease, which have so often been ascribed, in part, to dietary factors. Those in the South East and London had the highest intakes of total and saturated fats, followed by Scotsmen. Those in the North, and in the Central/South West/Welsh region had the lowest intakes.

Against the background of current nutrition guidelines the relatively small differences in fat intakes shown in the survey are not important. In public health terms the high overall level of fat intake in the population is of greater significance . According to the report, for example, obesity increased between 1980 and 1986/7 from six to eight per cent for men and from eight to 12 per cent for women.

Since there is a large and long-standing inequality in heart disease and all-cause death rates in favour of the South East, the relevance, in terms of heart disease and probably health in general, of the regional fat intake differences appears to be marginal. Scotsmen have the highest heart disease death rates and the second highest fat consumption but South Eastern men have the lowest rates and the highest fat consumption. Neither does the P/S ratio provide an explanation for the North-South mortality divide, since there were no regional differences for either sex.

How we fare against the COMA targets for fat

Only six per cent of men and eight per cent of women met the government recommended targets for both total and saturated fat intakes.

■ **TOTAL FAT:** Average intake was 40 per cent of food energy.

Twelve per cent of men and fifteen per cent of women had intakes less than the COMA target of 35 per cent.

■ **SATURATES:** Average intake was 17 per cent of food energy.

Eleven per cent of men and twelve per cent of women had intakes less than the COMA target of 15 per cent of food energy from saturated and trans fatty acids.

Thirty per cent of men and 27 per cent of women had saturated fat intakes less than 15 per cent of food energy if trans fatty acids were ignored.

■ **P/S RATIO:** Average for men 0.40, for women 0.38. Both are less than the COMA target of 0.45.

Table 1: Fewer nutrients for low income families

Respondents receiving benefits had low intakes of the following nutrients compared with others:

	Vitamins	Minerals
men & women	niacin vitamin C vitamin D vitamin E	calcium phosphorus magnesium
women only	riboflavin folic acid carotene	potassium iodine zinc

A similar picture emerges for social class differences in fat consumption. There are no differences in proportions of energy from total or saturated fat intakes between classes. This may come as a surprise to the pundits who use attitude survey findings to back their belief that it is the middle classes who know what they ought to be eating. Perhaps the middle class survey respondent is happier to tell the interviewers what they want to hear.

Small social class differences in the P/S ratio were measured, the averages ranging from 0.37 for social classes IV/V to 0.42 for social class IIIN (non-manual). These differences are small. Overall, they confirm the switch from hard margarine, lard and butter to sunflower and other polyunsaturated cooking oils and spreads shown by the National Food Survey (NFS) over the previous decade. The NFS, which collects information on household food purchases (rather than individual consumption), reveals a uniform doubling in the P/S ratio across income groups from around 0.2 to 0.4. If the differences between classes revealed in the ANS are not greatly underestimated they are small in comparison with the overall trend in Britain. However, the P/S ratio is the only measure of dietary fat intake which fits the pattern of social class inequalities in heart disease.

The survey suggests that North-Sonth, and social class dietary differences in fat intakes are non-existent or quite small. It seems unlikely that dietary fat can explain regional or class health differences, as a result of these findings. A sceptic might argue these data away by claiming that despite a sample size of almost 2200 people, the survey method was not sufficiently reliable, and the sample size too small to detect the differences which many might have expected. But the results for vitamin and mineral intakes, particularly on a social class basis, show otherwise.

Regional averages for minerals are uniform with the notable exception, for both sexes, of sodium, which reflects salt intake. If people north of Watford Gap have one dietary vice the ANS suggests it is using a lot of salt. The national average for men in the survey is 10.1 grams per day and for women 7.7 grams. In Scotland, average intakes are some seven per cent higher than this, and intakes fall from North to South. High intake of salt is linked to increased risk of raised blood pressure, so here there is a suggestion of a dietary factor in regional health inequalities.

The good news is that intakes may be falling. In 1983 the National Advisory Committee on Nutrition Education estimated salt intake to be about 10-12 grams per day at the beginning of the decade. It recommended a 25 per cent reduction, which on the basis of the ANS, carried out in 1986/87, may have already begun. Regardless of the extent to which these two estimates can be directly compared, intakes of salt are still needlessly high, though little of this is amenable to individual change. Salt added to processed food contributes about 80 per cent of intakes in the British diet.

After adjusting for the higher levels of those on low incomes in the North, and other background factors, the results for vitamin intakes provide scant evidence of Northern nutritional 'ignorance'. Thiamin (vitamin B1), riboflavin (B2), niacin (B3), pyridoxine (B6), cobalamin (B12), folic acid, vitamins A and C were each estimated. Of these, only folic acid for men, and pyridoxine for both sexes, showed regional differences.

Social differences, rather than regional ones, stand out as the important findings for public health. The unemployed, those receiving benefits or in lower social classes tended to have smaller intakes of every mineral estimated, except for sodium.

Undoubtedly some will argue that there are cultural patterns which explain the survey findings for vitamin and mineral intakes. The remarkable consistency of the results, which for those receiving state benefits show many of these intake differences even after adjusting for social class, supports the view that it is simply lack of money which prevents many people from eating well.

Table 2: Regional variation in consumption of selected foods

Average amounts in grams consumed by those reporting they ate the item (not adjusted for regional variation in social class structure)

	Scotland	North	Central/SW	London/SE
chips	415	445	390	329
burgers/kebabs	170	166	139	205
sugar	151	189	200	198
oily fish	147	142	115	144
spirits	244	121	147	127
wine	545	507	471	556
beers	4175	4849	4254	3432

Table 3: Regional and social class differences in fat intakes

Based on the per cent of food energy derived from total and saturated fat, and the ratio of polyunsaturated fat to saturated fat (P/S ratio)

	men	women
Regional differences		
total fat	*	ns
saturated fat	**	ns
P/S ratio	ns	ns
Social class differences		
total fat	ns	ns
satnrated fat	ns	ns
P/S ratio	*	**

ns = difference not statistically significant
* = statistically significant difference
** = statistically highly significant difference

Reference:
The Dietary and Nutritional Survey of British Adults, OPCS, HMSO, 1990.

HARDSHIP FACTOR IN DEATH RATES

Regional differences in death rates may be attributed to a variety of factors. A recent paper in the British Medical Journal, examining the underlying pattern of social deprivation as an explanation of the high mortality rates in Scotland compared witb England and Wales, showed that four factors accounted for most of the difference. They were: proportion of men unemployed, overcrowding, no car, and low social class. These material factors predict the geographic pattern of mortality, but do not give any direct clues as to the importance of the role of diet. V Carstairs and R Morris, *British Medical Journal*, 1989 vol 299, 886-9.

BOOK REVIEWS

Events

1992 — The People's Health

The Public Health Alliance are organising a conference: *1992 — The People's Health — Who is in charge?* to be held at Glasgow City Chambers on 1 September 1990. Speakers will include Dr Ilona Kickbusch, of the World Health Organisation.

For more information contact the PHA, Room 204, Snow Hill House, 10-15 Livery Street, Birmingham B3 2PE. Tel: 021-235 3698

Vegetarians unite

A mass vegetarian rally and picnic is being held in Hyde Park on Sunday 22 July from 12 noon. Organised by the Young Indian Vegetarians the event will provide an opportunity to meet vegetarian celebrities, politicians, sports personalities and gurus.

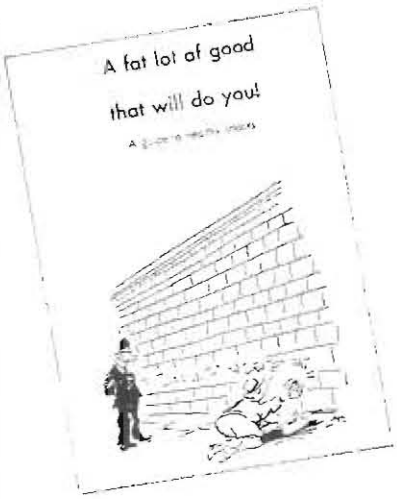
For more information: 081-681 8884

New food group

The Ryedale Food Education Group in North Yorkshire is a new group set up to promote a wider interest and better understanding of all aspects of food. The group includes people who are involved in farming, food processing, catering, education and aspects of food regulation. New members are welcome.

Their programme of public talks starts on 20 September 1990 with Professor Richard Lacey and Colin Spencer on the platform.

For further information contact Chris West (0653 693093) or Verity Steele (0653 694084).



TAKE HEART! AND CHOOSE HEALTHY SNACKS

The Coronary Prevention Group has published a guide to healthy snacks. Many snacks are packed with fat and have very little fibre. Sausage rolls, crisps and peanuts get the thumbs down with more than 53 per cent of their energy coming from fat. This useful leaflet provides a host of more healthful alternatives for when you're feeling a little peckish.

A fat lot of good that will do you! A guide to healthy snacks, available from The Coronary Prevention Group, 60 Great Ormond Street, London WC1N 3HR.

NUTRIPOINTS

Dr Roy E Vartabedian and Kathy Matthews,
Grafton Books (8 Grafton St, London W1), £6.99.

Calorie counts were once the slimmers' Bible. Then came the F-Plan and dietary fibre was the way to judge good food. But neither calories nor fibre are sufficient indicators of good or bad nutritional value. Now there's a new approach which tries to put the entire spectrum of nutrients into a one-dimensional rating scale: Nutripoints. We asked **Eve Smith** to try it out.

Using Recommended Daily Allowances of 18 nutrients as a guide, Nutripoints are assigned to a wide range of foods according to their nutritional value. High numbers = high nutritional value.

Foods are listed by groups: vegetables, grains, meat/fish, pulses, etc. However, eating exclusively from the high scoring vegetable list would not ensure nutritional balance. Variety is the key to the Nutripoint programme. But, because the aim is to encourage healthy eating habits, foods high in fat, salt, sugar, caffeine and cholesterol (often high in calories) tend to score low or minus numbers, despite their good qualities. Cheese is high in calcium, but can often be high in fat. Eggs, despite being high in a number of nutrients, score minus 11.5 because of their high cholesterol content; whereas low fat yogurts score a positive 8.5–10 Nutripoints.

Nutripoints is a system for accessing the relative nutrients in a variety of common foods. For example a slice of Cantaloup melon scores a massive 29 Nutripoints, an apple 4.5. Both are low scoring in terms of calories but, given a choice, the Cantaloup melon scores better in terms of nutrients.

Again if you choose to use one tablespoon of olive oil (minus 3) when preparing a dish where the main ingredients are vegetables and lentils, there would be little loss in Nutripoints, particularly if shared among a number of people.

Overall the authors are clear in their aims, and *Nutripoints* is easy to read. And anyone seeking to lose weight, or concerned to reduce their chances of lifestyle diseases such as hypertension, heart disease and osteoporosis, could well find *Nutripoints* useful. However, *Nutripoints* offers little advice when it comes to avoiding food additives and pesticide residues. Also, I was concerned to read their recommendation of artificial sweeteners as an alternative to sugar.

Eve Smith

INSIDE THE BIOREVOLUTION:

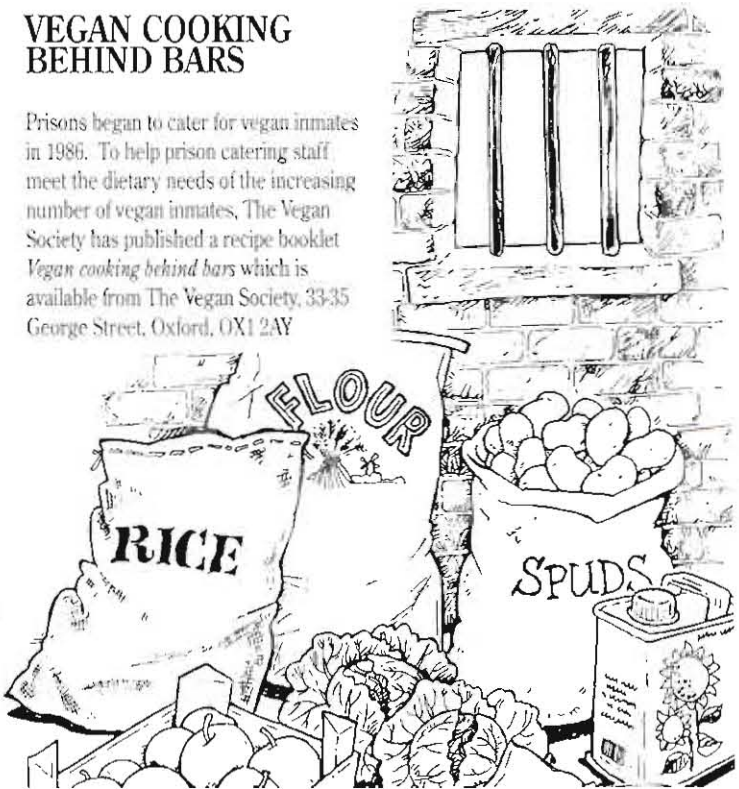
A Citizens Action Resource Guide on Biotechnology and Third World Agriculture,
145pp, available for US$10 per copy (seamail) from International Organisation of Consumers Unions, PO Box 1045, 10830 Penang, Malaysia.

Arguing against transnational companies' control over food production and supply, *Inside the Biorevolution* warns that natural biological diversity must be preserved for the millions of small farmers around the world.

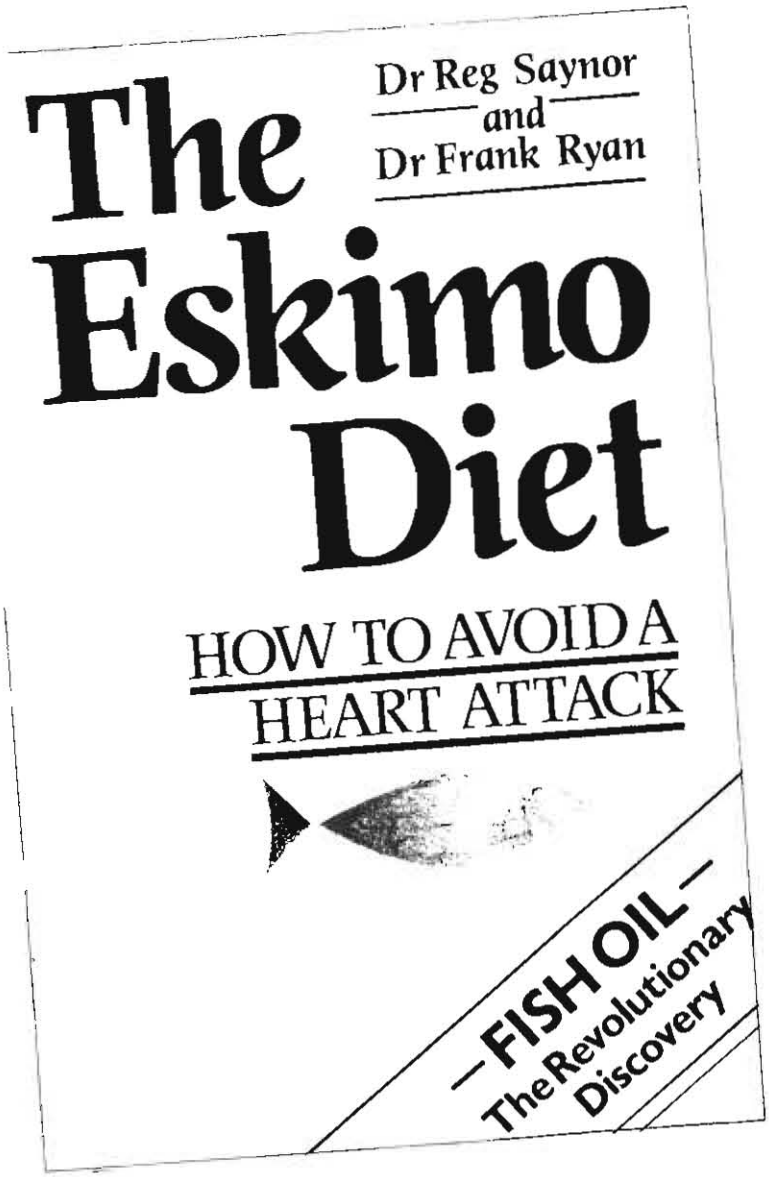
The book includes an annotated bibliography covering technical, political, socioeconomic, environmental and regulatory aspects of biotechnology. It also includes a list of contacts around the world to encourage campaign networking on biotechnology and third world agriculture.

VEGAN COOKING BEHIND BARS

Prisons began to cater for vegan inmates in 1986. To help prison catering staff meet the dietary needs of the increasing number of vegan inmates, The Vegan Society has published a recipe booklet *Vegan cooking behind bars* which is available from The Vegan Society, 33-35 George Street, Oxford, OX1 2AY



BOOK REVIEWS



THE ESKIMO DIET

Dr R Seymnor and Dr F Ryan, Ebury Press (20 Vauxhall Bridge Road, London SW1), £5.99.

A catchy title for a book with a message: reduce your chances of a heart attack (even if you have already had one) by eating plenty of fish oil.

The book focusses on fats in the diet, their nature and effect on our cardiovascular system, the valuable contribution of fish oils (Omega-3 fatty acids), and how these can be supplied from fish either eaten in the diet or fish oil preparations, with a favourable mention for the leading brand.

Tables show what different types of fish can give you, to reach your recommended 0.8g fatty acids per day — mackerel tops the list, with 8-10oz per week doing the trick. With herring you need 1lb per week, trout nearly 2lbs (and watch out for fish-farm trout: the authors suggest farmed fish may have substantially reduced acid levels).

It has little to do with eskimos (who anyway prefer to be called Innuit) and a lot to do with telling us how to eat a healthier diet. The emphasis, including a section giving recipes and a general one on lifestyles, is how we as individuals can reduce our risk of heart disease by changing our habits. No attempt is made to look at wider issues concerning income and diet or the promotion of saturated fatty foods by food companies. Little is said about the over-fishing of the seas, the pollution of shallow-water fishing grounds or the poor quality (and poor value for money) of many fish products.

But if for nothing else, it is worth the cover price for the clear and extensive review of the last twenty years of persuasive research showing how our dietary fats affect our heart and arteries.

Tim Lobstein

CHICKENGATE

R North and T Gorman, Institute of Economic Affairs, Health Unit Paper No 10, £4.95. (2 Lord North Street, London SW1)

Subtitled 'An independent analysis of the salmonella in eggs scare,' the book offers both a re-assessment of the political struggles going on in 1988 and 1989 over food poisoning outbreaks, and as a series of 'free market' proposals for policy changes.

The authors are Conservative MP Teresa Gorman, and Richard North, an environmental health consultant and an advisor to the UK Egg Producers Association. The thrust of their argument is that, far from poor egg production standards (which is the responsibility of MAFF) being to blame for the rising incidence of salmonella poisoning, it is poor food handling, especially by caterers and frequently on NHS premises, that should be blamed (the responsibility of the Department of Health).

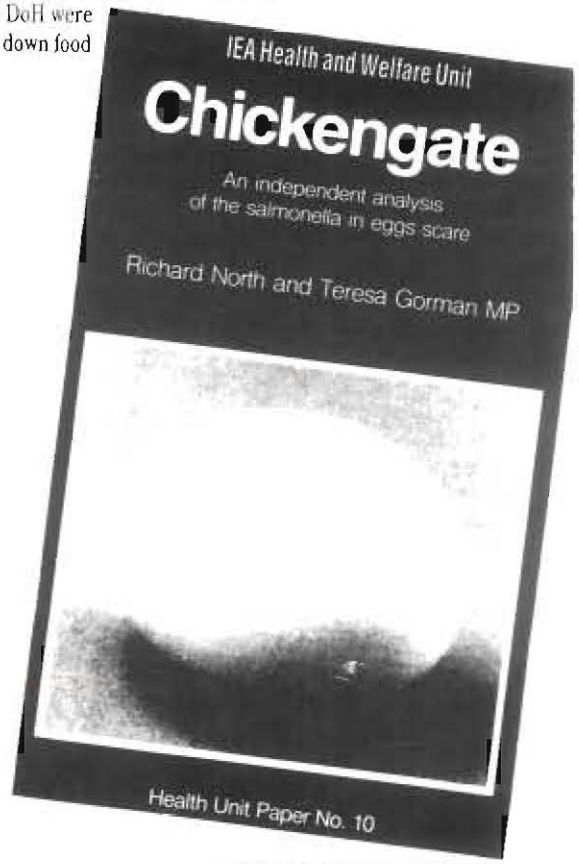
While media pundits were, according to the authors, suggesting that the DoH and MAFF had conspired to keep the public ignorant until forced to issue advice, the reality they suggest is that the DoH were doing their best to play down food poisoning outbreaks which had occured in hospital after hospital, and the DoH's own failure to issue catering (especially cook-chill) guidelines. The DoH was more than pleased, suggest the authors, to put the blame on eggs and egg producers, and proceeded to issue public warnings and take pages in the national press, culminating in Edwina Currie's TV statement putting all the blame on egg production.

This fascinating, and for egg producers greatly heartening, thesis then becomes the basis for a tract on free market mechanisms as a means to ensure better food hygiene. The book argues for an insurance scheme, whereby food establishments would be liable for any food poisoning outbreaks and their insurance premiums would reflect their general cleanliness and no-claims history. Insurance inspectors could replace local authority environmental health officers.

The authors suggest, somewhat against the facts, that the government 'has been panicked and then pushed into fielding the most comprehensive array of legislation on food since the war, of a scale and nature that would make any socialist government justly proud.' Yet the book's case rests on the argument that the government (or at least the DoH) did far too little to control catering practices in hospitals.

But in the end there can only be agreement with one key point they make: that 'In Britain we have in some fields the least well-informed consumers in the rich world.' Government secrecy and cover-ups help no-one but the government bodies themselves.

Tim Lobstein



FEEDBACK

Advertising coffee for babies?

I would like to say how much I enjoy your excellent magazine and commend the work of The Food Commission in general.

In the April/June 1990 issue, the article on children's TV advertising was very good and very informative for me in particular, because we banished the television two years ago, when my elder son was only one. I felt that he would be exposed to values I did not share or approve and presented with a distorted vision of the world. No doubt he will discover it for himself later on, but I hope that will not be until he is old enough to judge for himself.

I was surprised that in your article you described tea and coffee as 'neutral'. Even if Nescafé were not the subject of a boycott because of Nestlé's promotion of baby milks in the third world, neither coffee nor tea should have any part to play in the diet of young children. Both contain powerful stimulants, which can cause insomnia, palpitations, irritability, anxiety, and both can interfere with iron absorption. They may displace more nourishing foods from the diet, which is important in toddlers who have such small appetites.

I wonder why advertisers choose to place coffee and tea ads on children's TV? Perhaps one shouldn't be surprised: Gay Palmer reports that in 1970, mothers in the Ivory Coast were giving their toddlers Nescafé, because a radio ad proclaimed 'Nescafé makes men stronger, women more joyful and children more intelligent!'

It couldn't happen here, you say. Walking round this town, it isn't uncommon to see young toddlers in buggies slurping away on bottles containing a brown liquid, which can only be coffee or tea, almost certainly with sugar in it.

Dr Patricia Mills
Tunbridge Wells, Kent

More details

Your publication *The Food Magazine* is greatly appreciated by our project staff and is very relevant to our work. We are very pleased to hear that you will continue to produce this important magaziue.

I especially appreciate the book reviews. To make it easier to order the books reviewed, could you please put the full name and address of the publisher at the end of the review?

Penelope Husin
Librarian, International Organisation of Consumers Unions
Malaysia

Barbeques and parasites

This is the season for barbecues and fresh garden vegetables. But can I remind readers of the danger — especially to pregnant women — of infection with the parasite *Toxoplasmi gondii*?

Congenital toxoplasmosis is a rare disease, but as I found, a tragic one in which a baby can be born blind or develop water on the brain or eye damage in the first few years. If you are planning to get pregnant your GP can arrange a blood test to check whether you are already immune. If you aren't, then you need to take precautions:

(1) Eat no raw or under-cooked meat. UK meat is not generally checked for toxoplasmic cysts, though meat that is salted, cured or frozen is unlikely to contain any viable parasites.

(2) Beware of home grown vegetables etc from an area which maybe contaminated by cats — and avoid handling cat litter.

For more details, send a large SAE to the Toxoplasmosis Trust, Garden Studios, 11-15 Betterton Street, London, WC2, and read the feature article in *The Food Magazine*, Issue 7.

Chris Alderton
London, SE5

Special quality meat

In answer to your invitation in *The Food Magazine*, Issue 9, on food labelling:

A couple of years ago, I realised the importance of following nutritional guidelines. Seeing that my method of getting rid of excess fat from mince beef was insufficient (I used to fry it and drain it in a colander), I started looking for 'lean' mince beef at my local supermarket — Asda — and found some pre-sealed and wrapped packs with a label advertising them as 'Home produced special mince beef'.

At that time, partly due to my lack of observation, I presumed that this was the 'leaner' type of beef that I was looking for, and it was not until Asda started producing another type of ground beef labelled 'Extra lean' that I came to realise that the 'Special mince beef' that I had been buying was no less

fatty than any other ordinary mince beef.

It is not Asda's fault that I wrongly interpreted the label, however such an ambiguous description — 'special' — can easily lead to a variety of meanings:

that it is 'low in fat', which it is not; that it is finely minced, which it is; or that the butcher was in a particularly 'special' good mood on the day he minced it, which would be irrelevant.

As you can see, both labels are at the present being used to describe different mince beef at Asda. I wonder though, whether such a misleading title such as 'Special mince beef' conforms with the Food Act, 1984, which states that it is 'an offence to use a description which is likely to mislead as to its (the food's) nature, substance or quality.'

I hope that the above example will be of use to you in pressurising FAC to review its policy on food labelling.

Mrs Fatima Walker
Leeds

FEEDBACK

SO_2 versus irradiation

The Soil Association has received two separate requests from symbol holders who want to use irradiated corks, one for bottling an organic cider, the other for an organic wine.

Our initial reaction was that this was unacceptable. The correspondence, however, has continued for several months, with the producers insisting that the only other way of sterilising corks is to use sulphur dioxide gas which is not 100 per cent effective and can leave an unpleasant smell. They claim to understand and support the arguments against food irradiation, but say there is no logical reason why this should be extended to food containers.

We have no specialist knowledge in this area and would be very grateful if you could give us your view on the subject.

Richard Young
Chair, Soil Association Symbol Committee

Tony Webb replies: The Food Commission Food Irradiation Campaign is opposing irradiation of food for human consumption. We have no quarrel with the principle of irradiating medical supplies or other items, such as wine corks, which are not *eaten*. There is however the problem, evidenced in our book *Food Irradiation: The Myth and the Reality*, of worker and environmental safety problems in a number of irradiation facilities, including worker deaths and environmental contamination. In addition, companies irradiating other materials appear to be at the forefront of promoting food irradiation, despite many unanswered scientific questions on its safety, the misrepreseutation of scientific data by the IAEA/FAO/WHO and problems of control shown by many cases of abuse in the distribution of food.

Battle over sweets and crisps

I am a mother of an 11-month old baby girl. I am trying to provide and educate her with a healthier diet. I don't give her salt or fatty foods, chocolate, crisps or any kind of sweets and she's quite happy and I am sure dentists and dietitians will agree with me she's better off without them.

The problem is I'm finding it more and more difficult to maintain my views with pressure from all around, (eg at playgroup they give the kids crisps, biscuits, cakes and cordials). I refuse them for my little girl, but I'm made to feel so guilty for saying no. 'You meany,' and 'poor child, won't your mummy let you have some crisps.' I feel so angry. The children are happy playing anyway until the play leader interrupts their fun with cakes and crisps. They don't really need snacks. Most of the children go home with toothache or don't want their tea and their mothers wonder why.

When she's at school I won't be able to watch what she eats and I feel so helpless, as if I'm wasting my time. It's coming up to Easter and there's more pressure from grandparents buying Easter eggs. I've said no, but they say it's grandparents' privilege to buy their grandchild an Easter egg.

I get annoyed at televisiou advertising. One advert in particular for chocolate buttons says 'chocolate for beginners'. It's like sayiug alcohol for beginners. If parents didn't wean their children on to chocolate and such like then they wouldn't get a taste for it or cry every time they see it in Tesco's — and they'd eat their meals. I think more education is needed for better health and the younger they're educated the better. What do you think? I would like to hear your views and if you have any help and advice to take the pressure off a bit. I look forward to hearing from you.

Mrs D Stewart
Rochdale

Editor's reply: I'm sure there are other friends or parents who feel similarly with whom you could share your worries. Perhaps you could organise a meeting and invite a speaker — for example a speaker from your health authority's *Health Promotion/Education* department, or *Community Dental Health* service, or a *Community Dietitian*.

If any readers would like to write letters of support or advice to Mrs Stewart, we will be pleased to pass them on to her.

Joan Lestor's Diary

Joan Lestor, Labour spokeswoman on child welfare and keen campaigner to protect child health contributes a personal view.

PHOTO: MONITOR SYNDICATION

'If it is true that we are what we eat, I'm glad I don't sup with the Selwyn Gummers.

Whatever the Secretary of State for Ag Fish and Food has been ingesting over the years has made serious inroads on his little grey cells. How else to explain the latest exhortation to get back inside the burger bar backed by little more than a practical, if unscientific demonstration of force feeding of little Cordelia Gummer?

There is quite clearly a crisis of confidence in the Government over food safety and the sooner Government Ministers wake up to the fact the better. Last year, the worst outbreak of botulism in years followed hard on the heels of a salmonella scare. Since 1980, reports of cases of food poisoning have trebled — and these official figures can only represent the tip of the iceberg. It can't all be down to dim housewives and unhygienic kitchens.

There are two distinct issues here.

First the Government must recognise that People Aren't Stupid. They know that issues affecting food safety come to public attention when there is genuine concern expressed by 'experts' and they require a serious and honest answer — not photo-opportunities for the benefit of the media.

And second, it should make an honest commitment to the cause of consumer rights, not least the right to know, through more accurate product labelling and a greater research effort.

What we have got, of course, is cut after cut in support for food research, coupled with stubborn adherence to the one-sided dogma of free markets at the expense of common sense protection of consumers.

Yes, people's eating habits have changed and there is a substantial reliance on pre-prepared fast-food, particularly among low-income families. All the more reason why the Government should bring in regulations which properly address modern eating habits and their attendant production methods. Disillusion with the government of the day shouldn't affect people's faith in food and food producers.

Last week saw the first major debate in the House of Commons on the welfare of children, after eleven years of Conservative government. Opening the debate, as Labour's spokesperson for children, I was keen to emphasise that we ought to look more closely at the issue of food poverty.

Children in well-off families can be malnourished, but by and large health and diet status is very dependent on social class.

In support of this view, I referred during the debate to a nation-wide study of the growth rates of 10,000 British primary school-children. Set up in 1972 after Margaret Thatcher stopped free school milk, it is producing some highly politically sensitive results.

The study, which is under the auspices of St Thomas' Medical School in London, revealed last year that the distinct trend during the 1970s towards more equal growth rates across the social spectrum went into reverse during the last decade. The Government's response to the significant findings? The Department of Health are having serious thoughts about whether to continue funding the research after next April.

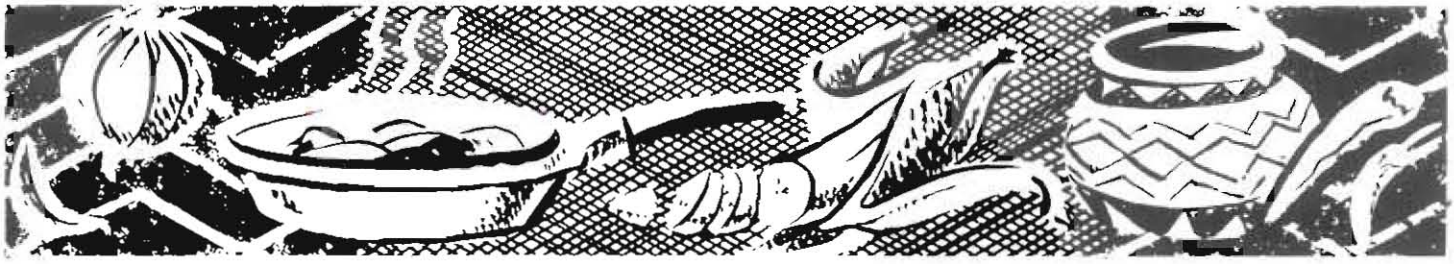
For many children food poverty begins in the womb. The Maternity Alliance report, *Poverty in Pregnancy*, looked at the cost of an adequate diet for expectant mothers. It showed that many pregnant women face serious difficulties in trying to buy the kind of food recommended by hospitals. Costed at £15.88 a week in 1988, the diet used up over a quarter on Income Support for an unemployed couple expecting their first baby and more than half the Income Support received by a single woman aged 24 in the same position.

In 1977, a DHSS report stated: 'An inadequate diet before and during pregnancy may impair growth of the baby and put at risk the health of both mother and child.' It is scandalous that in 1990, after ten years of a so-called 'economic miracle' and forty years after the formation of the NHS, babies of fathers in unskilled jobs are twice as likely to be still-born or to die within their first year as babies of fathers in the professions.

My colleague, Dr David Clark, described food irradiation as a technology looking for a use, during the debate on the Food Safety Bill. After sacking thousands of food scientists, cutting the number of vets employed by the state by 27 per cent, allowing a severe shortage of environmental health officers, closing research stations and weakening food regulations, the government's response to the inevitable food poisoning epidemic is to jump on the irradiation bandwagon.

It just will not do. The Labour Party object to current proposals to allow irradiation of food on many counts and I will list just three of them. Because we cannot measure irradiation, there is no adequate test available to the consumer. There is similarly no test which could reveal whether re-irradiation has taken place. We don't know enough about its effect on pesticides, food additives or packaging. And finally, it is too tempting a method of dressing up bad food as good.

David illustrated this last point with the well-documented case involving a consignment of prawns being imported by Young's. Failing to reach health standards, the prawns were sent to Holland for a quick fix — irradiation — and reimported, passing all bacteriological tests. I was fascinated to learn that this quite widespread practice is known as 'Dutching' in the trade.'



Ghanaian cooking

Joseph, a young chef with skills in preparing Ghanaian dishes for his family and friends, has contributed three recipes to *The Food Magazine*. He admits he is fairly relaxed about actual quantities, but the amounts suggested, he says, should serve a family of six.

Peanut butter (groundnut) soup

3 to 4lbs chicken pieces, seasoned
Palm or other vegetable oil
1lb fresh tomatoes, skinned and chopped or a 14oz can
2 onions, chopped
1 jar approx 12oz smooth peanut butter
4 pints water

Thyme, salt, 2 teaspoons hot chilli pepper to taste

Heat the oil and toss the chicken in it with the chopped onions and the seasoning. Cover and simmer slowly for about 20 minutes.

Pour in the water, bring to the boil and add the tomatoes. Simmer for 15 minutes to reduce the mixture, then add the peanut butter, combining the mixture into a sauce.

Cook over a low heat for an hour. Skim the oil from the surface.

Can be served with fufu, yam, gari, rice or kenke.

Spinach stew

3 to 4lbs of fresh spinach
2 large onions
3 fresh tomatoes
1 teaspoon pepper
vegetable or palm oil
1 piece saltfish or some meat, pilchards , tuna can be used instead

If using saltfish it should first be soaked overnight, drained and boiled in fresh water for five minutes to flake.

Pour the oil into the pot and let it heat, then add the chopped onions, then add the saltfish, pepper, seasoning and chopped tomatoes.

After ten minutes add either meat, pilchards or tuna and mix it all together with the spinach. Let it cook on a low heat for half an hour.

When cooked serve with boiled rice, yam or fried plantain.

Joloffe rice

This is a Ghanaian one-pot rice dish that can be made with chicken or fish.

2lbs chicken or fish, cut into pieces and seasoned
1 large onion, chopped
1lb fresh tomatoes, chopped, or a 14oz can
Approx half a tube of tomato puree
1 pint water
1lb rice
Seasonings: salt and hot pepper to taste

Heat some oil in a pan until hot and hazy. Shallow fry the chopped onions, add seasoning, tomatoes and puree. Simmer ten minutes.

Add meat or fish and water. Bring to boil and simmer for ten minutes.

Add rice and cook on a low heat until the liquid is absorbed.

Serve alone or garnished with salad.

To prepare yam

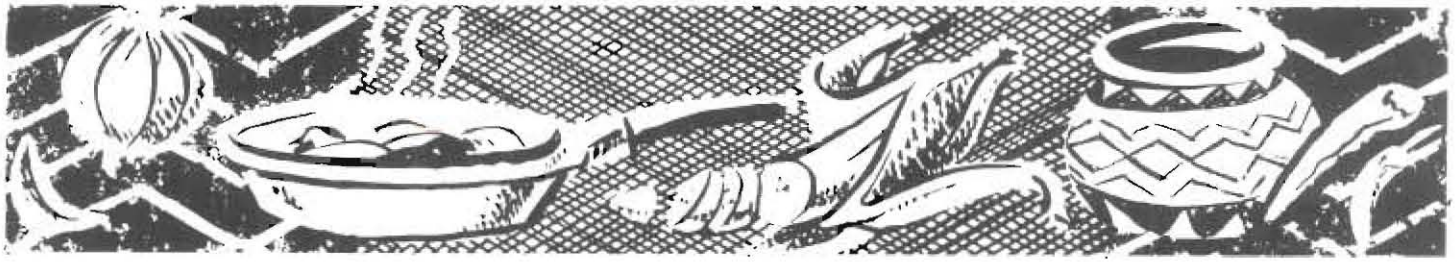
Peel and chop yam into 2-3 inch cubes. Boil in salted water until tender (about 15 minutes). The addition of a little vegetable oil to the water will prevent discolouration.

Plantain

Peel and cut into 3 inch length and boil in lightly salted water. Alternatively slice and fry in oil.

Fresh fruit salad dessert

Fresh fruit salad makes a delicious dessert. Use tropical fruits such as pineapple, banana, mango and pawpaw .



WHAT THE JOURNALS SAY

Vegetarian diets, exercising for bone strength, carrots against cancer, and children's intelligence – Eric Brunner reviews the medical journals.

HEALTHY EATING DOES CUT BLOOD FAT LEVELS

A report from the Oxford Vegetarian Study shows that health-conscious individuals do indeed have a low blood cholesterol. Diets tended to be high in fibre and low in saturated fat, but did not meet the COMA recommendation for total fat.

The Oxford study is a long term study of 6000 non-meat eaters and 5000 meat-eating controls, designed to examine the effect of vegetarianism on health and longevity. This new report compares diet and blood fats across four dietary groups: vegans, vegetarians, fish eaters (no meat) and meat eaters, each with 52 subjects. A large majority of those in the study are in non-manual occupations, whereas only around one third are so in the general population.

The vegans had, as might be expected, a diet very different from those who ate animal or dairy foods, with about one third more fibre, virtually no cholesterol and only seven per cent of calories from saturated fat. Notably, the vegetarians had a saturated fat intake very similar to the fish and meat eaters, at 13 per cent of calories. This compares with the national average in 1986, when the survey was done, of 17 per ceut, and the COMA target of 15 per cent, pointing to the clear dietary difference between the individuals in this study and the general population. The vegan men were the only group whose average total fat intake lay below the 35 per cent COMA target.

For those who set the national nutritional targets, which aim primarily to reduce the high rates of heart disease in Britain, the question of the most suitable form of those targets is raised. The study provides four distinct dietary models, coupled with measurements of total, low and high density lipoprotein cholesterol, and the nature of the relationship between these diets and blood fats shows that the role of the 'total fat as a percentage of energy' recommendation may be inappropriate in the UK.

While the level of fat in the diet shows a fairly strong relationship with blood cholesterol internationally, the results of this study suggest that altering the quality rather than the quantity of fat is significant. Increasing polyunsaturated oils in compensation for reduced saturated fat, coupled with increased dietary fibre, may be more palatable than reducing fat in the diet overall, as well as being more effective at lowering blood cholesterol.

Thorogood M et al, 'Dietary intake and plasma lipid levels: lessons from a study of the diet of health conscious groups', *British Medical Journal*, vol 300, pp 1297-301, 1990.

DIETARY CALCIUM IMPORTANT FOR BONE STRENGTH IN MEN

Whilst osteoporosis is more common in elderly women, men also have an increased risk of fracture to the hip, spine and forearm with ageing. Several studies have failed to show a relationship between bone loss and the incidence of fractures, and calcium intake in women. An Australian study, of 48 men, has found that dietary calcium intake is an important determinant of bone mineral density. This effect seemed to be independent of energy intake, and therefore by implication, of amounts of exercise taken. Physical activity is known to have a positive effect on bone density. What is not clear is whether the level of calcium intake is related to the maximum bone density achieved by an individual, the maintenance of density, or both. It might be that similar associations have not been shown in women because long-term dietary intake of calcium is more variable, and therefore harder to measure reliably.

Kelly PJ et al, 'Dietary calcium, sex hormones, and bone mineral density in men', *British Medical Journal*, vol 300, pp 1361-64, 1990.

FRUIT AND VEGETABLES PROTECT AGAINST BOWEL CANCER

Rectal cancer accounted for four per cent of cancer incidence in 1988 in America and killed 8000 people. This study, of more than 400 cases, provides more evidence for the protective effects of carotene, vitamin C and dietory fibre from vegetables. Fibre from grains, calcium and vitamins A and E were not associated with either increased or decreased risk. The report suggests that risk may be substantially reduced by only modest increases in fruit and vegetables. Eating one carrot per day extra, for example, would raise carotene intake sufficiently to confer considerable protection. Cancer risk decreased with raised intakes of broccoli, celery, lettuce, carrots, green peppers, cucmbers and tomatoes, and the total number of different fruits ingested.

Freudenheim JL et al, 'A case-control study of diet and rectal cancer in Western New York', *American Journal of Epidemiology*, vol 131, pp 612-24.

VITAMIN/MINERAL SUPPLEMENTS AND INTELIGENCE — THE DEBATE CONTINUES

Several studies have recently tested the effect of dietary supplementation on children's IQ (see *The Food Magazine*, Issues 1 and 3). Results have not been conclusive, and here supplementation for five months produced an effect in boys, but not in girls. 167 thirteen year-olds were given vitamin/mineral pills or placebos. They were assigned to 'better' or 'poor' diet groups on the basis of diet diaries, and on repeating non-verbal intelligence tests at the end of the experiment the boys in the poorer diet group produced improved results only if they bad been taking the real supplements. The findings for the girls were negative, with no difference between supplement and placebo groups in the poorer diet group. A possible explanation might be that the difference between the better and poorer diet groups was greater amongst the boys than the girls.

Benton D and Buts JP, 'Vitamin/mineral supplementation and intelligence' (letter), *Lancet*, vol 335, pp1158-60, 1990.