

# THE FOOD MAGAZINE

MORE PAGES  
THAN EVER!

25 RESOLUTIONS  
FOR THE 1990s

NEW FOOD  
IRRADIATION  
CAMPAIGN

BUTTER VS. MARGE  
SURVEY

CATERING UNION'S  
HAZARDS PACK

SAVING OUR FISH

PLANTS: THE GENE  
REVOLUTION

GERMAINE GREER:  
FOOD AND SEX

Incorporating London Food News ♦ Issue 8 Volume 1 ♦ Jan/March 1990 ♦ £2.50

NEW COLOURING  
REGULATIONS

MAFF'S MICROWAVES  
DEAL

SCHOOL MEALS  
SURVEY

BABY MILK  
COMPANIES  
SLAMMED

LETTERS

BOOK REVIEWS

RECIPES

PATTI RUNDALL'S  
DIARY



DINNER AT HER  
MAJESTY'S PLEASURE

PHOTO: CARLOS GUARITA

# THE FOOD MAGAZINE

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Its membership represents London's community and voluntary groups, food sector trade unions, statutory bodies and interested individuals and professionals.

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## EDITORIAL

# Food faddists for the 1990s

**A** big thank you to all our readers and supporters. Due to you all, so much headway was made in the 1980s. The 1990s will in many respects be very different.

This time a year ago, the public scandal about food poisoning was in full swing. It was a classic case of vested interest versus the public interest. Our moles in the Ministry of Agriculture assure us that the Ministry was astounded by the public reaction. The approach to food policy which earlier in this century Walter Runciman, President of the Board of Agriculture (later to be MAFF) described as 'business as usual' could not cope with public scrutiny. The Ministry reiterated that everything was under control.

A year later Government has had to do a U-turn. The Government is de-regulating by inclination, anti-local authority in rhetoric, and anti-interventionist by ideology. But it has been forced to toughen up regulations, give an extra £30 million to environmental health officers and launch a major public relations exercise with the Food Safety Bill. After saying for months that the Ministry already acted on the consumer's behalf, a 'new' Food Safety Directorate has been created with an extra £4 million to spend. It must have been hard to stomach.

Our main concern is that by promising tougher action on food safety — though not as tough as it should be — the Government is ignoring wider issues. A historic opportunity to shape food policy and law for the 1990s has been missed. Action on food poisoning is promised, but clause 16 (1) (c) of the Bill allows the Minister to legalise any new process or technology, such as irradiation — a technology which cannot solve the problems of food poisoning.

But what lies ahead? For us in the consumer, environmental and public health movements it too must be 'business as usual'. We must be wary of food policy tokenism, just as Friends of the Earth warn us of green tokenism. Above all, we must learn from our experience in the 1980s. If the 1970s was about preparing the ground and the 1980s about sowing the seed, the 1990s must be the period when



we work to allow the seed to flower into a rational, equitable food policy.

Consider that remarkable 1989 fight against Alar. The company which made this particular plant growth regulator withdrew it in the USA. Pressure from Europe, particularly in the UK from Parents for Safe Food, led to the product being withdrawn world-wide. A victory for common-sense, but a word of caution. In this country it is still legal to use daminozide, the active ingredient in Alar. MAFF has not banned it.

The onus is on consumer groups to keep up the pressure to get daminozide banned.

International pooling of information and experience should be a priority for us all in the 1990s. That is why I for one cheered so loudly when that marvellous group, the Baby Milk Action Coalition (BMAC), won a Caroline Walker Trust Award. It is no accident that BMAC and Parents for Safe Food, two organisations which have been so effective in recent years, have been motivated mainly by mothers but supported by all. They have argued with powerful logic that women and parents everywhere have the right to feed their children well and safely. But they have organised and thought internationally.

If I have one public wish for the 1990s, it is that we can build on the new global consciousness and expand the 'think global, act local' principle into 'think global, act local, organise international'.

The new public health, environment and socially conscious public is a 1980's phenomenon which gave the lie to the supposed selfish traits of the decade. It is this new questioning approach which the Minister of Agriculture John Gummer must so fear that he has termed it the mark of 'food faddists', which means anyone he doesn't like and is beyond his control.

The phrase reminds me of Harold Macmillan's memorable slogan 'you've never had it so good'. Mr Gummer's phrase could also be taken to indicate a contempt for us all, which will probably boomerang on its originator. Whoever we are, we want a good quality, healthy, environmentally sound and affordable diet which we can be proud of, whether we just eat it, produce it or feed it to our children. We are all food faddists now.

**Tim Lang**

# My hopes fo

*In this, our first issue of the new decade, The Food Magazine asks 'What are your hopes for the 1990s?'*

## Derek Cooper

*Food writer and broadcaster*



My hope for 1990 is that at the earliest possible date a snap election will return a government to power which actually cares about what people eat and drink. Its first priority will be to formulate a food policy which recognises that cheapened, debased and adulterated food is the real enemy within.

I'd like to see the creation of an independent body which would mount a crash programme to improve the quality of the food on our shelves. It might put crippling levies on crap food and offer subsidies to the really nutritious things. At the very least it would begin to bring about the food revolution that Britain has been needing for the last 50 years.

One of the first things it could do would be to release the advertising industry from the drudgery and humiliation of writing copy which suggests that rubbish and junk foods are actually good for you. All that money could be channelled into making truthful TV commercials about good food. At first there might not be many commercials but it would be a start.

## Professor Philip James

*Director, Rowett Research Institute*

The 1990s could be the most significant decade for food since World War II. We have been dominated by concepts of food needs and the provision of enough food to prevent starvation. This crude approach has led to a cheap, mass food production policy in the affluent West and major UN development programmes elsewhere. The 1990s should see a major swing in perceptions: food supplies will probably be adequate everywhere except the Sub-Sahara region.

Elsewhere food 'quality' should become the major theme. The nutritional quality of the diet seems to be deteriorating in most parts of the world as fat, sugar and perhaps salt intakes rise. Changing these trends will require a revolution in the food industry. In Britain the advent of the National Curriculum seems likely to reduce the amount of practical cookery taught in schools. The young people of the 1990s may therefore be less willing or able to prepare fresh, unprocessed foods. How to promote improvement in the quality of the diet will be the major challenge.

## Richard Adams

*Director, New Consumer*



In the coming decade we must have more information about the food chain. Not just of the grass, sheep, lamb chop variety, but who owns and markets what brands. We give tremendous power to companies that hide behind a vast range of subsidiaries. Birds Eye, Brooke Bond, Mattesons, Walls and John West are just some of the hundreds of Unilever owned companies, whilst names associated with Nestle's \$27 billion turnover are Carnation, Chambourcy, Crosse and Blackwell, Fox's, Libby's, Rowntree's and Sarson's.

To hold these huge conglomerates to account we need to know who owns what. Parent company names on the label, please.

## Tom Jaine

*Editor, The Good Food Guide*



Just as restaurants have seen the incontestable rise of chains and multiple outlets, so have retail food shops. My dream is that supermarkets fade away, except for the sale of detergents, and the owner-occupied fresh food shop springs reinvigorated and rearmed onto the High Streets of Britain. If this were combined with the encouragement of farmers' markets in most urban centres, shopping patterns might be redressed in favour of the small food producer.

## Carole Tongue

*MEP*

Aside from my overall desire to see the promotion of wholesome, non-irradiated food, I would like to see the end of the 'exclusive nature' of British pub culture, so that public houses become more open to women and children. Moreover I would like to see restaurants more ready to accept parties with children. Finally I believe that all food establishments including airlines should have to offer a vegetarian alternative on their menu.

## Aubrey Sheiham

*Professor of Community Dental Health*

Food is emerging as an important health and political issue in many industrialised countries, but the main debates on food have been about individual constituents of foods: the dangers of specific pesticides, of fats and sugars. We need a comprehensive farm-food-nutrition policy formulated by groups without vested interests, with freedom of access

to the information required for such a strategy. The policy should be part of a broad health promotion policy. The basis of health promotion is that healthier choices are the easier ones.

The science of nutrition is dominated by vested interests. Food scientists should be supported by funding bodies who will not limit their freedom to express their views.

I would like to see an alliance of those who produce foods, those who consume them, the food scientists and the policy formulators. Too much time and effort is being spent on exposing the shortcomings of the food and agriculture industries. We should be setting the agenda

## Colin Spencer

*Food writer*

The informed and the affluent can choose a healthy diet for themselves, so I would like to see a reformed MAFF attacking the abuses of the food industry by creating new standards of nutrition, especially in the areas of convenience and junk foods which the majority of people eat. Government should be able to penalise food manufacturers who use an array of cosmetic additives to hide poor nutritional quality. Government should subsidise healthy fresh foods by making these economically viable for the majority to consume. In such ways Government could alter market forces completely, however, we know this Government is hand in glove with agribusiness and will not lift a finger against them. Let us pray that Labour policy will be braver and will have a chance of implementing a food revolution later in the 90s.

## Tony de Angeli

*Editor, The Grocer*



I wish that in the New Year there could be a much more subdued, constructive,

# r the 1990s

helpful and co-operative attitude concerning health and food. What is sad is that all the attacking and defence mechanisms seem to be in immovable positions. The result is a sauce that goes with everything, called Media Relish.

## Michael Hindley MEP

I would like to see a rising wave of anger at the subsidised over production of food, which serves only to swell the coffers of the agri-business, depress Third World agriculture by dumping and ruin the countryside.

The European Community would be forced to abandon the Euro-centrist Common Agricultural Policy (CAP) and negotiate a 'World Food Policy', whose central principle would be the human right to cheap, wholesome nutritious food.

## Lynn Stockley Nutrition Officer, Health Education Authority



First and foremost, in the 1990s, I would like to see the introduction of compulsory comprehensive nutrition labelling on all packaged

foods, using a standard format.

Secondly, 1989 has seen a plethora of scares about food. There is no doubt that some of these were entirely well founded and necessary to bring about action. Others were completely unfounded, often taking scientific findings out of context. The problem is like that of the boy who cried 'wolf', soon people will not believe any of these stories, and consumer and health pressure groups will have lost an important tool. I hope that in the 1990s food does not hit the headlines

so often, and when it does nutritionists and journalists work together to make sure that the public is presented with a balanced and factually accurate picture.

## Ann Foster Food Policy Adviser, National Consumer Council

I would like to see a decline in the number of all types of food poisoning cases. In recent years there has been a steady upward trend in the number of reported cases, culminating in the sharp increases of 1988 and 1989. It would be nice if 1990 could see the end of this upward trend. This would be the best news of all for consumers.

I would like to see progress made on the legislative front. In the UK, this means that the Food Bill should be a genuine consumer protection measure. In the EC, there needs to be a far greater commitment to introducing essential consumer protection measures before the trade barriers eventually come down by the end of 1992. It is the only way that the single European market will work to the benefit of all.

1990 is also going to be the year of MAFF's new Food Safety Directorate and the Consumer Panel. Both initiatives have had a somewhat mixed reception. It will be nice to look back in a year's time and agree that, at last, consumers really did achieve a strong and effective voice in food policy in 1990.

## Earl Baldwin of Bewdley Member, House of Lords



Food and health are intimately connected and we need more recognition of this at government level. This will entail greater encouragement

of organic producers and a far more precautionary stance on hazards such as additives, pesticides and food irradiation. On these, and on food intolerance and the effects of the modern Western diet on physical and mental health, we need a programme of independent, good-quality research. The unhealthy grip of food manufacturers in policy matters must be loosened to include strong consumer representation. None of this will happen without a firm lead from the government of the day.

## Tony Venables Director, Bureau of European Consumer Unions

I hope that the EEC will take on a responsibility for consumer interests in safety and quality of food, and not just the free circulation of foodstuffs in the internal market. A European Food and Drug Administration should be set up. Its purpose should be to strengthen and speed up the work of scientific committees in assessing new hazards and overcoming the backlog of work which is needed to assess the pesticides and additives which have never been subjected to proper scrutiny. Such an agency would also be responsible for overseeing enforcement, and the collection of more reliable statistics on food poisoning. It is essential, though, that such an agency should be fully accountable and that consumer and other public interest organisations should have access to it.

## Jonathan Aitken MP

The crusade to promote good health through good food is likely to have a high priority on the political and Parliamentary agenda in the 1990s. As an initiator of one of the earliest food and health debates in the House of Commons (my 16 July 1984 adjournment debate on the prevention of coronary heart disease (CHD), which highlighted the late Caroline Walker's 'socks and sausages' routine to demonstrate the

weaknesses of food labelling), I shall keep fighting on the familiar battleground. I hope to see Britain's appalling CHD mortality statistics fall dramatically during the 1990s. This will be achieved only through national diet, lifestyle, and food manufacturing changes on a big scale.

## Dr Michael Jacobson Executive Director, Center for Science in the Public Interest, Washington, USA

The 1990s will be a race between healthful, natural foods and phoney foods of uncertain nutritional value. Olestra, acesulfame-K, sucralose, alitame, fluffy cellulose, and ingredients still undreamt of in the minds of chemists will challenge toxicologists, government regulators and consumers to identify and shun the bad and select the good. I am sure, though, that readers of *The Food Magazine* will be among the first to know the facts about the brave new world of good recognisable and healthful foods.

## The Rt Hon Jack Ashley MP



Food is not what it used to be because the preparation and purchase of meals is replacing home cooking. I hope 1990 will be the year when the public realise that the pre-requisite of food safety is public pressure and government intervention.

I seek full information, effective monitoring and recognition that the consumers' interests should prevail over the manufacturers'. The content, quality and taste of food are essential ingredients of life. They should secure a firm place on the Parliamentary agenda and not just be an occasional sensational item.

# The 1990s

## Susie Orbach

Writer and therapist



I think food is an anxious area for many people, especially women (we feed others and that means love and caring, but we are supposed to

be wary of food ourselves), and the new theories on what constitutes 'healthy' food tighten this pressure further. In the absence of government policy that sets standards for food safety it becomes the responsibility of the individual woman in the individual family to ensure that the population is healthy. This is not a good situation. I'd like to see us, as a culture, take more responsibility for food.

I'd like to see an end to the routine patronising of women around food by well-meaning health workers who often have no idea of the impact of their casually uttered phrases. A nursing mother can be told quite cavalierly to feed her baby only every three hours; a woman deemed overweight by her doctor can be told 'just go on a diet dear,' the dentist can tell the child 'we don't eat sweets do we?' Such utterances may sound benevolent but they miss the social and psychological context in which food exists. They don't 'reform' people's practices but come across as punitive, and unwittingly contribute to people feeling ever more guilty about what goes in their mouths as opposed to being thoughtful, and understanding what is caught up in the feeding relationship, in eating and in food deprivation.

## Dr Alan Long

The Vegetarian Society



Food should rate with friends and lovers as a joy to savour, cherish and linger over; haste and disregard for such blessings spell

unfulfilment, woe, and the nemesis of nasty ills. I hope for a new decade in

which we stuff the turkey for good and resort to kinder manners in farming, food, health, and the land and all its denizens.

## Dr Michael O'Connor

Director, Coronary Prevention Group



To help remove the UK from the top of the world league for deaths from coronary heart disease we need national and EC food policies which provide

affordable, high quality food for everyone and are geared to the nutritional needs of the consumer rather than the economic interests of the producers. Policies should provide consumers with comprehensive and accessible information on nutritional qualities through product labelling and encourage the food industry to provide accurate and balanced information about their products. Health education and healthy school meals can encourage young people to adopt healthy diets.

## Bob Stevens

Public analyst



The responsibility for monitoring food quality is a serious one, but the level of activity varies greatly between local authorities. Minimum sam-

pling levels should be defined by central government or better still by the EC throughout the community, on a population basis.

'Informative labelling' is regularly advocated as a successor to minimum compositional standards. While the latter are increasingly undermined, labelling is as euphemistic as ever. It is time that informative labelling took shape in the form of stricter labelling requirements.

## Sir Richard Body

MP



What an amazing change there has been in the 1980s over our attitude to food. My wish for the 1990s is for us to keep up the momentum and so

perhaps by the year 2000 we may see two more big changes — an end to the cruelty in our slaughterhouses and an end to the high taxes on food imported from outside the EEC.

## Tony Webb

Food Irradiation Campaign

My hopes are for the government to recognise the legitimate concerns of many organisations over the way food irradiation is being promoted; for the World Health Organisation to re-open the safety investigation and produce a properly referenced report; and for the food retailing industry to give a clear signal it will not sell irradiated food.

## Jonathon Porritt

Director, Friends of the Earth

I have two main hopes for the 1990s. I hope that public anxiety about food safety will harden into a coherent campaign for an unambiguous food policy in the United Kingdom and that the interests of the consumer, judged against the criteria of nutrition, quality and environmental protection, as well as value for money, will at long last take precedence over the interests of the producer.

I also hope that all good environmentalists will be fully engaged in that campaign!

## Dr Michael Joffe

Chairperson, London Food Commission

The first item on the agenda for the 1990s is to ensure that action follows words. Ten years ago there was little public challenge to the individualistic view that the consumer had free choice and should take the blame for any

health problems.

A great deal of progress has been made on 'green' issues and over concerns about food quality. Crucially, attempts to shift blame onto consumers and homemakers have been resisted.

There is now a need for a greater sense of social responsibility as we enter the 1990s. The food economy is effectively multi-national and the international dimension will become increasingly important. As the world economy is constantly being restructured, control over the process of change rests in too few hands. The most difficult challenge is to bring the disenfranchised into the debate.

## Gay Palmer

Baby Milk Action Coalition

My dream is that the glamorous sophisticate in the TV adverts says to her suave neighbour: 'Could I possibly borrow some coffee ... but not Nescafé because Nestlé's promotional tactics have unspeakably ghastly effects on babies all over the world.'

In reality, we hope the growing awareness of church, consumer, union and student groups all over the world that is fuelling and expanding the Nestlé boycott will reach into the hearts of those blinkered people who have violated the important marketing code.

## Apologies to The Green Party

Our apologies to the Green Party for a typesetting error which led to an omission in their statement on The Food Bill in the last issue of *The Food Magazine*. The first two sentences should have read:

'The Green Party is committed to the production of fresh, wholesome and nutritious food which excludes processes damaging to the environment and human health, or which cause any kind of suffering to animals. This can be achieved only by adopting organic systems of food production which do not rely on massive inputs of artificial fertilisers, pesticides, growth hormones and preservatives.'

## Microwave deal leaves consumers cold

As the Food Magazine goes to press new research shows one in three microwave ovens failed to heat food adequately in tests carried out by government scientists. But MAFF have refused to publish the full results because, we understand, the ministry agreed with manufacturers not to disclose the information in return for test ovens provided free of charge.

But the uproar following the revelation that the manufacturers had been told the results but not consumers led the manufacturers themselves to name the 24 models which failed the government tests. But while some companies, such as Comet, withdrew models and offered customers a refund, others only issued revised instructions such as 'put food on edge of turntable and stir or move during cooking.'

The survey found 24 out of 70 models tested were failing to heat food to 70°C throughout — the guideline temperature for destroying bacteria such as Salmonella and Listeria. For 10 models temperatures below 60°C were found and in the worst case a temperature of just 44°C was recorded.

The survey also found that the wattage power of ovens varied by up to 24 per cent from that stated by the

manufacturers.

The 24 models failing to heat food evenly and thoroughly to 70°C were:

Boots: Model 500  
Brother: MF1200PW/MF3200DB  
Electrolux: NF4061/  
NF4065/NF4076  
Goldstar: ER350ME/ER535ME  
Hoover: H6312  
Matsui: 260TC  
Moulinex: 059  
Philips: AVM625/AVM734  
Proline: M3030  
Russell Hobbs: 8504  
Samsung: RE570D/ RE576D/  
RE990CT  
Sanyo: EM2714BR  
Sharp: R-7A50M/R-8H50(B)T  
Toshiba: ER9610EW-1/ER9630E  
Tricity: MH1081

■ A survey by the Institution of Environmental Health Officers found that 2,858 out of 5,622 restaurants, pubs, take-aways and other outlets investigated were using domestic rather than commercial microwave ovens.

■ Heating foods in microwave ovens produces potentially dangerous changes to amino acids, according to Austrian research published in The Lancet last December. Researchers at Vienna University's Paediatrics Department compared baby milks heated in microwave ovens with those heated in a water bath, and found the microwaved samples contained two types of abnormal amino acid associated with neurotoxic and immunological problems.

employed and the conditions of use. However, Cadbury Limited and, I believe, the rest of the UK chocolate industry do not use Brazilian cocoa. Regrettably, therefore, there is little influence we can bring to bear in that part of the world'.

But according to government statistics, the UK imported over a million kilograms of Brazilian cocoa beans in the nine months to September 1989. This may be just one per cent of total cocoa bean imports but it would make a lot of chocolate.

Cadbury's are just one of the UK chocolate manufacturers represented by the trade association, The Biscuit, Cake, Chocolate and Confectionery Alliance, whose response to our article is printed on page 33.

## New colouring regs 'inadequate'

The Ministry of Agriculture, Fisheries and Food's announcement before Christmas of new regulations on colourings in food has been criticised by the Food Additives Campaign Team (FACT) for failing to be acting in consumers' best interests.

FACT says that MAFF has ignored consumers' concerns about additive use, particularly by still permitting colours known to provoke intolerant reactions in foods marketed to children and by not improving labelling of additives. The key MAFF proposals are as follows:

■ So-called natural additives crocin, santalin and the solvent extracted versions of annatto, canthaxanthin and capsanthin/capsorubin may be removed from the permitted list. *FACT comment that both crocin and santalin are rarely used by the industry anyway, but the restrictions on solvent-extracted colourings are welcome.*

■ Legislative controls 'may' be considered if voluntary restrictions on the use of the word natural are found to be inadequate. *FACT comment that trading standards officers showed two years ago that up to 90 per cent of uses of the word natural were misleading, so why not legislate immediately?*

■ No colouring to be permitted in butter, cream, milk, tea, coffee, cocoa, chocolate (except chocolate fillings) fruit juices, raw meat, fish, fruit and vegetables, flour and bread, (except brown, malt and wholemeal breads) table wines, mustard powder, honey and extra-fruit jams and jellies.

*FACT comment that many of these foods are already free of colouring, but the table wines are a welcome new addition. Why, asks FACT, are brown and wholemeal breads exempt, and why not extend the colouring-free list to the range of foods likely to be eaten by young children?*

■ Limits on E150 caramel in certain foods:

Beer (except stout) up to 5000 mg/kg  
Beer (stout) up to 10,000 mg/kg  
Morning goods (buns, croissants etc) up to 2000 mg/kg

*FACT comment that the levels are still*

high and roughly in line with amounts used by industry already. MAFF admits that anyone drinking two pints of stout would exceed the daily recommended intake of E150 caramel.

■ Limited use of certain colourings: E127 erythrosine, use only for glace cherries, 128 red 2G, use only in meat products and analogues, 154 brown FK, use only for cured fish

*FACT comment that it is possible to buy glace cherries without E127, so why is its use permitted? The red colouring 128 is used by meat product makers to colour fat and rusk a 'lean, pink meat colour' which is at essence a legalised fraud on consumers.*

The Food Advisory Committee originally proposed reducing the amount of caramels in soft drinks by three-quarters, but has backed down on this and several other points following pressure from the food industry,' says Dr Erik Millstone of Sussex University. 'Most of their proposals will have no effect on industry. By setting maximum levels so high, they've done nothing to reduce the level of additive use.'

## Chocolate's dark secrets II

UK chocolate manufacturers including Cadbury's have been quick to try to distance themselves from the appalling conditions faced by Brazilian cocoa workers highlighted in our article, Chocolate's dark secrets, in the last issue of The Food Magazine.

Cadbury's wrote to a concerned reader: 'I have a great deal of sympathy with your comments about the totally unsatisfactory practices which take place on Brazilian cocoa plantations, both with regard to the nature of the pesticides



E127 may be banned from products like these.



PHOTO: BRENDA PRICE

## Food fears

**T**wo large surveys of consumer concerns about food hazards both report rising anxiety among the British public about the quality of the food they are sold.

In a survey published last October for *Marketing* over half of consumers questioned said they did not feel food companies could be trusted to put health and safety before profit. Nearly three-quarters said they were confused about whom to believe: only two per cent believed the Government completely, while nearly 60 per cent believed them only a little or not at all.

Asked if there were any stores or brands that they could trust, Marks and Spencer and Heinz topped the unprompted replies, with 26 per cent and 14 per cent respectively. But 54 per cent of the 741 shoppers questioned said they could not think of a brand name they trusted completely, and 40 per cent could not think of a completely trustworthy retailer.

Of those shoppers who used to buy meat pate, 77 per cent have now cut back or stopped buying it. Twenty three

per cent of former egg buyers now buy less or none at all.

Over three-quarters said that food poisoning concerns now influenced what they bought, 72 per cent were influenced by additives, 68 per cent by cholesterol, 66 per cent by salt and sugar and 61 per cent by a fear of pesticides. In a separate study Food Confidence by the Strategic Research Group the Government again came in for criticism for showing too little interest or objectivity. The study involved a dozen discussion groups around the country and concluded that smaller retailers and food companies

were trusted less than larger concerns, which were assumed to have better standards, faster turnover of produce and more to lose if things go wrong.

Package tampering was also a concern, with credit being given to companies that quickly withdrew suspected foods and re-packaged their range in tamper-proof containers. Companies who denied the problem or were slow to withdraw stock gained a bad reputation.

Sources: Crisis in Food, researched by Diagnostics for *Marketing*, 26.10.89 (details 01-379 3454); Food Confidence researched by David Hopper and Tim Mills for Strategic Research Group, October 1989 (details 01-837 6800).

**Over 80 per cent of shoppers are concerned about food safety, especially pesticide and drug residues, food poisoning and malicious tampering, a street survey in the London boroughs of Southwark, Lambeth and Camden has found.**

**Food processing companies and retailers were felt to be more to blame for food poisoning than either farmers or households. The majority said they would accept a smaller range of foods, and even higher prices, if it meant less risk of food poisoning. Only ten per cent of the 71 shoppers interviewed were in favour of lifting the ban on irradiated foods and would actually buy them, while 60 per cent opposed irradiated food outright.**

Survey conducted for the London School of Hygiene and Tropical Medicine, August 1989 by Veronica Tuffrey.

## Glasnost at MAFF?

**E**ighteen months after the launch of the London Food Commission's Food Quality Charter calling for more democracy, less secrecy and more action on food poisoning, safety and adulteration, the Ministry of Agriculture, Fisheries and Food have announced their new Food Safety Bill, a new Consumer Panel and a Food Safety Directorate.

The Food Safety Bill gives tougher penalties for infringements and promises better training for food handlers. Food premises are to be registered, with controls to cover the whole food chain. An extra £30 million is to go to local authorities for environmental health officers.

But the Bill does not go far enough,

says Tim Lang of the London Food Commission. 'All food premises would be better licensed, not registered. You are not allowed to drive a car without it and yourself being deemed safe and fit to drive. Registration will be red tape with few advantages. And MAFF's commitment to clean up food is in doubt while Clause 16 (1) (c) in the Bill gives the Minister power to legalise irradiation which is widely recognised as a dangerous irrelevancy in tackling food poisoning.'

As the last opportunity to clean up its food policy before 1992, the Food Safety Bill may be a missed opportunity. The LFC has set out its case in its briefing paper 'Food Legislation: time to grasp the nettle' (October 1989; £2.50), and says that by focusing on safety, MAFF ignores the weight and range of the consumer and public health movement's concerns about UK food and diet. Lang adds: 'The cynical view is that by conceding a little on safety,

the UK's food conglomerates can carry on adulterating quite legally and lobbying for their approach to European standards.'

MAFF's food safety work is being reorganised into a new Food Safety Directorate with an extra allocation of £4 million. But it is too early to judge whether its effects will be more than a public relations exercise.

### NEW CONSUMER PANEL

Also announced by John Gummer is a new Consumer Panel to be 'a direct means of conveying their views on food safety and consumer protection issues to the Ministry'. Invitations to nominate representatives have gone to five state-funded groups (the National Consumer Council, the Welsh Consumer Council, the Scottish Consumer Council, the General Consumer Council of Northern Ireland and the Consumers in the European Community Group) and only one group

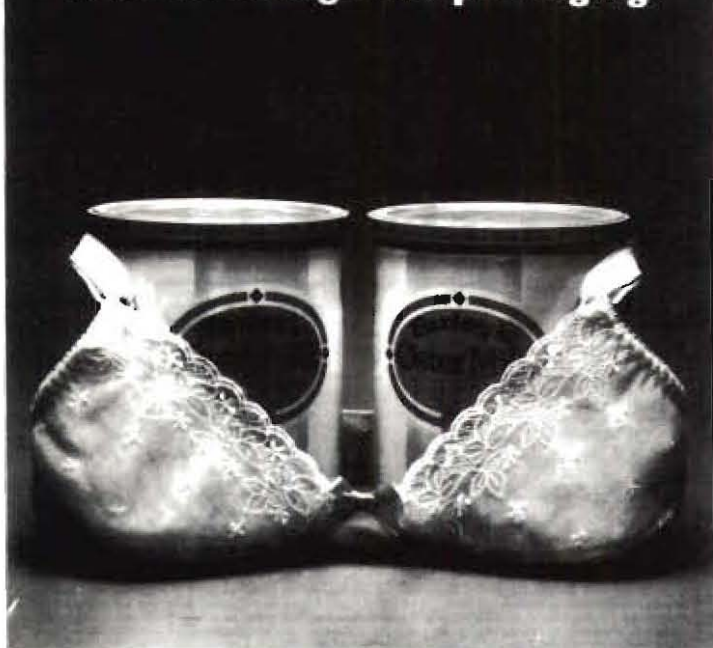
which is independent of government, the Consumers' Association. Neither the LFC, Friends of the Earth nor Parents for Safe Food have been invited onto the panel.

Tim Lang for the LFC said: 'For one dreadful moment I thought MAFF might do something intelligent and invite some of us on. I need not have worried.'

The Panel is to meet quarterly, and terms of reference have not yet been clarified. One particular sticking point is whether the consumer bodies will be allowed full access to the Ministry's information.

The LFC's Food Quality Charter called for MAFF to be reorganised into a Ministry of Food. The emphasis is still on farming and manufacturing, with retailers, caterers and consumers largely excluded. Time will tell if the consumer panel is a sop to defuse consumer outrage or a step in the right direction.

**Any closer to breast milk and we'd have to change the packaging!**



Obviously, we're not saying that Farley's OsterMilk could hope to match mums' milk.

But we can safely say that OsterMilk is the best infant formula you can recommend.

Unlike other infant formulas, OsterMilk is identical to breast milk in its levels of protein and

lactose. It's also closer in the balance of essential amino acids.



And it's unique in that the only oils you'll find come from vegetables.

Sadly though, we have to admit that even Farley's will never make milk quite like mother does.

But then, we're only human.

**SOPALEY'S COOOL**

**Outright winner of the Tasteless Advert of the Year award must be Farley's picture of a bra (not even a nursing bra) attempting to convince us that their product is virtually identical to breastmilk. Rejected by magazines such as the Health Visitors Journal it was published by the Nursing Times in November, 1988**

Readers may wish to write to Farley's (now owned by Boots the chemist following Farley's salmonella contamination crisis in 1986) c/o Crookes Healthcare, 1 Thane Road West, Nottingham NG2 3AA (tel:0602-507431).

## Baby milk company tactics slammed

**I** am prepared to sue any hospital which gave my newborn baby a formula feed without my wife's permission', announced Professor David Morley, of London University's Institute of Child Health and an internationally renowned paediatrician, at the Baby Food Network Forum in Manila last October.

He went on to say that there is good evidence that just one formula feed can be harmful, particularly in families with allergic history such as asthma, hayfever and infant eczema. 'It would be easy' said Professor Morley, 'to brief a lawyer and win a case against any hospital.'

Philippines President Mrs Aquino declared 12 October to be National Breastfeeding Day, and Forum delegates mounted a massive motorcade through the Manila city streets to dump hundreds of discarded baby milk cans on the doorstep of Nestlé's in protest against the company's continued disregard for internationally agreed marketing restrictions. Delegates then joined

regional health workers singing local songs and calling on Nestlé to stop killing their babies.

Patti Rundall, coordinator of the UK's Baby Milk Action, visited a typical Philippine hospital which had been refurbished by Nestlé ten years earlier. She found that all the babies were being routinely bottle-fed on Nestlé milk in a nursery. Mothers were forbidden by staff to have their babies beside them and Nestlé posters advertising their milks adorned the walls.

The UK team included health visitor Isla Cameron, who has been finding gastro-enteritis among bottle-fed babies in Liverpool. 'My work is made all the more difficult by the way companies undermine breastfeeding. They wine and dine us and give lectures on infant feeding, even though their expertise is breastfeeding failure not breastfeeding success. They expect us to hand out promotional material to mothers, which I refuse to do.'

The UK government signed the World Health Organisation's marketing code restricting company activities in 1981, but then adopted an industry-drafted, less restrictive code in 1983. Despite some strengthening in 1989 the UK code does not yet comply with the WHO code.

Details: Baby Milk Action 0223-464420.

**Now read Patti Rundall's Diary, page 32.**

## Sulfadimidine — a 'farmerceutical' for the chop?

**W**e note that residue levels of sulfadimidine were still high in pig kidney samples. Residues were also found in kidney samples from cattle and calves. This suggests that withdrawal periods for pigs were commonly being abused, the dosing instructions were not being followed or, more likely, a combination of several factors including these two.

So reported a MAFF Food Surveillance paper in 1987 following a survey in which 28 per cent of pigs'

kidneys sampled from butchers' shops revealed residues of the antibiotic. Half of these (i.e. 14 per cent of the total) exceeded the maximum acceptable residue of 0.1ppm.

Pigs in intensive systems are under constant stress and threat of infection in the five and a half months in which feed and growth boosters fatten them to slaughter weight. Sulfadimidine is added to feed to counter the prevalent infections of the respiratory tract and gut. It is a prescription-only medicine obtained

through a vet. Farmers may mix it themselves and the drug, one of the sulfonamide antibiotics, may be advertised direct to farmers.

It has been known since 1943 that sulfonamides administered to rodents induce goitre. Results published in 1989 show long-term feeding resulted in the development of neoplastic lesions and a risk of cancer. The authorities in the USA have proposed to ban sulfadimidine (called sulfamethazine in the USA) in farming from mid-1990, and are already refusing to allow the pharmaceutical industry to introduce it in new mixtures for farming use.

The drug is not recommended for dairy cattle yet US tests found residues in 3 out of 4 bulked milk samples.

Treatment of one cow can contaminate the bulked milk supply from 60,000 cows above permitted concentrations. It was also detected in six per cent of pig carcasses.

Fluctuations in the market and the inconvenience of switching feeds for the animals' last days before slaughter cause farmers to flout advice on withdrawal periods for drugs such as sulfadimidine.

Vets, unlike doctors, generally sell the drugs they prescribe, and in farming practices may derive a large part of their income from these sales. Such vets may condone the use of the drugs as at least a poor substitute for the stockmanship the animals are denied.

Alan Long

# Food irradiation - Th

**A**s the government prepares to legalise food irradiation the consumer campaigns prepare for battle.

Irradiation, the controversial technology which involves exposing food to radiation doses up to 100 million times greater than a chest X-ray, is about to be legalised in the new Food Safety Bill now before parliament.

The London Food Commission's campaign now has three targets

■ Persuading MPs and Lords to reject clause 16 (1) (c) of the Food Safety Bill allowing the minister to permit, without consultation, '...any process or treatment in the preparation of food...'. MPs and Lords of all parties have expressed concern and the public is urged to write to MPs asking them to look behind the reassuring but misleading briefings being provided by the Ministry of Agriculture. If the market forces of supply and demand are really meant to operate, where is the demand for irradiation? It is certainly not coming from consumers or from the food industry. These questions must be resolved first.

■ Persuading MEPs to stand by the position adopted by the European Parliament in 1989. This rejected proposals from the European Commission that would have forced all EC countries to permit irradiation of a wide range of foods. It called for a general ban — with one exception for irradiation of dried herbs and spices. Under Community procedures, the Parliament will have a second vote in 1990. If carried by 260 members this would prevent irradiation being made law — unless all EC countries unanimously voted to override the elected parliament's decision. Denmark and West Germany may be unwilling to do this. In 1989, 263 members voted for irradiation to be banned, so every vote will count.

■ Persuading the Sainsbury supermarket chain that their policy in favour of irradiated food is incompatible with its 'green' image. The LFC and Friends of the Earth have

published a 'positive list' of all the major supermarket chains including Tesco, Co-op, Marks and Spencer, Asda, Gateway, Waitrose, Littlewoods, Spar, and Budgens who have given clear statements that they are not intending to sell irradiated food for the time being.

An action kit with sample letters for MPs, MEPs and the supermarket chains is available from the LFC Food Irradiation Campaign, 88 Old Street, London EC1V 9AR.

## FOOD IRRADIATION — THE MYTH AND THE REALITY

This month sees the publication of *Food Irradiation — The Myth & The Reality*, by Tony Webb and Tim Lang. This is a revised and updated version of the popular *Food Irradiation — The Facts* published by Thorsons in 1987.

The new book draws on the experience of the authors' successful campaign which has led to Europe-wide and international networks sharing

common concerns about the issue. Like the earlier edition, the book sets out the facts about irradiation and the arguments on both sides of the debate, but is written from a global perspective and delves deeper into the issues to contrast the myths that irradiated food is safe, wholesome and beneficial to consumers, the food industry and the world's hungry with the realities. It documents:

■ Bias, illogicality, misrepresentation and inaccuracy in the way official assurances are drawn from a mass of contradictory evidence on safety. It questions the way safety testing requirements have been relaxed and whether the use of massive vitamin supplements to suppress adverse effects found when irradiated food was fed to animals is scientific incompetence or deliberate scientific fraud.

■ Abuse of irradiation to hide contamination on unsaleable food — a practice that has led to the term 'dutching' in the international seafood trade — and the inadequacy of controls that has allowed illegal irradiation of Japanese baby-food in boxes labelled as 'animal feed'.

■ Accidents, some of them fatal, in

irradiation facilities world-wide and the inadequacy of current controls for protection of workers and the environment.

■ How tax-payers' money is being used to finance the International Atomic Energy Agency's (IAEA) global marketing plan for the promotion of irradiation.

■ Why irradiation is no solution to the problem of food poisoning — being at best irrelevant and at worst increasing the risk to public health. A clear choice has to be made between improving the hygienic quality of food and using irradiation to hide filth and contamination.

■ Why irradiation will not help to feed the world's hungry but benefit the well-fed, affluent section of the population, especially in developed countries. It contrasts the so-called aid being given to develop irradiation with the real needs of the Third World for appropriate technologies to relieve food losses, hunger and malnutrition.

■ How the health education message of the UK and other governments is undermined by irradiation. It is the very foods which help reduce the risk of fatal illness, especially coronary heart disease, which are targeted for irradiation, such as white meats, wholegrains, fresh fruit and vegetables. As a result they will be older, staler, depleted in vitamins, yet sold as looking fresh — counterfeit fresh.

■ How consumers, trade unions, environmental and public health groups world-wide have rejected irradiation, how many countries have banned or severely restricted its use and how large sections of the food industry do not want it — with good reason. Far from improving safety, quality or the market image of food, consumers will rightly ask if a food had to be irradiated, what was wrong with it?

Finally, the book draws on the lessons of successful campaigns in many countries to suggest how the reader can intervene to prevent the introduction of irradiated food until all the crucial questions are resolved.

*Food Irradiation — The Myth and the Reality*, T Webb and T Lang, Thorsons, 1990, £5.99



# FOOD IRRADIATION

The myth and the reality

- ★ What is food irradiation?
- ★ Is food irradiation safe?
- ★ What does it do to the food?
- ★ Who wants it?
- ★ What can you do about it?

# Campaign Heats Up

## THE TECHNOLOGICAL FIX

Irradiation does not make food measurably radioactive but produces chemical changes which have the effect of:

- extending the shelf-life of foods — like a preservative,
- killing/stopping breeding of insects — like a pesticide,
- killing some (but not all) bacteria on food — like a disinfectant.

To the Government and the international nuclear industry, which is actively promoting

irradiation as a solution to the problems of food poisoning and world hunger, there are few problems and many benefits from this technology. To critics, which now include most major consumer, environmental, women's, trade union and public health groups, there are many outstanding questions that need to be addressed before the ban is removed.

■ How safe is irradiated food given that safety testing falls far short of the standards required for food additives — some of which are now being banned after years of assurances on their safety? The London Food Commission has uncovered a litany of fraud and bad

science including systematic bias and misrepresentation of the safety research. There is a mass of data indicating serious adverse effects from feeding irradiated food to animals. Many of the claims that these can be dismissed are based on illogical and inaccurate opinions rather than scientific facts. In many of the studies, which it is claimed prove irradiated food is safe, there was systematic use of massive vitamin supplements to suppress the adverse effects.

■ Losses of some essential vitamins from irradiation and the increased storage times it will permit, can be up to 90 per cent — three times the non-irradiated loss. This undermines the Government's

own public health message on increased consumption of fresh unprocessed food at a time when whole sections of the population already have dietary deficiencies.

■ There are still no tests for detection of irradiation and verification of the maximum and minimum doses applied (which are critical in some instances, eg quarantine controls). A battery of new tests is needed by port/environmental health officers to prevent the widespread abuse of irradiation that has been uncovered. Far from improving food safety, irradiation makes obsolete existing public health controls and legitimises inadequate hygiene.



Egon Ronay launching the Coalition Against Food Irradiation at the beginning of December said: 'Irradiation is the most portentous food treatment since the invention of fire. The list of supermarkets is most welcome, because those who are reluctant to stand up and be counted are the Pontius Pilates of irradiation, washing their hands of a grave problem. Highly qualified scientists point to the risks, including that of carcinogenicity. Irradiation is guilty until proven innocent beyond any reasonable doubt.'

The Coalition, calling for a moratorium on legalising irradiation, is supported by the Consumers' Association, Friends of the Earth, Guild of Food Writers, Institution of Environmental Health Officers, the London Food Commission, the National Federation of Women's Institutes, Parents for Safe Food and the National Federation of Meat Traders.

## A BIG 'NO' TO FOOD IRRADIATION

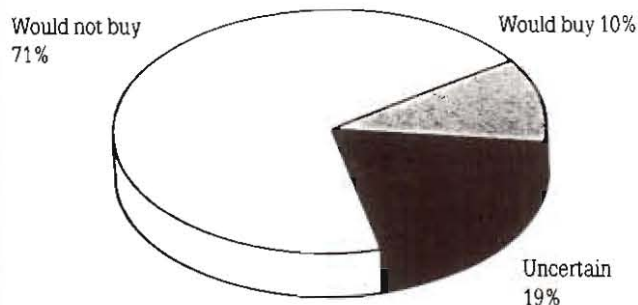
In February 1987, the LFC published the Marplan findings of the first public opinion poll on food irradiation. It showed that, given a choice, only 13 per cent would buy irradiated food. Similarly last June, only 13 per cent of nearly 2,000 people sampled by the Consumers' Association said they would definitely buy irradiated food. And TV's 4 What It's Worth in May 1989 found only

eight per cent definitely saying yes to 'would you buy it?'

The Consumers' Association poll confirmed that the more people know about food irradiation, the less happy they are.

And in the biggest sample to date of 7,921 for the Neilson/Henley Centre for Forecasting survey in April-June 1989, 71 per cent said they would not buy irradiated produce. Overwhelmingly polls find that the UK public rejects irradiated food.

### The Reaction to Food Irradiation



source: Checkout/Neilson/Henley Centre for Forecasting 1989

## School meals survey shows what's wanted

Nottingham County Council, alarmed at the decreasing number of children eating school dinners following the 1988 change in the benefit system, called on the University's Food Science Department to investigate. The investigators have sent *The Food Magazine* details of their preliminary findings.

Two secondary schools, both operating cash cafeteria systems, were studied and 839 pupils aged 11-13 and 14-16 questioned.

The survey revealed a decline in the use of the cafeteria with increasing age. Similarly, the level of satisfaction with the dining room area declines with age. The two main improvements suggested were increased space and the provision of music.

Two main reasons for not using the cafeteria were queuing and food choice. However, the problem of queuing becomes less important with increasing age and it is the older pupils who remain the target for increasing cafeteria usage. The choice of food needs further research since this reason for not using the cafeteria increases with age.

Variety was the main factor determining food choice. The occasional theme day (Mexican, Chinese, Greek etc) was the most popular idea for introducing other foods and there were encouraging signs concerning health foods/salad bars and vegetarian meals. The evidence suggests that while pupils may have strong preferences for certain types of food there is a demand for a wider variety including foreign dishes. In addition there appears to be a growing awareness of the relationship between nutrition and health stimulated by the educational campaign within schools and curriculum content, eg home economics.

The survey reveals that the amount spent at lunchtime by cafeteria and non-cafeteria users was significantly different. In the total age groups the majority of cafeteria users spent 50-74 pence. In the non-cafeteria section however, there are two distinct patterns. Forty three per

cent of the children taking packed lunch did not spend money on additional food and drink items at school. Research is needed to determine whether the price of a school meal, particularly for those parents with more than one child, is a major factor influencing school meal uptake. Conversely the majority of children eating outside school premises spent over 75 pence on food and drink, and the trend is more pronounced in the older age group. For this sector one strategy to encourage school meal uptake might be to make parents of children who buy from local shops, and who therefore spend more money, aware of the advantages of having a cheaper and healthier school meal.

If pupils eating outside school premises are spending more money at lunchtime and indicating that a major reason for non-cafeteria use concerns food choice then future research must seek to identify their food purchasing habits. These purchasing patterns could then be analysed to determine whether their preferences could be incorporated into the lunchtime menu within the nutritional guidelines of 'healthy eating'.

*Study conducted by L P Booth, R J Neale and C H Tilston, Faculty of Agriculture and Food Sciences, University of Nottingham.*

## The cost of clean water

With improvements to the water system costing at least £22 billion and with shareholders' dividends to be found, an estimated 30 per cent of the population could face financial hardship following water privatisation, according to a new report from the Public Health Alliance.

The report\*, launched in November 1989 with the support of the Institution of Environmental Health Officers, raises public health concerns over water and examines how the industry should comply with international standards for lead, aluminium, nitrates, pesticides and bacterial contamination, as well as organic solvents for which there are no EC standards.

Many consumers have turned to bottled water to protect themselves from the perceived risks of tap water

but in one survey 70 per cent of still mineral waters left standing at room temperature for three days were contaminated with bacteria at levels above the EC minimum and Perrier water has been found to contain a high nitrate level. Some researchers advise that bottled water is not safe for babies.

The report says that water filters may be effective in removing organic residues but not nitrates from water. In addition bacterial growth may be a hazard both in the filter vessel and in the filtered water from which chlorine has been extracted.

The report makes recommendations to ensure the quality of drinking water supplies after privatisation and says that the Drinking Water Quality Regulations should be extended to apply to the food and drinks industry.

\* *Water, Wholesome, Clean and Affordable*, is available from the PHA, c/o Springfield Health Promotion Centre, Radcliffe Road, Selly Oak, Birmingham B29 6JB. Price £2.50 PHA members; £6.50 non-members.

## School guidelines

Pilot schemes to encourage healthy eating in secondary schools in Croydon are to be extended to all such schools in the borough. They will involve the local health authority's health education and dietetics departments as well as the borough's education and school catering departments and the school governors and PTA members.

Details of Croydon's approach are available in the Croydon Health Authority's publication *A Taste for the Future: Guidelines for Healthy Eating in Secondary Schools*. Contact Anna Parton, Community Health Services, 12-18 Lennard Road, Croydon, Surrey CR9 2RS.

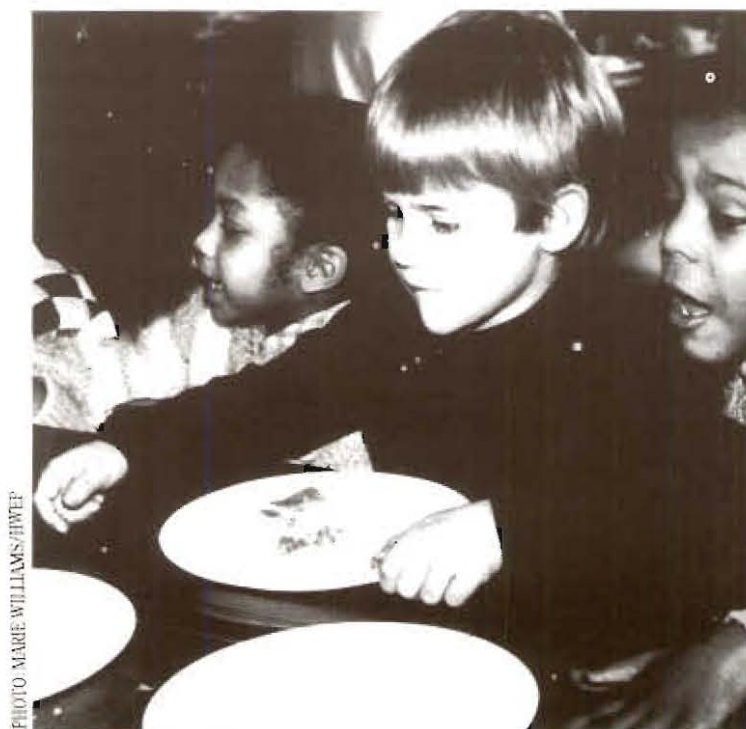


PHOTO: MARGARET WILLIAMS/HWTF

# PESTICIDES

## California may ban pesticides

**A** correspondent writes: Through a wonderful American device known as the initiative process, we are taking a new pesticide reform law directly to the voters in California, to be placed on the November 1990 ballot. Under the initiative process the electorate can bypass the legislature and take such issues straight to the general public. The proposed measure, known as the Environmental Protection Initiative of 1990, deals not only with the serious health risks presented by pesticides but also with global warming, the pollution of our coastal waters and other environmental concerns.

The initiative proposes to phase out by a certain date the use of any pesticides in California that are known to cause cancer or birth defects. In addition it will prohibit the sale in California of food containing residues of such substances, whether produced in the United States or

abroad. The potential 'ripple' effect of this measure, therefore, both nation wide and even world wide is substantial.

### CALIFORNIAN FOOD LABELLING

The Californian Grocers' Association, which represents over 8,000 retail outlets, has passed a resolution calling for food producers to provide warning labels on products containing chemicals which are known to cause cancer or birth defects and which pose a significant risk. A second resolution passed by the CGA at its annual convention on 2 October 1989 calls for aggressive implementation of new standards contained in the recently-passed *Bronzen Bill*.

This legislation provides for: increased testing of raw agricultural commodities for pesticide residues; initiation of a pesticide residue testing programme for processed foods; prioritised monitoring of pesticides of greatest health concern; reporting all pesticides used in food production; and research into alternative pest management techniques.

## Italy to tax pesticides

**A**n ecological tax is being proposed for Italy's 1990 budget aimed at companies which cause pollution exceeding national limits and EC directives.

The taxes could add as much as 20 per cent to the retail costs of pesticides according to the trade magazine *Agrow*. The amounts will vary according to the estimated pollution generated by different products, and in some areas of the country the tax will not apply. The most that the ecological tax is likely to raise in revenue is an estimated £200m and the actual figure is likely to be far lower. But the principle of taxing products deemed environmentally incompatible could mark a breakthrough in European national legislation.



Source: *Agrow*, World Crop Protection News, October 20th, 1989 No 97

## After Alar

**U**niroyal, makers of Alar, an apple crop spray criticised for being a suspected carcinogen, have agreed to cease production of the chemical worldwide.

Nonetheless the UK government still permits the active ingredient, daminozide, to be used on crops and it is feasible that other companies may offer daminozide-containing products to Britain's apple growers. Besides Uniroyal, the Ministry of Agriculture lists two other companies marketing Alar in Britain, Dow Chemicals and Murphy Chemicals, and a third company, Fine Agrochemicals, marketing daminozide under the trade name Dazide.

### MEANWHILE.....

The American Consumers Union magazine *Consumer Reports* has been criticised by some defenders of pesticide use for being too 'activist' in its attack on pesticide residues. It is accused by Professor Ames of California University of failing to acknowledge that natural hazards pose greater risks. He claims the risk of developing cancer from aflatoxin in peanut butter to be eighteen times the risk from Alar derivatives in apple juice, and that a glass of beer would be a thousand times the risk. There are, he says, natural carcinogens in dozens of plants, from cabbages and carrots to parsnips and turnips.

Furthermore, Professor Ames cites evidence of complex interactions between carcinogens: dioxin given to rodents before aflatoxin provided some protection from the aflatoxin, but if given afterwards resulted in many more tumours.

But perhaps more to the point, Professor Ames addresses the question of trade-off between the toxins from pesticides versus the benefit to society: chemicals such as Alar 'have markedly lowered the cost of our food, a major advance in nutrition and, thus, health... When people drive to work, put logs on a fire or make a barbecue they are putting carcinogens into the air... If we spend all our efforts on minimal rather than important hazards we hurt public health.'

Consumer groups have countered these statements with accusations that many pesticides are not proven to be cost effective, especially when wider environmental costs are considered; that their use requires a non-sustainable use of resources; and that the toxic residues in our food, however small, represent an unnecessary additional burden to the toxins we

already have to deal with.

In the UK Professor Conning, head of the industry-funded British Nutrition Foundation, has suggested that the risk posed by synthetic chemicals in the diet, including both pesticide residues and food additives, was too small to have any biological effect on humans. In order to prove their safety, suggested Dr Conning, human volunteers could be fed pesticides and additives in laboratory experiments. Humans would not be harmed, he claimed. 'We just want to detect man's metabolic chemistry, and that can be done with extremely small doses.'

Dr Tim Lang of the London Food Commission pointed out that consumers had been human guinea pigs for several decades already. 'That is why they are hostile to pesticides and other contaminants.'

## Spreading the fat facts

**T**he butters and margarines we spread on our toast — yellow fats to give them their trade name — supply nearly a quarter of the total fat in our diet.

We buy some two billion packets and tubs of these spreads each year. Worth nearly £700m, the yellow fats market is bitterly contested by the vegetable fat giants led by Flora-makers Van den Berghs (owned by Unilever), Kraft and Dairy Crest, and the dairy fat producers promoted by the Butter Information Council.

So far the marges have had the better of it. Butter has lost 40 per cent of its sales in the last six years, with margarine and more recently the new dairy-and-vegetable blends and fat-and-water low-fat spreads taking its place.

Consumer surveys showing the shift from butter to margarine quote health reasons as the main motivator. Flora is promoted as the answer to a wife's concern for her husband's health, while the blends and low-fat spreads refer to less animal fats and lower calories as an inducement to try them.

But where are the facts? Health educators encourage us to cut back on saturated fats and turn to the unsaturated fats, but does that mean all the butter-substitutes are preferable to butter?

The Food Magazine looked at over 40 butter-substitutes and found none that had as much

### The Food Magazine's brand-name guide to butter-substitutes

saturated fat as butter. But we found some reduced-fat spreads that were little more than watered-down butter, with the proportion of fat that was saturated just as high as butter — raising questions about the real value of choosing that type of product.

We also found some dairy blend and low fat spreads could be short on vitamins A and D, and we found hardly any non-butter spreads free of added yellow colouring agents.

#### SOFTLY SOFTLY

As a rule of thumb, the harder the fat the more saturated fat it contains, while the softer fats and especially the oils will be relatively rich in unsaturated fats. The large table shows the proportion of fat that was saturated fat in each product.

The fat in some margarines can be as much as 40 per cent saturated fat. The best buy from the point of view of getting the lowest ratio of saturated fat in the product were the polyunsaturated margarines, made largely from sunflower oils. Used sparingly they can help cut back on total fat intake and saturated fat intake simultaneously.

Low fat spreads are aimed at people wanting to cut back on total fat. They are a blend of fat and water (more than half water) held together with emulsifying agents. They can help cut your fat intake provided you don't use too much — the temptation is to increase the amount which defeats the whole purpose of a low-fat spread.

These spreads are about half the fat content of regular margarine or butter and dietitians have observed that people may spread extra on their bread or toast, or eat other fats instead, bringing

the total fat back up to margarine or butter-eating levels.

The fat used in low fat or 'light' spreads may be rich in saturates, so that a thin spread of sunflower margarine would give less saturated fat and possibly less calories than a thicker spread of a so-called low-fat product. But if you like the taste of low-fat spreads and can stop yourself spreading it thick, then you might take a look at some of the new extra-low fat products which, although expensive for a tub of 60 per cent water, might offer the best way to achieve a low-calorie, low-saturate diet.

#### ESSENTIAL VITAMINS

Butter contains significant amounts of two fat-soluble vitamins, A and D. As a public health measure, food regulations have long required that margarine should also contain vitamins A and D added during manufacture.

But the regulations have never been extended to the recent generation of blended products and low-fat spreads, allowing manufacturers to cut costs by leaving out the vitamins. In several products we found no mention of any added

### Brand owners

Apart from the supermarket own-brands — which now account for over a quarter of sales — the leading brand names are dominated by just a few giant companies.

Company	Labels owned	Market share
Van den Berghs (Unilever)	Blue Band, Echo, Stork, Flora, Krona, Summer County, Delight, Outline	44%
St Ivel	Gold, Shape	9%
Kraft	Vitalite, Mello, Golden Churn	8%
Dairy Crest	Clover, Willow	4%
Others		8%
Supermarket own label		27%

### BUTTER SUBSTITUTES: TAKE YOUR CHOICE

**Margarine** Must be at least 80 per cent fat, and at most 16 per cent water. The oils used may be from fish and animal sources as well as vegetable, and will be refined, deodorised, bleached and may be hydrogenated (chemically hardened). As with virtually all non-butter spreads, these products may be flavoured and coloured, and mixed with antioxidants and emulsifiers to produce a long-lasting smooth blend.

**Half-fat butter** No legal definition, but typically 40 per cent fat, 55 per cent water.

**Fat-reduced margarine** No legal definition, but typically 70 per cent fat, 25 per cent water.

**Dairy spread** No legal definition, but typically 70-80 per cent fat, 15-25 per cent water.

**Reduced fat spread** Typically 60 per cent fat, 35 per cent water.

**Low fat spread** No legal definition, but typically 40 per cent fat, 55 per cent water.

**Very low fat spread** No legal definition, but typically 25 per cent fat, 60 per cent water.

# OFF THE SHELF

vitamins (see table), which can indicate a lower vitamin content for these products compared with regular butters and margarines.

## BUTTER-YELLOW

Butter is currently permitted to contain certain colouring agents but in Britain it rarely does so. Margarines and the other spreads however nearly all have added colouring — usually betacarotene, circumin or annatto. (Some forms of annatto may be banned in the near future.)

Granose vegetable margarine declares on its label 'no colour or flavour added' but list betacarotene as a vitamin in their ingredients and use mono- and di-glycerides and maltodextrin in the recipe — all of which are flavour-affecting agents. Similarly Suma sunflower margarine declares no colouring or flavouring added, but the ingredients include betacarotene and mono- and di-glycerides.

## MORE BREAD, LESS BUTTER

Health educators are recommending that, as a nation, we should be cutting back on our saturated fat and on fat generally. It is a mistake simply to substitute polyunsaturates for the saturates. The goal is to reduce our average fat intake by at least a quarter — from over 40 per cent of our calories to around 30 per cent — and to get the missing calories from other sources, preferably from complex carbohydrates such as bread, potatoes, pasta and pulses.

Other sources of fat in our diet need to be remembered: meat and meat products like sausages and pies give us a quarter of our fat, while milk and cream add another 15 per cent, and cakes and biscuits another 11 per cent. This means looking carefully at labels when shopping, but it also means checking the 'hidden' fats, such as the (generally harder) fats used in pastries, pies, crisps, cakes and biscuits.

And don't forget the deep frying fats used for chips and french fries — McDonalds and Burger King use beef fat blends (over 45 per cent saturated fat), Kentucky goes for partially hydrogenated soya oil (around 20-25 per cent saturated) and Wimpy for vegetable oil (around 15 per cent saturated).

## HOW THE BRANDS COMPARE

	% fat by weight	colouring	no vitamins	animal fats	hydrogenated fat	% saturated fat
<b>Butter</b>	81-83					62-75
<b>Margarines:</b>						
Blue Band sunflower	82	c		h		15
Co-op margarine	81	c				
Co-op silver	81	c				
Flora sunflower	80	c		h		20
Good Life sunflower	81	c		h		15
Granose vegetable	82	(c)		h		
Safeway vegetable	83	c		h		
Safeway soft	81	c	a			30
Safeway sunflower	81	c		h		20
Sainsbury's margarine	80	c	a			35
Sainsbury's sunflower	81	c		h		20
Stork	80	c	a			40
Suma sunflower	83	(c)		h		15
Tesco soya	83	c		h		20
Tesco sunflower	82	c		h		20
Tomar kosher	—	c		h		
Vitalite	80	c		h		15
<b>Blends and low-fat spreads:</b>						
Anchor half-fat	40	c	nv	h		
Delight	40	c		h		30
Kerrygold light	39	c	nv			
Outline very low	28	c		h		20
Safeway low-fat	—	c		h		
Sainsbury's golden	39	c		h		25
Sainsbury's half-fat butter	40	c				65
Sainsbury's low-fat	40	c		h		20
Sainsbury's sunflower spread	39	c		h		20
St Ivel Gold	39	c		h		25
St Ivel Gold Lowest	25	c		h		25
St Ivel Shape	39	c		h		25
Tesco sunflower spread	40	c		h		20
Tesco soft spread	72	c				30
Clover	75	c	nv	h		
Clover light	40	c	nv	h		
Co-op Red Seal	—	c				
Kraft Golden Churn	75	c		h		20
Krona	70	c	a			45
Sainsbury's Devon spread	75	c	nv	h		40
Sumner County	72	c				35
Tesco Dairy Churn	75	c		h		45
Tesco half-fat creamery	40	c	nv			65
Willow	78	c	nv	h		

**Key** ■ saturated fat as a percent of total fat  
 — no fat information on the pack  
 c added colouring (margarines, blends and spreads)  
 (c) label says 'no colouring' but betacarotene added  
 nv no vitamins added (blends & spreads)  
 h includes hydrogenated fat  
 a contains animal or marine oils (excluding butterfat)

Product research by Lori Silberstein

# OFF THE SHELF

## A fat lot of good

**H**attie Ellis looks into the future of fat substitutes.

The dangers of eating too much fat are well known. The dangers of the food industry's response are less certain.

At least nine companies are currently developing 'non-fat fats' to compete for the potentially huge profits to be made from guilt-free food. The leading contender, Olestra, expects to make over one billion dollars a year in the USA alone. Big bucks for industry and the promise of small waists and long-lasting hearts for consumers — but can we really have our cream cake and eat it too?

Olestra is a type of sucrose polyester which our bodies, lacking the right digestive enzymes, cannot absorb. Its maker, US giant Procter and Gamble, is

seeking US and UK approval to use it in 35 per cent of home cooking fats and 75 per cent of commercial frying fats. It could be widely used in everything from cakes to chip fat and could contribute up to five per cent of a person's diet.

In 1987 it looked as if Olestra would get US approval on a wave of positive publicity. But the Washington-based Center for Science in the Public Interest criticised the company's safety tests because they used only one animal species instead of the normal two and, according to consultant pathologist Melvin D Reuber: 'The two year rat feeding study, though flawed, indicates that (Olestra) is toxic and carcinogenic.'

There was also evidence that the absorption of fat-soluble vitamins A and E was impaired and indications that the undigested material could interfere with intestinal functions.

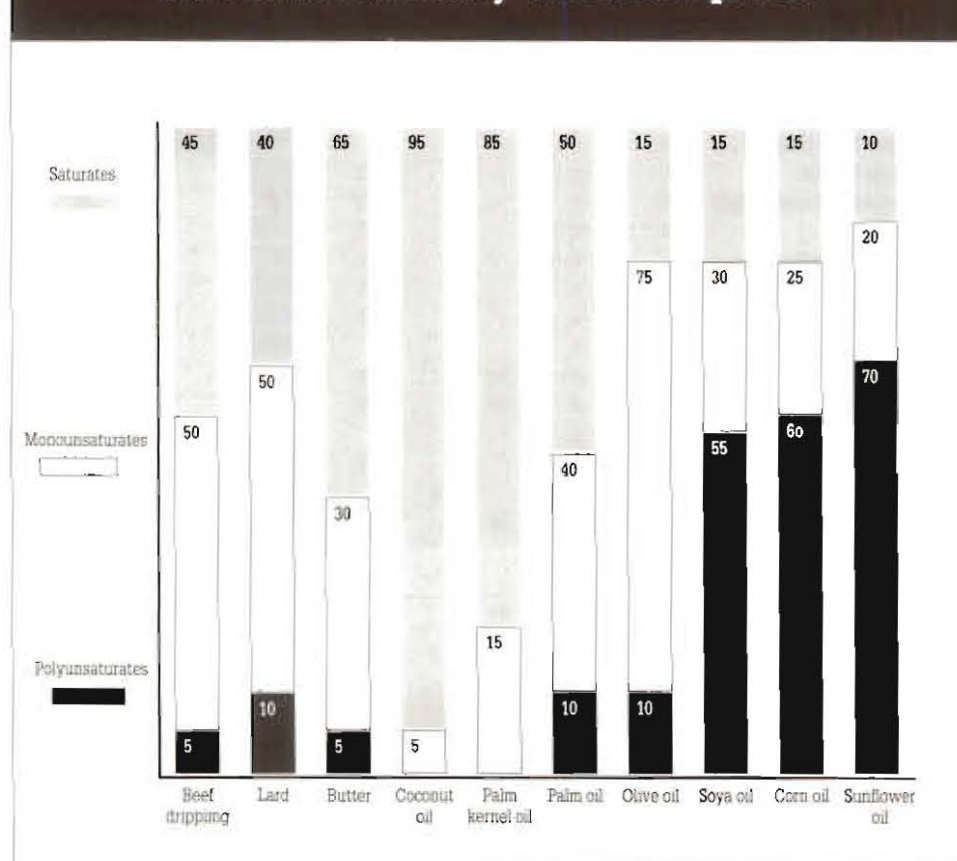
In Britain Olestra has been referred by MAFF to

their Committee on Toxicity of Chemicals in Food and to the Novel Foods Panel of the Committee on Medical Aspects of Food Policy, which should allow an examination of the nutritional aspects of non-nutritional food. But the approval process in the UK is shrouded in commercial confidentiality. Not only are consumers kept in the dark but, unlike in the USA, the UK government does not require companies to submit all their data on a new product.

Another product close to arriving on the shop shelf, NutraSweet's Simplese, has promoted its 'naturalness' because it is made from egg and milk proteins. Ray Dull from Experience Inc who studied fat substitutes says approval of Simplese would be a test case for future foods: 'The ability of a company to take parts of a naturally occurring approved substance and change them for use in foods will be a regulatory issue.'

Add these fat substitutes to fluffy cellulose, a no-calorie flour substitute developed by the US Department of Agriculture and currently being market tested as Snowite Oat Fibre, mix in some artificial sweetener, sprinkle with traditional E numbers and you have a dish which is made entirely of cosmetic foods, one giant additive. And it is 'good' for us?

### Fats and oils: fatty acids compared



### OLIVE OIL

Great faith is put in olive oil as a health food. The low levels of heart disease enjoyed by people living on 'Mediterranean' diets are given as evidence for the benefits of this traditional food. Other factors may help explain the disease patterns: more fish, fresh fruit and vegetables, less animal fats and hydrogenated oils. But as a replacement for more saturated fats such as lard or hard margarine it can be recommended.

There is some evidence that olive oil, which is rich in monounsaturates, may be as healthy as sunflower oil and other oils rich in polyunsaturates, and may actually offer some advantages. It appears to be able to reduce total blood cholesterol mainly by reducing one component — the low-density lipoproteins — considered most closely connected with damaging the arteries, while not reducing and possibly increasing a second component — the high density lipoproteins — which appear to protect us from arterial disease.

Research on these factors is of great interest to countries such as Italy and Spain anxious to promote olive oil exports. As with the tropical vegetable fats, consumers need to take care distinguishing research shaped to suit vested interests and that which is accepted by the 'scientific consensus'. Being low in saturates and high in cost, olive oil could be thought an ideal source of fat in any diet aiming to reduce saturates and reduce total fat intake simultaneously.

# Fishing for the future

## Vegetable facts?

Proud boasts on a packet that a product 'contains no animal fat' may be great for non-meat eaters but it does not necessarily mean the fat is rich in polyunsaturates. Some vegetable fats are high in saturated fat, especially the so-called tropical fats such as palm, palm kernel and coconut.

Heart disease campaigners put such tropical fats in a 'best avoided' category along with the animal fats, but the tropical oils industry has been at pains to try to redeem their products, especially palm oil, from banishment. Evidence given at their seminars includes several areas for further research:

- Palm fat contains carotenoids and vitamin E, both of which appear to act against tumour formation. The carotenoids are lost during refining but palm oil appears better than either lard or corn oil at preventing tumour growth in animals eating high fat diets.

- The vitamin E in palm oil also appears protective against thrombosis (internal blood clots) with little difference between palm oil and sunflower oil but a great difference between palm oil and hydrogenated coconut oil.

For consumers the problem is separating vested interests from valid research findings, and reaching a 'consensus opinion' on what constitutes sensible dietary advice. Whatever its redeeming features, palm fat is rich in saturated fat and the prevailing advice is to cut back on saturates (and on fat intake overall). Boasting 'no animal fat' on the packet is less reassuring than 'low in saturates'.

## Acid truths

There are several types of fat, or fatty acids, with different properties. Saturated fatty acids (saturated fat) are considered the ones to avoid the most, being closely associated with raising blood cholesterol, which in turn indicates a raised risk of heart disease.

Unsaturated fatty acids (mono and polyunsaturated fat) appear to be more beneficial, with some evidence that polyunsaturated fat helps lower blood cholesterol generally and that monounsaturated fat can lower those components of blood cholesterol — the low density lipids — most closely associated with a risk of heart disease (see olive oil item).

Hydrogenation is an industrial process (using nickel catalysts) that converts unsaturated fat into saturated fats or trans-saturates. The food industry likes the process as it can create harder vegetable fats with a longer shelf life, but the trans-saturates found in hydrogenated fats are now being questioned as a possible health hazard equivalent to naturally occurring saturated fats.

**F**ish are a valuable source of essential fats. Professor Michael Crawford argues against the 'hunting and gathering' exploitation of the sea and for an aquacultural equivalent to land-based agriculture.

My nephew Neil burst in on me recently, complaining: 'They've done it again — every time we find something to make life on an oil rig more bearable they stop us doing it. They've stopped us fishing'. It seemed dreadful, but seeing how the paper mills had stopped me fishing in the River Crammond by polluting it several years ago, I merely expressed my avuncular concern.

Several years earlier a different event occurred, and the two together have triggered an interesting idea about marine resources.

Several thousand penguins lay dead on the beaches of the Falkland Islands. The event was in 1985 some time after the Falkland war and the unusually large number of dead Rockhopper penguins prompted an enquiry.

Dr Ian Keymer, who had been pathologist to the Zoological Society, was called in to investigate. One concern was that there was a large amount of ironmongery lying at the bottom of the sea, along with explosive chemicals and detonators, but Ian could find no sign of toxicity or infections.

He noticed many of the penguins seemed to be wasted and asked us to analyse their nutritional status. As the liver stores fat soluble vitamins the liver was the target of choice. Analyses of dead and live penguins at that time revealed extremely low levels of vitamins A and E.

The penguin eats foods rich in polyunsaturated fatty acids which normally occur together with vitamin E.

The conclusion was drawn that the penguins had literally starved. Why? Obviously there was not enough fish for them. And why was that? Clearly the food chain must have been disrupted.

## JAPANESE OVERFISHING

Whilst the waters of the South Atlantic are extremely rich, even rich resources can be eroded by unecological exploitation. Recently, for example, the Japanese have devastated the coastal fisheries around New Zealand. In the Northern Hemisphere, the debate on the unecological use of the sea was thrust in the public debate by the algal bloom in the Baltic and the seal deaths in the North Sea. But these matters have been preceded over several decades by the collapse of the Peruvian anchovy, the near extinction of the herring and the almost total loss of Mediterranean sardines with much else besides.

Then there are the so-called 'improved' netting techniques which led to the overfishing of the capelin

for animal feed and for commercial fats. This sliced a section out of the food chain in northern waters with a disastrous effect on the cod and seals. With the demise of the capelin the cod has little to feed on except themselves. The seals which ate cod and salmon found their food in short supply and for the first time in memory came down from the Barents Sea in hordes to invade the Norwegian Sea in search of food.

When I visited Norway last year 'for sale' signs on boats and homes in the small fishing villages were a tell-tale sign of a marine, economic and cultural disaster. Families who for generations had earned a livelihood from the sea and supplied food for inlanders were for the first time in history finding a sea without fish.

It is a game where the smaller fishing people lose to the big-time companies with their drag nets and freezer ships. However the system is essentially primitive hunting and gathering; no more and a lot less, because we should know better.

We are witnessing today an event reminiscent of the Pleistocene over-kill when it is thought that early hunters recklessly killed land animals for food. Rock drawings show primitive people chasing whole herds of bison or reindeer over a cliff in a frenzy of killing resulting in only a small proportion of the dead animals being useful. Today the EC fishing quota system has the same primitive feel to it. Kill as many as you can and dump the surplus back in the sea. We only sit up and take notice when we see thousands of seals dead on the beaches and are disturbed by their puppies' soulful eyes.

## ESTUARIES POLLUTED

In the last few centuries, Western man has opted for industrial growth and intensive land-based agriculture. The run off from the chemical fertilisers, the untreated sewage and commercial effluents have recklessly destroyed the rivers and estuaries and added to the damage to marine ecology. The mouth of the Thames, once a rich source of mussels, crabs, oysters and fish of all sorts, now portrays its plight in a stale stench and dead mud. It is not just that this source of food, so much loved by Londoners, has gone. It is that every estuary throughout Britain and indeed Europe has been destroyed in less than a century. Throughout previous time, the estuaries, rich in trace elements washed from the land and oxygenated by rivers and tidal and wind movements of the shallow waters, provided the wealth of nourishment for the small beginnings that led to the greatness of the marine food chain. It is not just that the capelin has been sliced out of the middle of the food chain. It is that its very origin has been destroyed.

We have been remarkably silly about the way we treat our marine resource. The United Nations Food and Agriculture Organisation estimates that we have already reached a global harvest of marine food approaching 90 per cent of the total possible if the resource is to be self-regenerating. This is where the Rockhopper penguins and my nephew Neil become relevant.

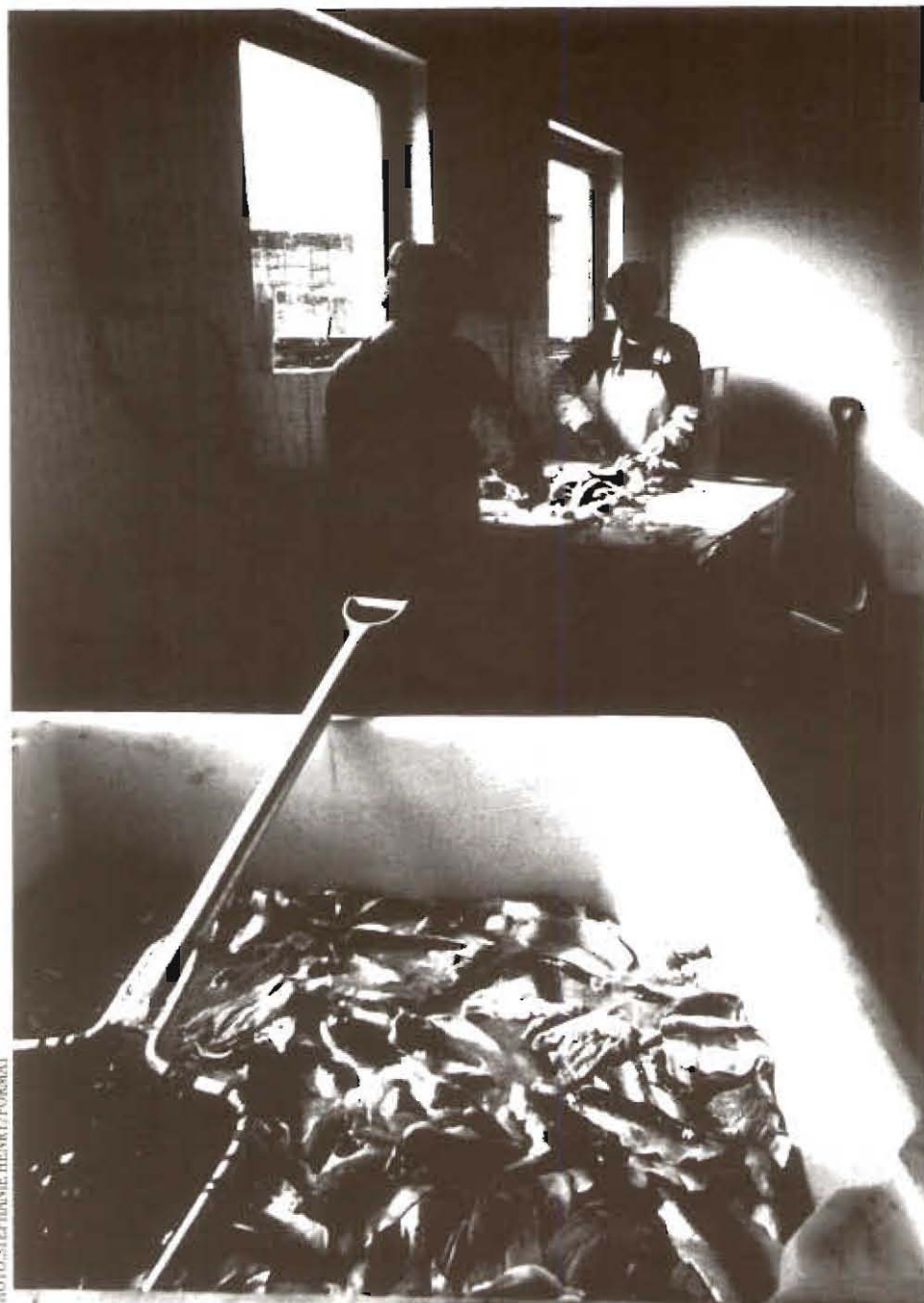


PHOTO: STEPHANIE HENRY/FORMAT

**Preparing herring for smoking — a traditional industry providing nutritious food, but how long can it last?**

The message from the penguin deaths is that just as climatic variations on land affect harvests so marine climate may also vary and effect its harvest. Developing better technology to locate and catch fish is a delusion. If you catch the fish on a downturn in the marine food chain you will do damage that takes years to repair. But if the marine food chain has been stimulated to improve conditions you may catch only a part of what could be taken.

So there needs to be proper monitoring of the marine food chain, for example through estimating the nutrient status of penguins. Had we been measuring penguin liver vitamins or tracking the nutrient flow in the coastal fish in 1984, we would have noticed the downward turn in their nutrient store before the beaches were littered with their dead. Application of these techniques to the North Sea could provide nutrient charts offering a powerful predictive capability.

#### SEA RANCHING

Decommissioning oil rigs costs a minimum of £1m each, but why not use them to provide the first stations for the domestication of marine resources? When animals were first domesticated on land they were simply provided with places to eat that were convenient for man. As my nephew Neil and other rig dwellers know, the legs of the rig provide places for the beginning of the marine chain to take root. Why not develop larger surface areas serviced by the rig? There should be enough residual gas and oil to pump air over the surfaces to encourage the primary systems of the marine food chain, and the rigs could be equipped to monitor nutrients to provide local maps and to adjust conditions for growth on the plates. The North Sea would become the first sea ranch.

There is a third action plan needed requiring urgent discussion by government and industry in view of water privatisation. People talk about the progress made cleaning the Thames: 'a salmon seen last year'. This attitude is either complacent or ignorant of the enormity of the damage which has to be reversed. Industry and society have not faced up to the cost of their sewage and effluent. Hazardous waste flushed into a river saves the industry a cost but society pays through the loss of fresh water and marine resources. Industry must pay the real cost of its actions through the proper disposal of industrial waste.

Sewage is similar. The Drax power station near Selby draws water from the Ouse for its twelve cooling towers. Steam billows from the towers which on a clear day can be seen literally turning into small clouds. It has been reported that it is not just steam but the dust which falls onto the villages and fields, and lunch in the local pub garden is contaminated with untreated sewage from the Ouse. Even worse, some of the sewage is tidal backflush from the Trent estuary! Whilst the bacterial density is dilute by the time it hits the cheese sandwich and is unlikely to kill anyone, it is said that Drax, which supplies ten per cent of England's electricity, may have to shut down until a solution is found. These are the costs that those who dump untreated sewage are avoiding. Someone pays in the end.

Sewage and waste should be treated as a resource. Sewage can be treated to be used as a fertiliser rather than used to kill our rivers and estuaries. But it needs European co-operation, the guidelines for which should be set before 1992.

Some years ago when my wife and I visited Edinburgh we took the relations to Crammond Inn, the watering hole of my youth and renowned for its local sea foods. Crammond Inn is in an idyllic and tiny fishing village where the river enters the estuary of the Firth of Forth. We had arrived early and strolled down to the sea-front. There at the water's edge stood a brand new Department of Environment notice with its back to the sea, its bright yellow template glistening in the warm light of the setting sun which shimmered across the water where it lit the paps of Fife. 'DANGER' the message exclaimed — 'Mussels unfit for human consumption.'

## Not in front of the consumers

**W**hat has happened to the Advisory Committee on Food, set up to advise the European Commission on matters of food legislation? It seems this vital committee, comprised of consumer and trade union representatives together with those from agriculture and the food industry, has not met for eighteen

months, despite the huge amount of current EC food legislation.

With general acknowledgement that the Consumer Consultative Committee is inadequate and in need of restructuring, this leaves no real forum for the consumer voice to be heard.

However the industry need not fret. European Committees such as the ad hoc Commission working group on food additives still allow industry and the Commission to meet regularly. The fact that their membership apparently excludes any consumer representatives must be causing many sleepless nights.

## Better paid take more sick leave

**A** study by catering consultants Rita Bransby found lower-paid workers in staff canteens took less sick leave than better-paid workers.

Comparing larger companies offering good sick pay schemes with smaller units, the time taken off sick was least among the smaller units, even

though these generally offered the lowest pay rates.

Overall, canteen staff took an average 9.4 days sick leave per year. Female full-time staff aged over 40 took an average 15.7 days per year.

The report suggests that companies with higher average sick leave were those showing most concern that sick staff should be completely well before returning to work to minimise the risk to other staff and customers.

*Sickness survey: A Report Carried out for the Industrial Catering Section of the Catering Industry, 27pp, £4.25, from Rita Bransby Consultants, P O Box 230, Warlingham, Surrey, CR3 9YZ.*

## Brussels heartland

**A** new lobbying organisation, the European Heart Network (EHN), is setting up an office in Brussels to lobby the European Commission on issues relating to cardiovascular disease.

The EHN is an extension of the International Heart Network, whose UK secretariat is placed with the Coronary Prevention Group, and aims to ensure that EC directives and policies will help to prevent cardiovascular disease.

One of the first issues the new body will have to deal with is the proposed directive on nutritional labelling. Far from requiring saturated fats, dietary fibre, salt or sugar levels to be shown on labels, current draft directives are suggesting an entirely voluntary

labelling scheme, and the French — holding the EC Council presidency — have been pushing for just protein, energy, fat and carbohydrate to be shown.

Details: Jeanette Longfield, c/o CPG, 60 Great Ormond Street, London WC1N 3HR.

## Disabled people survey

Preliminary results from a survey of 300 disabled people show that healthy eating may be a luxury many can barely afford. Thirty-nine percent of the sample found that changing to a healthier diet was costing them more, even though over 70 per cent needed to follow a diet related to their state of health.

The survey, being carried out by The London Food Commission and Action Research on Multiple Sclerosis (ARMS) in the Greater London area, also found that 34 per cent experienced difficulty shopping.



### Selling or science?

The opening of another branch of McDonalds? Well you'd be wrong — it's the Science Museum's new Sainsbury Gallery. The major contributors to the £1.2 million 'Food for Thought' gallery are the Sainsbury Trust to the tune of £750,000, with contributions from Mars, British Sugar, Tate & Lyle, the National Dairy Council and the Meat and Livestock Commission. It therefore comes as no surprise to see Mars bars featured prominently around the displays or to find oneself in a mock up of a Sainsbury's supermarket, or a replica McDonalds.

## Cash for cake and ale

**W**hile the government has been slashing the budgets of a number of well-respected food research bodies it is not above providing the odd little perk to industry-allied research when it wishes. In the tenth of a series of 'Link' support grants enabling industry to get more acquainted with academia, MAFF and the Department of Trade and Industry have announced joint funding of two research projects.

In one project, £243,382 of taxpayers' cash is going towards a fibre-optic meter which can tell when additional beer filtering is needed. Industry partners include the Brewing Research Foundation, Grand Metropolitan and AVP Rosista.

And £269,576 is to be handed over to develop 'a low-cost production monitoring system enabling improved control of up- or down-stream processes on a multi-product cake

production line'. Industry partners are Ranks Hovis McDougall Research, Vision Dynamics and Manor Bakeries (owned by RHM).

Are these companies so impoverished that the government has to help them with their own research and development needs? Hardly — RHM saw profits of some £176m last year, while Grand Met saw £575m.

It is interesting to note the sums given by appropriate sectors of the industry to the Conservative Party funds during the last election period. From the assembled brewing companies came the remarkable figure of £244,325, while just two cake-making companies, United Biscuits and Ranks Hovis McDougall, between them donated another £140,000.

Allied Lyons, cake-makers and brewers combined, donated £97,000 to the Tory party during election year 1987/8. Coincidentally, Mrs Thatcher was once a food scientist working for the company. Equally coincidentally, Allied Lyons chief, Sir Derrick Holden-Brown, was knighted in Mrs Thatcher's first New Years Honours list in 1979.

## Dinner at Her Majesty's Pleasure

Long gone are the days when prisoners existed on a diet of bread, gruel and hard labour. In 1843, Sir James Graham, the Home Secretary of the day, decreed that 'diet should not be used as an instrument of punishment', and today's Prison Rules state that prison food should be 'wholesome, nutritious, well prepared and served, reasonably varied and sufficient in quantity'. But food in prisons remains a focus for complaint — with some kitchens described as 'appalling and unhygienic' and the food as 'stodgy and often unpalatable'. In this special investigation Sue Dibb looks at prison catering.

Last October, Her Majesty's Chief Inspector of Prisons, Judge Stephen Tumim, described the regime at Wandsworth Prison as lacking basic standards of humanity and propriety. He found unhygienic conditions — the washing-up area was deplorable and there was evidence of mice and cockroach infestation in the kitchen. Standards of cleanliness were exacerbated by staff shortages.

In July 1988 HM Inspector of Prisons' report into Stanford Hill Prison on the Isle of Sheppey concluded that without crown immunity the kitchen would be closed. Inspection of the catering areas found appalling and unhygienic conditions with vermin infestation and cockroaches. Water analysis found bacterial contamination associated with human faeces. Birds flew in and out of the kitchen and dining space, perching above food preparation areas and enjoying the contents of the waste bins.

Following riots in Risley Remand Centre early in 1989, an inmate was reported in *The Guardian* as saying 'Risley is the worst prison I've ever been in. The food was always cold and watery, the building is dirty and dingy and there was snot and gravy stuck to the walls. There were cockroaches all over the building — even in the food — and when we complained no-one took any notice'. In 1988 Judge Stephen Tumim described Risley as a poorly designed institution with barbarous and squalid conditions.

There are 125 prisons in England and Wales with a current inmate population of around 49,000, one-fifth of whom are unconvicted remand prisoners. In 1987 about 40 per cent of the prison population was in officially crowded conditions, mostly in local prisons and remand centres.

Conditions and practices vary between prisons and the above examples are certainly amongst the worst cases reported. But the 1988 Annual Report of HM Inspectorate of Prisons — an independent inspectorate established in 1981 — says 'inspectors were dismayed to

find, in prison after prison, kitchens that were either insanitary or unsafe, or both. Kitchens were frequently dirty, greasy and littered with food scraps. In some establishments, bird, rodent and insect infestation persisted. Wear and tear was taking its toll in many places, with cracked floor and wall tiles, rusty shelving, flaking paintwork and overworked drains.'

'They found that these problems were not confined to older buildings. Many of the unhygienic and unsafe conditions resulted simply from neglect and lack of attention to daily cleaning and basic safety standards. The report concludes 'the unpalatable truth is that in many establishments food is prepared in disgraceful conditions better suited to another century.'

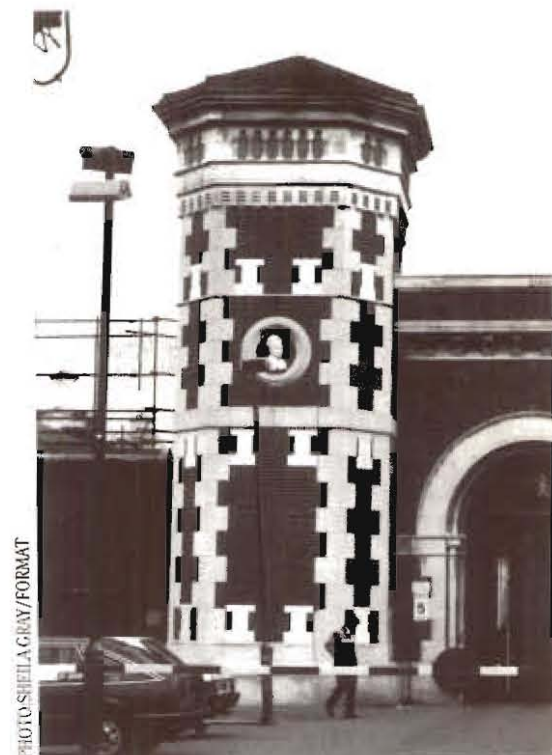
### FOOD POISONING IN PRISONS

In May 1989 Home Office minister Douglas Hogg, in a written parliamentary reply said: 'Since 1 May 1988 there have been four reported outbreaks of suspected food poisoning at prison service establishments. These were as follows:

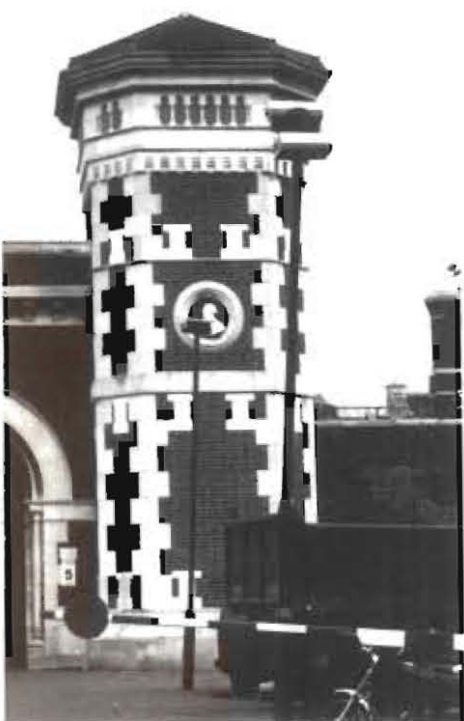
- HMP Cardiff — June 1988
- HMP Lincoln — August 1988
- HMYOI Hollesley Bay Colony — January 1989
- HMP Ashwell — April 1989

None of the four establishments had been visited by local authority EHOs prior to the reported outbreaks of food poisoning.'

Following an outbreak of food poisoning in Wakefield Prison in the autumn of 1987 EHOs reported that conditions found in the prison would not have been condoned in any other catering establishment. They concluded that it was only the existence of Crown Immunity that prevented the Prison Authorities from being prosecuted.



# PRISON FOOD



## CROWN IMMUNITY

'It is indeed ironic that those who have offended against one law should be made to suffer due to the non enforcement of another', concluded a 1988 Institution of Environmental Health Officer's (IEHO) report into access to prison kitchens. This survey found that only 21 prisons were successfully inspected by EHOs and over half (13) had food handling areas below the legal food hygiene standards. In six of these prisons standards were so low that prosecutions would have been considered had there not been Crown Immunity.

Prisons along with other government establishments have been protected by Crown Immunity from the legal requirements of the Food Act, including the Food Hygiene Regulations, and the Health and Safety at Work Act. Environmental health officers could not insist on access to prisons to inspect the catering facilities. But despite overwhelming support for the lifting of crown immunity from environmental health officers, prison reform bodies and MPs, the Home Office remained convinced in its view that Crown Immunity should remain in force in respect of prison kitchens. That was until November last year when a long-overdue clause was added to the government's Food Safety Bill which proposes that prison kitchens should be subject to the same hygiene requirements as other catering establishments. But whilst this means environmental health officers will have the power to inspect and take a case to court, there will be no powers to impose a fine. It is unclear how the new system will ensure improvements, if necessary, are enforced.

The Home Office is responsible for its own internal system of inspections. Though the thoroughness of these annual inspections are generally accepted, reports were often ignored and recommendations not implemented. Prison medical officers will remain responsible for hygiene on a day to day basis, but many are untrained in catering hygiene and see this responsibility as inappropriate to their role as doctor.

## "We weren't too keen on the soup"

**T**he Food Magazine talked with Liz and Sylvana both of whom had spent time in Holloway as well as other prisons.

Liz: 'It's got a smell to it, prison food. Horrible. That horrible smell that it's been hot and damp in those metal containers and the trolleys always smelt of it. The margarine has a smell of its own that I've never smelled in any margarine. The first time I ever tasted it I thought "This is it. I'll starve to death". But you do get used to it.

'In Holloway people filled themselves up on bread and potatoes, the only two things not rationed. So people got fatter and fatter and spottier and spottier what with lack of exercise and everything. The veg was cooked until there was no guts left in it so there was no nutrition. You might as well have drunk the water and thrown the veg away.

'But each place is different. Cleanliness depends on the officer you have in the kitchen. I've seen kitchens with mice running around and I've seen them spotless.

'At Styal each house cooks for itself, with a cook and assistant both of whom are prisoners. If you had a good cook then you had good nutritious food. All the vegetables are grown there so you have lovely fresh tomatoes and cucumbers. All the women grew it themselves, then cooked and ate it. Places like Holloway can't do things like that.

'In Durham I lived on cream crackers and weetabix with milk I got from the doctor. The food was cooked over in the men's wing, put in steel buckets and left outside of our door. The men would shout across "You've got such and such for dinner and we've pissed in it". The only thing I could eat was fish and chips because I didn't think they could do much to that. Apparently they now have a kitchen where they can cook things for themselves.

'At Cookham I had to go on a totally fat-free diet whilst I was waiting to have my gall bladder

removed. So I got boiled rice every day for eight months. I was reduced to just over six stone from eight and a half.

'When I went home I'd forgotten how to cook. I had to learn it all again. When I came out I discovered that food tastes out here — in there it didn't — everything tasted the same no matter what it was.'

Sylvana: 'In Holloway you were often hungry. Especially if it was a meal you did like and everybody ate it and there were no seconds. I used to enjoy my Sunday dinners as the best meal of the week. You'd go in thinking "I'm going to enjoy this", and you'd get one slice of meat and that was it. If you're hungry you'll eat it so I never really thought about what was put in it. I just thought "I'm starving". I'd eat anything. I must admit I put on a lot of weight when I was inside. I used to dream about kebabs and I'd hit myself and say "Stop it — you can't get out".

'You'd have boiled potatoes which were hard like bullets. You went to cut them and they'd fly off the plate. There were buns you could break your teeth on, like concrete. You'd get vegetable soup that was just like green water. No vegetables unless they had sunk to the bottom — the bowls looked like they were full of dishwater. We weren't too keen on the soup.

'The food at Cottonville was brilliant. You had your own gardens. Every unit had a kitchen, even though the meals are cooked in the cookhouse. At night they'd leave a loaf of bread, maybe eggs in the fridge. You had a cooker, fridge, electric kettle, rations of sugar, butter, tea and you could do it all yourself.

'I was in prison in Belgium and the food out there was really nice. They'd come round with big pots of mussels, salamis, cheese. There was more variety and it was better cooked — probably because it was a small unit with only about 30 women.'

*Interviews by Hattie Ellis.*

## MONEY

Stephen Handley of Her Majesty's Inspectorate of Prisons (HMIP), points out that despite improvements over recent years their numerous reports on individual prisons have found hygiene and health and safety in many prisons is not adequate, despite Home Office statements to the contrary.

But bringing all conditions up to standard will require more than just the lifting of crown immunity. HMIP say that what is also needed is more money and improvements in the internal management structure.

They advocate greater recognition of the importance of prison catering by giving catering its own department, with its own budget, separate from the present Supply and Transport Branch in Corby.

The announcement of more resources going into the improvement of existing prisons by the Home Secretary David Waddington last November has been welcomed. But HMIP warns that even new kitchens can be inadequate — a new kitchen opened in Full Sutton Prison in 1988 is already inadequate for its task because of poor design.

# PRISON FOOD

## *A million meals a week*

Top man responsible for food in prisons since 1983 is Alastair Thompson. Based in the Home Office Supply and Transport Branch at Corby, he is the Principal Catering Manager at the Home Office. Whilst he admits that the wheels of change in the Prison Service can grind slowly, he is dismayed that attention has become focused onto reports of bad conditions which he says do not truly reflect the commitment to improvements that have been made in prison catering in recent years. By example he quotes the extra £1 million now spent annually in deep cleansing kitchens every six months rather than once a year.

Serving over a million meals a week would certainly pose difficulties for any institutional catering operation without the extra challenges posed by prison life. He stresses the importance of food to the morale of prisoners. He knows that poor food, badly served can be a cause of serious discontent to those bound by the monotony of institutional routines.

### WHAT'S COOKING

There is just £6.10 a week to feed each prisoner but Alastair Thompson denies that food provision is cost driven. Rather, he says, food must be palatable and



**Alastair Thompson (left), Head of Prison Catering and John Lockley, Temporary Principal Catering Officer at Holloway Prison.**

### WEEKLY FOOD ALLOWANCES FOR PRISONERS AND YOUNG OFFENDERS

Cheese	110g
Chicken, oven-ready	170g
Coffee, instant	5g
Cornflakes	75g
Cornflour	30g
Custard powder	30g
Eggs, grade 4	3
Fish, fresh	(variable)
Fish, canned, pilchards	40g
Flour, bread	1,140-1,840g
Flour, wholemeal	285-460g
Flour, culinary	475-790g
Fruit, fresh	2 pieces
Fruit, dried	100g
Jam/marmalade	140g
Margarine, table	350-450g
Meat, fresh	(variable)
Meat, corned beef	60g
Milk, fresh	2,070-2,700ml
Milk, dried	35g
Oats, rolled	100g
Oil, vegetable cooking	150-250ml
Pasta	30g
Pork	80g
Pork, cured (bacon)	400g
Sago/semolina/tapioca etc	100g
Sausage/meat	170g
Sugar	400-450g
Tea	60g
Vegetables:	
Beans in tomato sauce	110-170g
Carrots	280-450g
Other root vegetables	110-230g
Cabbage	450g
Cauliflower/broccoli/sprouts	230g
Onions	150g
Peas, marrowfat/split	100g
Potatoes, fresh	3.15-3.92kg

NB Variations in quantities allow for age and sex of prisoner

meet minimum nutritional recommendations set out in dietary scales. These provide weekly food allowances for inmates depending on age, sex and category.

For the first time, from September 1989 prisoners can copy (at their own expense) their dietary scale which is indicative of the more open approach being adopted by the Home Office.

But with food in prison often described as bland and stodgy, relying heavily on bread and potatoes; vegetables usually overcooked and constipation the most common medical complaint, just how nutritious are prisoners' diets?

Mr Thompson says that in nutritional terms the dietary scale for prison food compares favourably with average household food purchase figures. But this comparison is limited as he acknowledges that no-one has yet looked at actual food consumption or wastage, though he has plans to do so.

The amount of calories that the current dietary scale provides are about 50 per cent higher than DHSS recommended daily calorie intakes. This would seem to imply that there is a high degree of wastage or uneaten food.

Dietitian Issy Cole-Hamilton points out: 'At face value the dietary scales appear nutritionally adequate, although they contain an unrealistically large amount of stodgy, starchy food including a pound of potatoes per inmate a day. But the amount of fresh fruit in the diet is low which, together with vitamin losses in cooking and service procedures for vegetables, will often mean that inmates' diets are relatively low in vitamin C and folate.'

One of the least acceptable features of the current dietary scale is that prisoners are allowed only two pieces of fruit a week — usually an apple and an orange — a situation that is a major source of complaint. Additional fruit is usually on sale in prison tuck shops, but with only about £3 a week spending money many convicted prisoners find it hard to afford.

With plentiful cheap labour there is an emphasis on fresh food. Added value foods would increase costs

and central buying provides value for money', adds Alastair Thompson. Much of the produce is produced on prison farms. 'We're 100 per cent self sufficient in pork and bacon, jam and marmalade and 80 per cent self sufficient in potatoes and vegetables with most prisons baking their own bread and cakes', states Mr Thompson, but he admits that cabbage can feature prominently on many menus. In 80 per cent of prisons inmates have a choice of menu and in a few prisons weekly menus operate with prisoners able to choose in advance — a system well liked by inmates and efficient for the caterer.



PHOTO: CARLOS GUARITA

# PRISON FOOD

## ON THE INSIDE.

Sue Dibb visits Holloway Prison.

'Holloway is not one of our better operations' says Alastair Thompson, Head of Prison Catering. With the principal catering officer on long-term sick leave and the deputy post vacant for over 12 months adding to the problems of a badly designed institution requiring the distribution of meals to 17 dining rooms, I began to understand what he meant.

Opened only ten years ago to replace the Victorian original, the new red-brick Holloway prison is disorientating and claustrophobic. Just under 500 women, half of them unconvicted, live in 17 interconnected wings each with their own dining room but many a long distance from the central kitchen.

'The food may be OK when it leaves the kitchen, but I can't control what happens after that. Heated trolleys may not be plugged in and food can disappear on its way to the wings,' says temporary Principal

Catering Officer, John Lockley, who had been in post less than a week. 'Many of our machines are not working and with half of the civilian works department on strike, we can get cleaning problems and hygiene begins to lag behind. It's a modern kitchen but badly designed with a lack of storage space.'

By 11 o'clock the lunch of chicken pie, mushy peas and boiled potatoes was ready to leave the kitchen in a train of trolleys on its journey around the wings. At 11.45 I saw many women carrying their blue plastic plates of lunch back from the dining room to their rooms, in the rush to ensure that they were locked by noon so staff could take their own meal break.

At a time when most of us are still digesting our lunch, Holloway's main meal of the day is served at 3.30pm. Today it's vegetable curry and rice followed by farmhouse cake and custard. With only a bun for the evening it's a long wait until breakfast at 7.30 the next morning.

'Most of us live on pot noodles from the canteen (tuck-shop). The potatoes are always hard and the curry's pretty bad, though the pizza's OK,' one inmate told me. 'The vegetarians complain they get eggs all the time which gives them tummy ache. And the waste bins are always full,' said another.

Holloway is unusual in that no choices, apart from special needs diets, are provided on the menu. With a high proportion of black and ethnic minority women, particularly from Latin America and West Africa, there are many complaints that the food is bland.

But John Lockley has plans. 'I'm determined to introduce a choice of menu in the new year if I'm still here. I'd also like to see more training for those inmates working in the kitchen. You can get anything done if you want to, you just have to go about it the right way.' Even with the support of a governor committed to improving the food, it may take more than strong convictions to overcome some of the problems Holloway faces.

But not everyone is happy with the situation: 'Take for example our greatest complaint — food. When it comes from the kitchen it looks alright, sometimes two or three choices. But when the cleaners, the painters (not to mention the reception staff on Sundays) have taken theirs,

nothing is left for us, only stew or curry for main course, with rice pudding every day for afters (which I do not like). The cleaners and painters get roast chicken every week but we only get a chance of it once every three weeks. According to HM Inspectorate of Prisons we should have a "good and nourishing meal with plenty of choice". Well we do not. There is no-one to voice such problems to — no-one is interested. Resentment just builds up.' (Letter from a prisoner in Wandsworth Prison.)

### HOW IS FOOD RATED?

Not all prisoners in all prisons rate the food badly, indeed in some places it is well liked. Despite the appalling conditions of kitchens found by inspectors at Stamford Hill Prison mentioned earlier, the kitchen staff were congratulated by HMIP on the quality of the food provided.

'For my part, by prison standards, Frankland's food was of a very good standard — in comparison with other prisons. This still means that the vegetables were always overcooked, the meat was fatty, and most of the stuff was all "low-grade". I used to work in a butchers years ago and you have to go out of your way to purchase meat that bad.' (Letter from a prisoner in Frankland Prison.)

In her study of five prisons in the Midlands, prison researcher Kathy McDermott found that if the food was better prisoners would say so. But in four of the prisons inmates expressed varying degrees of negativity towards the food. The exception was Nottingham where all prisoners rated the food highly. She identified two main factors to account for this difference. Firstly Nottingham is a small prison with the kitchen next to the wing. Even though there was no open dining, prisoners got their food straight

from the kitchen. There were no problems of distribution and therefore the quality of the food was much better. Secondly Nottingham was the only prison studied where Asians worked in the kitchens which possibly helped to increase awareness of special dietary needs.

### MINORITY DIETS

Each prison provides minority diets on religious, medical or conscience grounds, including vegetarian and vegan. Black or ethnic minorities account for 14 per cent of the prison population and are generally more negative about food than white inmates.

As one prisoner put it:

'Black and Asian prisoners find prison food more boring than the white prisoners do, and the reason has to be that we are used to a richer, more varied, spicier dish than whites are.'

However there is evidence that the employment of black and ethnic minority inmates in kitchens can improve the quality of ethnic minority meals.

One complaint is that it can be difficult to change between options. In most prisons it would be impossible to choose a vegetarian option one day but not the next. Those opting for a rice diet as an alternative to potatoes would have to stick to it.

But despite attempts to meet special needs, prison regimes may not always be flexible enough, as the following quote shows:

'As you know it is Ramadan for Muslims in here. Many of us have been forced to come off the fast as the organisation and food have been terrible. No one consulted us in trying to work out the arrangements. It has deeply hurt me.'



# PRISON FOOD

PHOTO: CARLOS GUANTIA



## DINING IN OR OUT

In the majority of prisons food is cooked in a central kitchen and then taken, often long distances, to be served to prisoners in separate wings. This inevitably means that food has to be cooked some time in advance and by the time the food is served its quality has suffered and it may even be cold and unpalatable.

It is usual for prisoners to eat in cells. With up to two or even three prisoners in each cell, inmates are often forced to eat sitting next to their slop bucket. They have just one bowl in which to wash both themselves and their eating utensils and only one towel on which to dry both. As one prisoner put it to a visiting Home Office minister who enquired about the food, 'It's not bad but when was the last time you ate dinner in your toilet?'

Mr Thompson along with HMIP would like to see more communal dining. Where inmates eat together, it is easier to serve the food, it stays

## ON REMAND

In March 1988 the Home Secretary changed the prison rules so that unconvicted remand prisoners were no longer allowed to have food brought in from outside. Remand prisoners spend an average of 56 days in prison awaiting trial. It was claimed that it was not possible to prevent drugs, alcohol and other illegal articles from being smuggled into prisons. A vegetarian remand prisoner, supported by the National Council for Civil Liberties, challenged this ruling on the grounds that the vegetarian diet in Wandsworth Prison did not provide suitable nutrition, but the change in law was upheld.

hotter and there is less opportunity for interference with the food. Inmates have the benefit of association and time out of their cells.

But even where dining rooms exist they may not be used. Prison researcher Kathy McDermott has identified a trend over the last 15 years where a greater emphasis on security and control has led to a deterioration of regimes — prisoners are locked up for longer, have less access to workshops and less prisoners eat communally now than in the 1970s.

Featherstone is a relatively new prison opened in the mid-70s, in which, although designed to operate an open regime, the dining room is not used and prisoners eat in their cells. Similarly in Cookham Wood Prison there is a very good dining room which is not used, even though it would require no more staff to supervise. A new living unit being built at New Hall Prison has no dining area — it is expected that inmates will eat in their cells.

But there are alternatives. Ms McDermott has visited prisons in the US where inmates and staff eat in the same dining room. The area was clean, the food was well presented and there were fresh vegetables and salad.

## WORKING IN THE KITCHENS

With every prison kitchen employing at least ten inmates, kitchen work is popular. As one inmate put it:

*'A kitchen job can be taken for several reasons. Long hours and hard work make time pass very quickly and wages are always high. There are many perks (both legal and illegal) and the possibility of better food though this rarely happens legally.'*

Ultimately the quality of the food leaving the kitchen will depend to a great extent upon the skill, knowledge and enthusiasms of individual catering managers. Catering officers are recruited from prison officers, often those with a background in services catering. Lack of staff has caused problems in the past but since Fresh Start in 1987 numbers of catering officer grades has increased from 400 to 560, although about 50 of these posts remain vacant. Poor management can also exacerbate problems but despite a trend towards greater civilisation, no-one yet seems prepared to advocate the introduction of civilian caterers.

Hygiene training for catering officers was formalised three years ago and now about 70 per cent hold a hygiene qualification, although by the end of 1990 it is expected that all will hold at least a basic certificate.

Hygiene training for inmates working in kitchens remains ad hoc, although some prisons like Brixton require inmates to pass the Royal Society of Health's 'Essential Food Hygiene Course'.

## RACISM IN THE KITCHENS

In 1987 a black prisoner, who was serving six years in Parkhurst prison on the Isle of Wight, was awarded damages for racial discrimination. John Alexander took the Home Office to court as he had been denied a job in the prison kitchens because he was black.

According to *The Voice* newspaper the court heard that a 'white mafia' ran the prison kitchens, and that they were so racist they staged a mass walkout when a black prisoner was put on kitchen duties in 1983. The incident was confirmed by one of Parkhurst's assistant governors, who said that the prisoners were later reprimanded for their racist action.

Initially Southampton County Court awarded £50 for injury to feelings but on appeal this was raised to £500.

The case provided a stimulus for change according to the Commission for Racial Equality which was backing the case. But whilst the Home Office now has a highly commendable policy on 'race relations' there are concerns about accountability, monitoring and implementation of the policy.

In her report on the experience of racism in prison published this year Kathy McDermott concludes: 'In areas that the Prison Service claims to be sensitive to cultural differences — food, religion, and interpersonal relations — there is clear evidence that minorities do not feel that the policy has succeeded.'

# Plant biotechnology: the Gene revolution

**G**enetic engineering offers an astonishing range of possibilities for altering the food we eat. Crops can be made to grow faster and bigger, to resist insects, viruses, drought and frost damage. Biological pesticides which might replace traditional, toxic, chemicals are heralded as a key to the Green future. But in the scramble for market share will there be time to resolve the environmental, social, ethical and health questions that are raised by these new scientific advances? In this special update *The Food Magazine* looks at the pros and cons of plant biotechnology, considers the Third World dimension and raises the question of who owns and controls plant genes?

The Green Revolution began in the 1960s. It involved the replacement of traditional varieties of crops by high-yielding alternatives requiring sophisticated irrigation systems, imported machinery and expensive inputs of fertilisers and pesticides. Production of staple crops has risen in some countries, for instance in India where wheat is no longer in short supply so often, but these changes in farming methods have been at the cost of many peasant farmers' bankruptcies, environmental damage and huge national debt burdens.

The promise now is of a second Green Revolution which will provide the Third World farmer with pest and drought-resistant crops which have the ability to fix their own nitrogen. Some scientists and governments in the Third World see biotechnology as the way out of the fertiliser and pesticide dependencies born of the first Green Revolution. Others are asking which of these technologies and products are appropriate and what unforeseen and undesirable effects they may bring. The inertia and inequalities of world trading patterns suggest biotechnology will change trade in ways that primarily benefit developed nations.

## PATENTING

Patenting of life forms has become a highly controversial issue because of biotechnology developments. Will we see, for example, the patenting of photosynthesis, seed production techniques, and staple crop varieties? By 1984, California-based Genentech had no less than 1,400 pending patents. Applications rose by 600 per cent between 1981-85 at the European Patents Office in Munich.

Ownership rights are of central importance to the companies investing in, and hoping to market, new biotechnology products and processes. Companies need to safeguard their huge investments during the very long lead times before financial returns are realised. Frequently, the often small and relatively unknown biotechnology companies have no alternative but to turn to the multinationals for finance. As a result, we are likely to see oil, drugs and food giants such as Shell, Chevron, Exxon, Standard Oil, Hoffmann-La Roche, ICI, Monsanto, Kellogg, and Unilever dominating agricultural biotechnology throughout the world.

In the EC, a Patents Directive is likely to be approved in 1990. The directive will pave the way for harmonised patent laws in Member States, and has the aim of establishing that living matter is not unpatentable, by virtue of being living, as it is at present in some countries. Patents would be limited to those organisms which are the result of microbiological processes. At a conference, Patenting

of Life Forms in Europe, held in February 1989 concern was expressed about the ethics of allowing legal ownership rights to both plants and animals, and the extension of reliance on chemical and other companies, through the extended use of monoculture, which it was said, will reduce genetic diversity and our future ability to produce crops suited to future environmental conditions. The Greenhouse Effect is one example of identified forces for such change.

## NEW PLANTS RUN WILD?

Releases of genetically engineered organisms have taken place largely in the USA and UK, with 13 releases so far made in the UK.

The Institute of Virology, Oxford, is conducting trials on a quick-acting viral insecticide. Natural baculoviruses, which have been used safely as biological pesticides in the past, can be engineered to produce insect-specific toxins from bacteria or scorpions. Baculoviruses have been shown to be very effective at killing caterpillar pests on cabbages and beets, and at the same time not to persist on the test site if modified 'crippled' virus was used.

Other releases include:

- Tomato plants with engineered resistance to tobacco mosaic virus.

- Tomatoes which do not soften with age engineered to reduce expression of the responsible gene.

- Pest resistant plants, eg tobacco, created through the insertion of caterpillar toxin genes from *Bacillus thuringiensis*.

- Plants engineered to withstand commercial herbicides sprays, such as Monsanto's glyphosate, so the spray can be applied to fields of food crops.

- Potatoes resistant to leaf roll virus using 'protoplast fusion', which produces a hybrid cell derived from cultivated and wild potatoes.

- The 'ice-minus' bacterium, a modified *Pseudomonas syringae*, produced by Advanced Genetics Sciences Inc, in California, which competes with ice-promoting bacteria. Prevention of frost damage to potatoes and strawberries has been tested.

The release into the environment of any live organism, whether it is a virus, bacterium, plant or animal, is irreversible. Martin Alexander, of Cornell University, New York, put the health and environmental risks of bacterial and viral releases into perspective: 'In general, whenever a new technology is introduced, there is a possible hazard. My belief is that the same is likely to be true of genetically engineered organisms. Most of them introduced into the environment won't survive. But a few will. Most that survive won't have an effect. But a few will. And most of those that have an effect won't do any damage — but a few will.'

Since plant biotechnology is such a recent development little can be predicted about the environmental effects if genetically engineered varieties become widely cultivated. Some insight comes from the study of introductions of animals to new habitats such as the rabbit into Australia. A review of the effects of introducing 118



PHOTO: ROSHINI KEMADOO/FORMAT

## Bioplastic

A potentially valuable new product, ICI's Biopol, is described by ICI as a 'green' plastic, albeit an expensive one. It is made from plant material which is 'fed' to genetically modified bacteria in a fermentation vessel, producing a biodegradable plastic which can be made into bottles, bags, and other disposable items.

# PLANT GENES

Part of the difficulty for biotechnology is that its claims are viewed through the prism of social anxiety about the consequences of other technologies. Despite the claims of nuclear scientists that splitting the atom would make electricity 'too cheap to meter', the cost of making nuclear power 'safe' has proved to be enormous. When new pharmaceutical and agrochemical compounds were developed and distributed without adequate anticipation of side effects, public scepticism about new technologies was exacerbated. Small wonder that the public lacks confidence in the latest assurances of the scientists.

But is it any worse to transgress a cellular barrier with DNA than to transgress a geographic barrier by, say, growing tomatoes and potatoes brought from Latin America in Europe? We have to accept responsibility for managing the global ecosystem. We have to deploy technologies with less environmental impact, rather than attempt to revert to some bygone time before we ever messed it up.

The technology is so easy and so safe that

regularly introduced for continued pathogen control.

Another objective of biotechnology has been to engineer herbicide resistance. Readers may ask: surely more herbicide resistant crop plants will simply increase herbicide application and resulting environmental pollution? Well, actually less than half right. There are several compounds which (when pure) are of negligible mammalian toxicity, are effective herbicides at very low dose rates, but kill (nearly) all known plants (even the crops), thus limiting their use. Such compounds include sulphonylureas (made by DuPont) and glyphosate (or Roundup, made by Monsanto). If one accepts, however reluctantly, the idea that herbicide applications are an unavoidable part of actually existing agriculture, it is much better to use such herbicides than to use more toxic, higher dose rate compounds such as 2,4 D and 2,4,5 T of Agent Orange notoriety.

The most serious controversy concerns the ownership of plant genotypes. Traditionally,

new varieties developed by breeders are protected by Plant Varieties Rights Protection (PVRP). Other seed merchants can still sell the variety but the breeder can charge a royalty on that sale. Most importantly,

breeders can use varieties developed by their competitors as a source of germplasm in their own breeding programmes. But a recent US legal decision awarded Molecular Genetics Inc of Minnesota patent protection on an entire plant selected for herbicide resistance in cell culture. This is being seen as a precedent for permitting companies which develop new (patented) transgenes also to patent the resulting transformed plants.

I believe it to be essential that patent protection does not extend beyond specific transgenes, but the implementation of such a system is complex. Every crop variety will need to declare its transgene composition in the varietal description. One can imagine in ten to 20 years that different crop varieties will contain dozens of different transgenes, and keeping track of who is owed how much royalty for which transgene would keep armies of lawyers and accountants fully occupied.

Prepared by Dr Jonathon Jones, The Sainsbury Laboratory, John Innes Institute.

types of mammal and 212 bird species to islands and continents found that 40 per cent of mammal and five per cent of bird introductions did have measurable ecological effects. Among these effects are plant and habitat damage and predation of, and competition with native species. It is difficult to draw parallels with new plant introductions, and the related use of biological pesticides, but the review's findings confirm Martin Alexander's view that some environmentally damaging effects are probable.

When a familiar crop rather than a wild species is introduced, reasonable predictions can be made of its effects. A genetically engineered wheat, for example, is likely to behave in a similar manner to its non-engineered relative. But it is not so easy to determine why one species should become a pest while its close relatives do not, as is the case with members of the oat family.

There is also concern that 'genetic leakage' from engineered plants may occur. Hybrids of crop and wild plants are common, for instance between the cereal sorghum and its wild relatives. Pollen, carried great distances by insects or blown by the wind, is able to produce novel plants. Research into the possibility that pest resistance may be conferred to wild plants has not yet been conducted.

## THIRD WORLD FEARS

Immediate threats to Third World economies come from the possibilities for substitution of imports by industrialised countries. Already 'high fructose corn syrup' produced using biotechnology from maize starch, is being used as a cheap replacement for cane sugar — a vital source of hard currency in several tropical states.

Genetic engineering may hasten the loss of the natural diversity of plant genetic material through the widespread use of new crop varieties. The multinational companies financing the research will want to take out patents on the most productive crop varieties. In the process, developing countries may be denied free access to these varieties. Subsistence farmers might have to purchase their seed annually from immensely wealthy First World companies — despite the original genetic material having come from wild Third World varieties!

Political leaders in almost all Third World countries have recognised that developments in biotechnology will inevitably have an impact. For example, the United Nations Environment Programme (UNEP) supports Microbiological Resource Centres in Brazil, Egypt, Guatemala, Kenya, Senegal and Thailand. Programmes include environmental safety risk evaluation, biowaste disposal, industrial processes, and international harmonisation of practices and controls in biotechnology.

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## The case for

in the event of a plant being produced which contains unintended novel DNA, the chances of releasing a plant that constituted a threat to people or the environment are extremely low. Such a plant would be unlikely to get beyond the greenhouse, because in the course of its analysis prior to varietal release the introduced DNA would be thoroughly described and the plant would be discarded from trials if it proved to contain the wrong DNA.

It is frequently pointed out that an accidental release of a living organism is different from the release of a chemical, because it can reproduce. True. But if it is an engineered plant which is perfectly safe, and easy to eliminate from inappropriate locations with herbicides, so what?

A major commercial objective of biotechnology is to produce plants which are no longer sensitive to plant pests, drastically reducing the need for insecticide spraying. This seems to be an obvious good thing, even if pathogens eventually evolve to overcome the resistance and new transgenes must be

# PLANT GENES

There are those who say that feeding the world's population — predicted to reach 8.5 billion by the year 2025 — will be possible only through the widespread application of biotechnology to raise productivity in farming.

But with the genes of 'supercrops' being patented by high technology companies, will Third World farmers be able to afford the costs of the second Green Revolution? Might not biotechnology further impoverish such farmers by providing cheap biosynthetic substitutes for products such as chocolate, coffee, and other tropical crops? There are also warnings that biotechnology may pose the threat of increased genetic erosion as industrialisation of food production accelerates, so making future selection of desired traits more difficult. Surely we must allow the developing world to feed itself, rather than believing that First World multinationals have the right answers.

Whereas traditional breeding methods are limited to mixing material from closely-related organisms, genetic engineering allows genes from almost any source, regardless of evolutionary relationship, to be introduced into almost any other organism. It may be said that all possible genetic combinations have at some time occurred in evolutionary history, but the deliberate

introduction of modified organisms, in large numbers, into favourable environments may have very different effects on survival and competition.

Although gene deletion using genetic engineering has its parallel in nature, this does not mean the process will be safe. The deletion of a promoter or suppressor gene could profoundly alter the behaviour of an organism through changed expression of its characteristics, with unpredictable consequences.

With biotechnology development in the hands of the multinationals can we be sure that the profit motive provides for people's needs, with safety and due caution? Is it being too cynical to contemplate that corners may be cut in the evaluation of the new products of genetic engineering, in order to get them to market? Proper regulation, public information and democratic participation in decision-making are vital, but even then unforeseen health and environmental hazards may emerge. In West Germany the strong public opposition to the

release of genetically engineered organisms is recognised. There is an informal ban on all releases, with exceptions considered on a case by case basis.

There are those who, on religious and ethical grounds, regard genetic engineering as odious. Living things do not exist solely for the benefit of humans. We have been around for only ten thousand years, while life began 4,000 million years ago. How can we

## The case against

usurp creation, the sanctity of life, and believe it is ours to tinker with? Surely, argue some, we must respect life, whether animal, plant or micro-organism, and have faith that nature is no less bountiful than is necessary. Are we not committing the greatest sin by ignoring the spiritual dimension of existence and believing that reductionist science can improve on nature? Prepared by Eric Brunner, London Food Commission Research Associate

## Campaigners call for controls

The UK Genetics Forum (UKGF) is a group of researchers, environmentalists and consumer and animal rights campaigners formed in 1989. The following is an edited statement issued by the group in response to the Royal Commission on Environmental Pollution (RCEP) report on the release of genetically engineered organisms into the environment.

The UKGF welcomes the RCEP report and believes it offers powerful support for the UK Genetics Forum's call for a partial moratorium on releases. But in its recommendations the Commission appears to ignore the thrust of its own evidence and opens the way for large-scale commercial releases of genetically engineered organisms in the near future.

The UK Genetics Forum supports the proposed formation of a Department of the

Environment Release Committee separate from the Advisory Committee on Genetic Manipulation. But it is concerned that no proposals have been made to restore public representation on the proposed committee. The UKGF further calls for a Public Biotechnology Commission to be constituted as a statutory body with advisory powers to ministers, covering all issues raised by biotechnology and genetic engineering, including deliberate release. Its members should be drawn from a wide range of public interest groups. This is the only mechanism which can properly take account of the broad range of issues raised by genetic engineering and enable a public voice to be heard on them.

The UK Genetics Forum also supports:

- \* The setting up of an authorisation and licensing system for organisations wanting to make deliberate releases.
- \* The maintenance of a case-by-case system of expert scrutiny for every proposed release.
- \* The setting up of lineage registers to record the history of genetically engineered

plant varieties and the full characterisation of introduced DNA sequences.

\* Mandatory insertion of uniquely identifiable marker sequences into all genetically engineered organisms to be released.

The UK Genetics Forum calls for a ban on the development of herbicide resistance and the use of antibiotic resistance as a marker in engineered organisms to be released:

\* Herbicide resistant crops could lead to increased use of herbicides.

\* The use of antibiotic resistance markers has to be considered against a background of increasing concern about the spread of antibiotic resistance in the environment.

\* With a newly engineered organism it will be prudent to begin with the assumption that an introduced gene is capable of spreading widely.

UKGF: details from 3-4 St Andrews Hill, London EC4.

# Catering workers who

Trades unions pride themselves in showing that they can provide more for their members than simply defending jobs or negotiating pay deals. With over 200,000 members preparing, cooking and serving meals in schools, hospitals, colleges and social services centres, the National Union of Public Employees is urging its shop stewards to check on food safety standards and kitchen hygiene. Its newly-published stewards' pack *Catering with Care* shows they means business.

**N**ot only are catering workers consumers of food themselves, but they are also the front-line troops in the battle against unsound food.

NUPE stewards and safety representatives can play a vital part in protecting both the health of their members and the public they serve. While their managers may be trying to implement cuts or compete with private contractors, the union-nominated shop stewards and safety representatives answer only to their members and can take a prominent role insisting that the service their members provide is of a high standard.

Defending the quality of their catering service can be justified as an extension of defending their job security. As there is usually a close link between a poorly-run, hazardous kitchen and a risk of poor hygiene, insisting on good practices is an extension of insisting on safe working conditions for members.

To assist their catering shop stewards, NUPE has produced a pack which encourages a critical examination of current practices and checklists on kitchen hazards and especially on cook-chill procedures.

NUPE's approach is based on a set of radical food policies. These include demands for:

- Employers to provide food hygiene training for all catering staff.
- Increased resources for local authority food safety enforcement.
- Food premises, including NHS and government premises, to be licensed.
- Free school meals for all children.
- Reinstatement of school meal nutritional standards.
- A reduction in chemical-intensive farming.
- No secrecy about the health effects of contaminated food and full access to evidence received by Ministry of Agriculture committees.

*Catering with Care: A Recipe for Kitchen Safety* A NUPE health and safety publication. For details phone NUPE head office 01-854 2244.

## IRRADIATION

The stewards' pack also takes a look at the issue of food irradiation and concludes 'Don't buy foods carrying the irradiated symbol and ask your employer not to purchase bulk supplies of irradiated food'.

NUPE takes the line that food irradiation can be abused as a substitute for good hygiene practices. 'It may benefit the food suppliers' the pack comments, 'but consumers will lose out.' It would have done nothing to prevent the recent outbreaks of salmonella in eggs (eggs develop an off-flavour when irradiated) nor can it prevent botulism poisoning.

The union is concerned that irradiation, while it can prolong the shelf-life of food, will reduce vitamins and other essential nutrients. The food will look fresh but will in fact be old and lacking in nourishment.

While food for retail shops will have the irradiated label on the pack, food for catering establishments



PHOTO: JENNY MATTHEWS/FORMAT

might not be so clearly marked. It is already the case that lower quality products are offered to caterers than to supermarket customers and there is every likelihood that much irradiated food will find its way to the catering sector rather than the retail sector. Rejected by the supermarkets, will it end up in school dinners or meals on wheels? Not if NUPE can help it.

## MICROWAVE SAFETY

Increasingly popular among caterers, microwave ovens should, according to NUPE, be treated with caution.

The stewards' pack suggests taking safeguards:

Food and liquids may be boiling yet the containers stay cool — check carefully before opening and serving.

Sealed containers may explode in the microwave — ensure they are opened or pierced before heating.

Metal, including foil, can 'arc' the microwave radiation, damaging the oven and creating a fire risk — don't use any metal.

Toxic chemicals from plastic made with PVC can get into food when the plastic is heated — ensure containers and film are PVC-free.

Microwaves can leak from ovens especially if the door seals are dirty or damaged — they should be cleaned every day, serviced regularly and can be tested by the local authority (don't use unreliable cheap leak-testers).

Poorly cooked or re-heated food is a health hazard — ensure food reaches 70°C for at least two minutes. A temperature probe should be used, which needs to be washed and disinfected after use and checked regularly for accuracy.

'Standing time' is part of the cooking time and is important to ensure thorough heating of the food.

# care for their customers



Stirring during heating helps some food to heat right through.

All staff should be trained in the safe use of microwave ovens and the importance of temperature control at all stages of heating and cooking food. Staff should be encouraged to report damage or faults to their supervisor.

## COOK-CHILL CHECKLIST

The introduction of cook-chill techniques allows management to separate the time when food is prepared from the time when it is served. The technique involves cooking the dishes then rapidly cooling them and holding them just above freezing until it is time for their re-heating and serving up to five days later.

Chilled foods are very vulnerable to temperature abuse: if during cold-storage or distribution they rise above 5°C they should not be re-chilled but consumed as soon as possible, if they rise above 10°C they should be destroyed.

Certain food poisoning bugs can breed at temperatures as low as 4°C or 5°C. They may only be destroyed by reheating the food to 70°C for at least two minutes. Care needs to be taken at all stages to reduce the possibility of food contamination in the first place, minimise bacterial growth during storage and distribution, and ensure thorough re-heating for service. NUPE's shop stewards pack includes an extensive checklist to help stewards monitor the cook-chill process and spot any potential hazards, for example:

### Preparation for chilling:

- Is food portioned and ready for chilling within 30 minutes of cooking?
- Is preparation carried out in room temperatures below 10°C?
- Can all non-disposable containers be easily washed and disinfected after use?
- Is food (except joints of meat) portioned in layers not more than 50mm deep?
- Are trays washed and dried separately from food preparation equipment and areas?

### Chilling process:

- Is food chilled to between 0°C and 3°C within 90 minutes?
- Do chillers have automatic controls, thermometers and temperature recorders?
- Is chiller capacity sufficient to cope with peak demands?

### Distribution of chilled food:

- Is food temperature kept below 3°C at all times during distribution?
- Are distribution containers and vehicles refrigerated?
- Are distribution trolleys checked and maintained?
- Is cold plating carried out in a separate room at a room temperature below 10°C?

### Reheating and service:

- Is food reheated within 30 minutes of removing from chill?
- Is food served within 15 minutes of reheating?
- Is the centre temperature of the food reheated to at least 70°C for at least two minutes?
- Is reheated food served at temperatures not less than 63°C?
- Is cold food (e.g. salad) eaten within 30 minutes after removing from chill?
- Is all reheated food destroyed if it is allowed to cool and is not immediately eaten?
- Are staff trained to operate reheating equipment and monitor food temperatures?
- Are thermometer probes provided and are they disinfected after use?
- Are temperature tests recorded?

## KITCHEN CHEMICALS

NUPE safety representatives are warned that several common kitchen chemicals need handling with care. Special precautions are recommended.

Chemical	Used for	Watch out for	Precautions
Chlorine (bleach, sodium hypochlorite, other chlorinated products)	cleaning, disinfecting	skin rashes, burns, sore eyes, nose and throat, coughing, burning sensation in lungs	ventilation, protective clothing for skin and eyes. Never heat or mix with other products, use dilute if possible
Ammonia (any chemical saying ammonium on label)	many cleaning agents, e.g. window cleaning fluid	fumes can cause watery eyes, sore nose and throat, coughing, skin rashes	ventilation, protective clothing for skin and eyes
Caustic soda (sodium hydroxide)	oven cleaner, toilet and drain cleaner	skin rashes and burns, eye irritations and burns if splashed, fumes causing eye, nose, throat and lung irritation	ventilation, protective clothing for skin and eyes
Detergents (general name for degreasing agents, may include biological enzymes)	washing up liquid, dishwashing powder, cleaning agents	dry and irritated skin, skin rashes, eye irritation if splashed, nose and throat irritation from powder	protective clothing, especially rubber gloves, use diluted
Pesticides (various types)	killing fungus, rot, insects, mice, rats etc.	many are poisonous and should never be used near foods	operators should be trained, kitchens should be cleared of food and staff, avoid contact, get source of problem dealt with
Asbestos	fire insulation boards, pipe lagging, oven door seals, flame-proof mats	all types can cause cancer and asbestosis (lung scarring)	if possible have it removed and replaced with other materials, otherwise it must be sealed and marked to prevent it being disturbed. Remove kitchen staff and food from area during works and get area tested for dust afterwards

# Sex and

**Dr Germaine Greer gave the second Guild of Food Writers Badoit Lecture. In this edited version of her talk, she shows how our attitudes to and enjoyment of food are inextricably linked to gender.**

Those of us who live in the overfed world eat three times a day. I think it is safe to say that none of us has sex in any form three times a day. Though we may imagine we're obsessed by sex, we spend a great deal more time thinking about food — what we eat, how to come by it and with whom to consume it.

The more I think about the contrasting ways in which males and females experience food, the more I come to believe that not only is the digestive system sexually differentiated, but that the differences are fundamental to an understanding of the ways in which males and females cohabit. Studies of the feeding habits of newborns show that little boys become more irritable and upset before feeds and go to sleep very soon after them. Little girls are supposed to demand food less aggressively and are harder to settle after feeding. I don't have to underline the possible analogy with sexual behaviour!

Baby girls are breast fed less often and for briefer periods than boys and are weaned earlier. An Italian study found that eight week old babies were suckled for an average of 45 minutes if they were boys, but only 25 minutes if they were girls. Mothers stopped feeding girls on an average three months earlier than boys.

What is certain is that girl babies are perceived as feeding less aggressively and this is a pattern which will last all their lives. In our own affluent cultures, girls are expected to show less interest in food and to eat less than boys. They are also expected to make less mess doing it and to be toilet trained earlier and more strictly. What this means in effect is that weaning is more distressing for girls and more repressive than it is for boys.

## **WORSHIP AT THE TABLE**

Weaning is the beginning of a long-anxiety ridden process which places the meal table at the centre of our social relationships. The meal table is an altar — thirty inches off the ground — over the head of the average toddler. This altar must be covered with a clean cloth and with a conglomeration of unnecessary articles. Eating is thus rendered awesome and it goes on being awesome for every foray up the ladder of consumption, exposing us to new hazards and new humiliations. The terror of the fondue, eating asparagus, extracting snails from shells, what to do with bones, what to do with something that is making you gag, and worst of all the selection of the right instrument.

By far the worst aspect of weaning in my view is coming to terms with cold steel. For some reason, the rich world insists on presenting its food to itself on the end of metal implements. We are only allowed to use fingers at the table for very specific foods, for the rest we must adopt what I call the surgical approach — dissecting and partitioning the food with sterile instruments.

One reason we approach food with knives and poke at it is that we are deeply suspicious of it. We are right to be suspicious of the food we eat these days, but treating it suspiciously once it is on your plate is not the way to make it safe. As everyone who knows who has watched people leering and sniffing at her lovingly compiled handiwork before conveying it to their mouths, suspicion of cooked foods is suspicion of the cook. When one has spent half the day thinking about, acquiring the materials for, and concocting a meal, the suspicious approach is particularly unwelcome. No wonder my mother always answered if we were unwise enough to ask what was for dinner, 'stewed eels and slow poison!' No wonder women when they kill choose poison. Having been suspected of it so many times, one might as well just do it!

## **MALE HIERARCHY**

Cutlery, tables and chairs are masculine notions. They are connected with hierarchy, rather than society. Slovenly eating is part of a revolt against the discipline that has robbed the giving and taking of food of most of its potential for sensual pleasure and replaced pleasuring with performance.

When the little girl trapped in her high chair gags on an overloaded spoon, all the tenderness has been purged from the operation. Getting her to take it becomes an exercise in control. Until the child has mastered the metal or plastic intermediary she may not feed herself. She protests, smears her food on the walls, slings it around the room, dashes it on the floor, the feeding parent zooms the spoon like an aeroplane, distracts the child and rams the spoon in whilst she is involved elsewhere. Feeding had been a warm, fleshy, cuddly and sleepy absorption of the milk of human kindness has now become a gauntlet that the child must run.

It's a funny thing that Freud attributed so much importance to toilet training and paid no attention to the painful process by which the food got into the gut in the first place. No discussion I have read has treated eating disorders as a result of disordered eating. It is well understood that obesity has its roots in over feeding of children in the early months of life. If a child's lack of interest in food is constantly over-ridden, for example it is likely that she learns to ignore the on/off switch in the mid brain that tells her when it is time to eat and time to stop eating. Feeding which insists that children ignore the pleasure principle and swallow what they neither like nor want is force feeding, but no-one has seriously challenged the right of parents to tell children they can't have pudding unless they eat up their spinach.

The thing that worries me the most in these feeding dramas is that food is not treated as an end in itself, but rather as a means to the end. You eat up in order to get big or get curly hair, and not because food is scrump-

# d food

tious. The meal must be got over in order to do something else, but what else? Eating is not done in order to sustain life, eating is life. If it is not enjoyed, life is not enjoyable. The child in her highchair begins to learn that eating is not the point, she begins to ignore the most subtle faculties she has, her senses of smell, texture and taste. She is not eating, she is eating up.

The preparation of food and the giving of food are intrinsically acts of love. For me the worst aspect though is that whether women have any talent in devising meals or not, they are obliged to express their love in this way. The woman who, on the other hand, has a talent for preparing food is equally likely to find that her family won't allow her to express it. Many a fine cook is wasting her life on fish fingers and oven chips because the family won't eat anything else. The nightmare of the highchair will be avenged.

Now I wouldn't dream of arguing that the dream to express love by the giving of food is a secondary sexual characteristic of women. It is striking that in virtually all cultures women, and sometimes even very tiny women, think their primary duty is to feed others, even to the point of starving themselves. When I was in Ethiopia, we used to fill our jeep with bananas before going into famine areas. Time and again I saw critically malnourished girls of about nine, ten or eleven who would take the banana I gave and break it up and feed it to small children. I could not convince them that the small children were doing better than they were and they needed the banana.

I eventually realised how to do it, and it took me quite a long time. I had to take the child as my child, and break the banana and feed it, and then the relationship was established. Now do you understand my way of talking about the way we eat is the experience of seeing people eat in a way which is inseparable from the expression of tenderness?

One of the oddest things I think about our culture is that women have got to prepare the food, serve it and appear to eat it. It seems to me that the idea is to imply that the serving of the food is effortless, that it somehow just got there, which is what everybody likes to think. Now it's true, both sexes are subjected to the stresses of

table training, but the psychological results I think vary. Boys develop what I've decided to call monorexia: monotonous taste for food they can trust, that they can safely put inside them in order to be fit and strong for doing whatever it is that life is supposed to be devoted to. They have no ambivalence about getting big. Girls on the other hand are frightened to become big and they become convinced that eating will make them big.

What of course is absolutely clear is that women are not terrified of food because men want them thin. Men have not imposed bulimia and anorexia on women, and I would hate anyone to think that I was going to regard them as expressions of straightforward demand that women be slim. Men do not in fact like women as slim as women like women. There is a complete disjunction about the notion of desirability between one sex and the other. Nevertheless fat is a feminist issue. Eating disorders are an expression of revolt.

Obesity, a far more common problem than either anorexia or bulimia, can be and often is a rejection of the

role of sex object and gentility itself. Like all unpublicised female revolt, deviant and dishonest over-eating is fundamentally self-destructive. Feminists have long argued that fat is a feminist issue, but mostly with the aim of attacking the prejudice against women who are not slim. However there is an important difference between women who achieve the right weight, which may seem stocky or robust by fashion standards, and women who pile on the flab, which first of all puts a strain on the back and then puts a strain on every organ in the body.

However you have to

remember that overweight is almost unavoidable for women forced by circumstance into sedentary lifestyles. Couch potatoes get fat. Many women trapped in inadequate housing, without accessible safe recreational space, have no choice but to become couch potatoes. Most female obesity results from a combination of enforced inactivity plus malnutrition and this kind of obesity affects mostly the women of the working class. Many English housewives become shapeless as a result of a diet of instant coffee and sweet biscuits.

Newsweek in July 1987 published the astonishing result of a poll on a group of school children that ten per cent of ten year old girls say they are on slimming diets. Something has gone horribly wrong. These are only the clinical extremities of a much vaster spectrum of food abuse by women. We can see how far most women have strayed from any rational, ie any pleasure-centred eating habits.

## EATING LEFT-OVERS

Women who spend their lives feeding others can hardly be expected to go to the same trouble when they've got to convey some nutrient into themselves. If they're at home with young children, they've already eaten the end of the rusk, the rest of the creamed chicken and the mashed banana that the child would not eat, and they don't even have any appetite let alone energy to think of some delicately balanced thing with which to feed themselves. And of course if they're at work, what are they doing lunchtime? They're not eating, they're shopping for the evening meal.

Food has become in our culture the curse of adult women. When they're not shopping for food, preparing food, serving it, eating it, they're cleaning up after it, washing dishes, laundering linen, polishing silver, putting crockery away. It's mad to me to think of those tower blocks in which, in every single unit, there's a woman cooking a meal which probably none of the people in the home are even going to want to eat. But the thing that gets me the most is that the most onerous part of women's relation to food in our society is that they have to think about it. In a society where there is no seasonal variation, never any shortage of food, menus have to be skilfully varied, as everybody coming to the table has a different fad or a different phobia and hardly anybody has a genuine appetite. In families where everybody eats at different times because of school, work, sport etc, meals go on literally forever and the thinking about food never stops.

The final irony, and to me it is a bitter one, is that women, the sex that eats in an irregular, distorted and joyless fashion has a greater capacity to enjoy food than men. All the tests for sex differences in perception agree that women have lower thresholds for detecting tastes. That is they detect elements in lower concentrations and show greater discrimination in identifying them and have a far more acute sense of smell. Men's food preferences can be partly explained I think by this relative insensitivity. It is very possible that eating is experienced by men and women in fundamentally different ways, like sex you might say.



PHOTO COURTESY HAMISH HAMILTON

## Caroline Walker Awards

Commemorating the work and life of campaigning nutritionist Caroline Walker, the first annual Caroline Walker Awards ceremony was held last October. Winners of the awards are as follows:

**Overall award:** James Erlichman, consumer journalist, *The Guardian*

**Media award:** *Daily Mail*

**Science award:** Professor Richard Lacey, microbiologist, Leeds University

**Industry award:** Tesco supermarkets

**Consumer organisation award:** Baby Milk Action Coalition

**Special mentions:** David Cordingley, BBC Food and Health Campaign

Oliver Gillie, health editor, *The Independent*

Tony Webb, Food Irradiation Campaign

## Food industry levies exceed £200m

Despite industry-wide opposition to the imposition of statutory levies on their operations to fund independently administered research, a parliamentary question recently revealed that UK and EC official schemes require nearly £213m to be handed over by the food industry.

Details of the main schemes are as follows:

Industry	Amount	Used for
Milk producers	£69m	Market support, promotion, disposal of surpluses
Cereals industry	£51m	Disposal of surpluses
Sugar processors and beet producers	£58m	Export and storage refund scheme
Sugar beet growers and processors	£2m	Research and education
Slaughterers and animal exporters	£18m	Meat and Livestock Commission promotion of meat
Cereals industry	£4m	Home Grown Cereals Authority and Food From Britain
Horticulture industry	£1m	Horticulture Development Council
Sea fish industry	£4m	Sea Fish Authority
Pesticides industry	£2m	Residues monitoring
Cocoa importers	£1m	International Cocoa Agreement price stabilising

Source: PQ 6127, asked by Dr David Clark, replied 24 Oct 1989 by David Maclean for MAFF

## LATE NEWS:

### COMA report on sugar

After two years of deliberation, the Department of Health's Committee on the Medical Aspects of Food has published its findings, which are more critical of sugar than expected.

Despite attempts by the sugar industry to play down the report, the key recommendations are:

\* Eat less sugar, less often (no target is given)

\* Sugar is implicated in a number of health problems in addition to dental caries. These include obesity and medical problems such as gall and kidney stones.

\* Improved labelling of the sugar content of food. Sugar in processed foods accounts for two-thirds of the national intake.

COMA report: *Dietary Sugars and Human Disease*, HMSO, 1989.

**For Action and Information on Sugar's response to the report contact**

Jack Winkler (01-226 1672)

or

Aubrey Sheiham (01-380 7600)

## Back issues — a few still available!

There are still a few copies left of the celebrated first seven issues of *The Food Magazine*

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# FOOD FROM THE PAST

## AMENDED TABLE OF DIETARIES FOR PRISONERS.

THE FOLLOWING ARE THE PRESCRIBED RATES OF DIET.

### CLASS 1.

Convicted Prisoners confined for any term not exceeding Seven Days —

Males.		Females.	
Breakfast	Oatmeal Gruel ..... 1 pint	Oatmeal Gruel ..... 1 pint.	
Dinner..	Bread ..... 1 lb.	Bread..... 1 lb.	
Supper..	Oatmeal Gruel ..... 1 pint	Oatmeal Gruel ..... 1 pint	

### CLASS 2.

Convicted Prisoners for any term exceeding Seven Days, and not exceeding Twenty-nine Days —

Males.		Females.	
Breakfast	Oatmeal Gruel ..... 1 pint. Bread ..... 6 oz.	Oatmeal Gruel ..... 1 pint. Bread..... 6 oz.	
Dinner..	Bread..... 12 oz.	Bread..... 6 oz.	
Supper..	Oatmeal Gruel ..... 1 pint. Bread ..... 6 oz.	Oatmeal Gruel ..... 1 pint. Bread..... 6 oz.	

Prisoners of this Class employed at Hard Labour to have, in addition, 1 Pint of Soup per Week.

### CLASS 3.

Convicted Prisoners employed at Hard Labour, for terms exceeding Twenty-nine Days, but not more than Six Weeks, and Convicted Prisoners not employed at Hard Labour for terms exceeding Twenty-nine Days, but not more than Four Months —

Males.		Females.	
Breakfast	Oatmeal Gruel ..... 1 pint. Bread ..... 8 oz.	Oatmeal Gruel ..... 1 pint. Bread..... 6 oz.	
Sunday and Thursday.			
Dinner..	Soup ..... 1 pint. Bread ..... 8 oz.	Soup ..... 1 pint. Bread..... 6 oz.	
Tuesday and Saturday.			
" ..	Cooked Meat, without bone, 3 oz. Bread ..... 8 oz. Potatoes ..... 1 lb.	Cooked Meat, without bone, 3 oz. Bread..... 6 oz. Potatoes ..... 1 lb.	
Monday, Wednesday, and Friday.			
" ..	Bread ..... 6 oz. Potatoes ..... 1 lb. or 1 pt. of Gruel, when Potatoes cannot be obtained.	Bread ..... 6 oz. Potatoes ..... 1 lb. or 1 pt. of Gruel, when Potatoes cannot be obtained.	
Supper..	Same as Breakfast.	Same as Breakfast.	

### CLASS 4.

Convicted Prisoners employed at Hard Labour for terms exceeding Six Weeks, but not more than Four Months, and Convicted Prisoners not employed at Hard Labour, for terms exceeding Four Months —

Males.		Females.	
Breakfast	Oatmeal Gruel ..... 1 pint. Bread ..... 8 oz.	Oatmeal Gruel ..... 1 pint. Bread..... 6 oz.	
Sunday, Tuesday, Thursday, and Saturday.			
Dinner..	Cooked Meat, without bone, 3 oz. Potatoes ..... 1 lb. Bread ..... 8 oz.	Cooked Meat, without bone, 3 oz. Potatoes ..... 1 lb. Bread..... 6 oz.	
Monday, Wednesday, and Friday.			
" ..	Soup ..... 1 pint. Bread ..... 8 oz.	Soup ..... 1 pint. Bread..... 6 oz.	
Supper..	Same as Breakfast.	Same as Breakfast.	

NOTE.—The Soup to contain, per pint, 5 ounces of cooked meat without bone, 3 ounces of potatoes, 1 ounce of barley, rice, or oatmeal, and one ounce of onions or leeks, with pepper and salt. The Gruel to contain 2 ounces of oatmeal per pint. The Gruel on alternate days to be sweetened with  $\frac{1}{2}$  oz. of molasses or sugar, and seasoned with salt. In seasons when the potato crop has failed, 4 ounces of split pease made into a pudding may be occasionally substituted, but the change must not be made more than twice in each week. Boys under 14 years of age to be placed on the same diet as Females.

### CLASS 5.

Convicted Prisoners employed at Hard Labour for terms exceeding Four Months —

<i>Males</i>		<i>Females</i>	
<i>Sunday, Tuesday, Thursday, and Saturday.</i>			
<i>Breakfast</i>	Oatmeal Gruel ..... 1 pint. Bread ..... 8 oz.	Oatmeal Gruel ..... 1 pint. Bread..... 6 oz.	
<i>Dinner</i>	Cooked Meat, without bone, 1 oz. Potatoes ..... 1 lb. Bread ..... 6 oz.	Cooked Meat, without bone, 3 oz. Potatoes ..... 1 lb. Bread..... 6 oz.	

### Monday, Wednesday, and Friday.

Males.		Females.	
Breakfast	Cocoa ..... 1 pint. made of 1 oz. of flaked Cocoa, or Cocoa Nibs, sweetened with $\frac{1}{2}$ oz. of Molasses or Sugar.	Cocoa ..... 1 pint. made of 1 oz. of flaked Cocoa, or Cocoa Nibs, sweetened with $\frac{1}{2}$ oz. of Molasses or Sugar.	
Dinner..	Soup ..... 1 pint. Potatoes ..... 1 lb. Bread ..... 6 oz.	Soup ..... 1 pint. Potatoes ..... 1 lb. Bread..... 6 oz.	
Supper..	Oatmeal Gruel ..... 1 pint. Bread ..... 8 oz.	Oatmeal Gruel ..... 1 pint. Bread..... 6 oz.	

### CLASS 6.

Prisoners sentenced to Solitary Confinement —

Males.	Females.
The ordinary diet of their respective Classes.	The ordinary diet of their respective Classes.

### CLASS 7.

Prisoners for Examination, before Trial, and Misdemeanants of the First Division, who do not maintain themselves —

Males.	Females.
The same as Class 4.	The same as Class 4.

### CLASS 8.

Destitute Debtors.

Males.	Females.
The same as Class 1.	The same as Class 4.

### CLASS 9.

Prisoners under Punishment for Prison Offences, for terms not exceeding Three Days —  
1 lb. of Bread per Diem.

Prisoners in Close Confinement for Prison Offences, under the Provision of the 131st Section of the Gaol Act —

Males.		Females.	
Breakfast	Gruel ..... 1 pint. Bread ..... 8 oz.	Gruel..... 1 pint. Bread..... 6 oz.	
Dinner..	Bread ..... 8 oz.	Bread..... 6 oz.	
Supper..	Gruel ..... 1 pint. Bread ..... 8 oz.	Gruel..... 1 pint. Bread..... 6 oz.	

This nineteenth century table shows the feeding allowances for prisoners in different classes and categories. An 1899 report stated that prison food was well beneath the diet of even the poorest in the community.

## HUNGRY FARMERS - WORLD FOOD NEEDS AND EUROPE'S RESPONSE

Clive Robinson

Christian Aid 1989 £4.95

I was asked recently why do I keep reading, reviewing and plugging books about food and the Third World? Some of the answers are in this book. Every day a world of food goes under our noses about which we know too little, often too late. Eighteen years ago I decided to focus my attention on food. I went farming. I went to meetings and discussed food policies. In food circles most attention at that time was on the Third World, and some of us felt this focus was wrong. Living in the UK we needed to understand how our own national food policies affected people both here and in the Third World. I was mightily impressed by E M Forster's dictum 'only connect'.

This wonderful little book by Clive Robinson makes the connection between our European farm and food policies and the rest of the world's. It is an excellent summary of progressive thinking and packed with facts, figures and insights. There are many parallels which the reader familiar with the UK food scene can draw between the world scene and our little local UK difficulties.

Whether you live in sub-Saharan Africa or in a shelter for homeless people in London, you starve or eat inadequately mainly because of lack of money. In Bangladesh ten per cent of landowners control 50 per cent of the land and 50 per cent of cattle and 50 per cent of the population are landless. In the UK landownership concentration is even greater, but the population is better fed because they have, generally, better incomes.

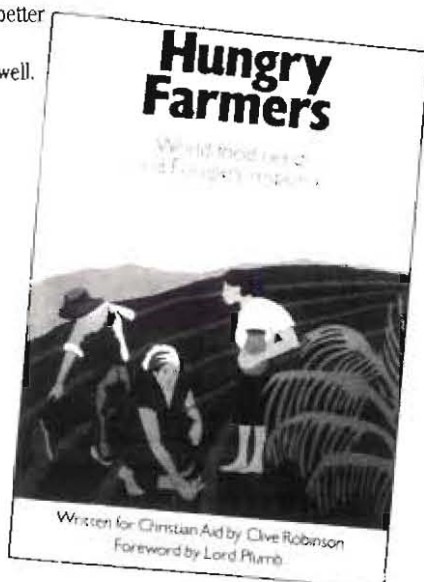
Clive Robinson tells the story well. Third World cash cropping feeds the world market but contributes to malnutrition at home. The food trade balance between industrial 'developed' countries and developing countries went against the developing countries ten years ago. In food terms, they are walking backwards.

Food has a direct impact on the quality of life and health. In the Third World this is brutal. Ten countries have more than 230 deaths per 1,000 head of population under the age of five. In the UK, the impact is less stark: coronary heart disease, food related cancers and lesser ill-health such as allergies and irritations.

In both Third and First Worlds women carry the lion's share of responsibility for food. In Africa two thirds of the agricultural work is done by women. Women produce around 50 per cent of the world's food but own only one percent of the world's land.

Read this book for all these kinds of data. It's well written. Above all, it focuses on Europe's responsibility and involvement in the world of food. Give the book to any 'little Englander' who needs convincing that we have a role to play in ending our collective European Common Agricultural Policy madness. Curtailing food over-production by quotas is no answer — further intensification just happens on remaining land. A more radical and daring food policy is needed in Europe and elsewhere. The book outlines — I suspect with more of an eye on the elsewhere than here — a new agro-ecological policy: mixed farming, rotations, less reliance on irrigation and agro-chemicals, more reliance on organic and low input systems, more resources and training for women on the land, better co-ordination between state and private sector to support small-holders, and a wariness towards powerful multi-nationals. All reasonable stuff. The problem is doing it.

Tim Lang



## Contents of cola

I am a school doctor and a part of my work is giving personal health education advice to many parents and their children. I am concerned at the quantity of Coca Cola that is drunk by children supplied by their parents. However I have heard that Coca Cola has specific ill effects on health. Could you please say if the latter is true and also what these harmful effects are?

(Name and address withheld on request)

### Editor's reply —

The main concern from a nutritional view is the sugar content. Cola-type drinks contain about ten per cent sugars: some 13 lumps in a 330ml can. However this is little different from many fruit juices and squashes — indeed the health image of Ribena might be challenged if it were more commonly realised that it contains 15 per cent sugars: around 15 lumps in a 250ml carton.

Besides the sugar other ingredients may also prove a health hazard for some sensitive people:

Colourant — usually a chemically

derived form of Caramel (E 150) which in some forms has been linked to adverse effects on white blood cells and is thought to act against vitamin B6 absorption.

Phosphoric acid — in large amounts there is a possibility of chronic calcium depletion, but in small amounts it is presumed safe.

Caffeine — a neural stimulant, 35-50 mg per can, around two-thirds the strength of instant coffee.

And in diet cola:

Sweetener — may be saccharin or aspartame (Nutrasweet). Saccharin has been associated with the development of tumours in laboratory animals and has to carry a declaration on the label to that effect in the USA. Aspartame is suspected of being associated with neurological problems, with disturbed brain function, epilepsy and even brain tumours being suggested, but there appears little conclusive evidence either way. Aspartame contains phenylalanine and is a particular hazard for people with phenylketonuria.

Preservative — usually sodium benzoate (E211) which is believed to provoke asthma, urticaria (skin irritation) and possibly hyperactivity in children.

## Which one is sweeter?



The sugar content of soft drinks: thirteen lumps in a standard 330 ml can of Coke, fifteen lumps in a smaller 250 ml ready-to-drink carton of blackcurrant Ribena.

# LETTERS

## Cocoa response

The Biscuit, Cake, Chocolate and Confectionery Alliance (BCCCA) represents British chocolate manufacturers and includes in its membership the UK firm or subsidiary of four of the companies named in the inset of the article on Chocolate's Dark Secrets in your October/December issue. The Alliance cannot speak for the parent companies, but I feel it is necessary to respond to some of the allegations made in the article which may have alarmed your readers unnecessarily.

First, UK chocolate is made almost entirely from cocoa beans imported from West African countries, eg Ghana, Nigeria and Ivory Coast. The industry does not own or deal directly with any cocoa farms or estates because beans are purchased on the commodity market. British manufacturers obviously do not condone the alleged difficult and dangerous working conditions of the Brazilian cocoa estates workers. However, given the fact that the overwhelming majority of British chocolate is made from West African cocoa and has been for many years, it is understandable that UK manufacturers should pay more regard to that region, where there is a long history of helping to develop the agriculture of the anglophone cocoa producing countries and of supporting the farmers who work on smallholdings. We share a common interest with the farmers in maintaining future supplies and recognise the role of pesticides in protecting crops when used responsibly. Over the past 40 years there has been constant two-way contact between the Alliance and Ghana and Nigeria in particular to ensure the safety of chemicals they may propose to spray on cocoa. The industry supports best practice as defined by the UN-FAO 'International Code of Conduct on the Distribution and Use of Pesticides'.

British manufacturers are particularly concerned at the allegation that the industry encourages over-production by the excessive use of chemical inputs in order to keep the price low. As the article says, good yields can and have been achieved in Ghana by use of food husbandry, integrated pest management and minimal use of pesticides. The Alliance has always actively supported this approach and it has also played a leading part in trying to achieve an

equitable International Cocoa Agreement, which would have stabilised prices above historical levels. The Alliance recognises that it is in everyone's interest that the producer should receive a fair return for his crop. The fact that the Agreement's economic provisions are stalled is due to the International Cocoa Organisation's failure to ensure the Agreement's ability to support prices.

I should also like to respond to the suggestion that the UK industry's pesticide residue testing was only restarted after prompting by the supermarkets. The facts are that the Alliance started testing for pesticide residues in cocoa on an industry basis in 1972. This programme continued until early 1987 when the Alliance was considering proposals to conduct a broader programme of independent testing (to generate a volume of independent scientific information) on certain ingredients in order to be able to respond to possible legislation on permissible levels. There are as yet no UK limits so one cannot make any comparison with the situation in Switzerland. This programme of testing cocoa, fruit and nuts began in January 1988 and further testing of cocoa continued in May 1989. The decision to revise the programme was made for the reasons stated, and not as a result of any pressure from or contact by the supermarkets on this issue.

Finally, your readers must judge for themselves whether the 'growing concern' over residues in cocoa is justified or not. In fact the levels of residues found in cocoa beans are, and always have been, minute and well within recommended safety limits. Subsequent processing reduces the levels even further and there is no evidence whatsoever from our data to support the allegation of 'gross overuse'. A 20kg child would have to eat over a ton of chocolate a week for life before reaching the established safety level.

**Mr J E Newman,**  
Director of The Biscuit, Cake, Chocolate & Confectionery Alliance.

*Editor's reply —*  
Whilst there is at present no evidence that the minute quantities of pesticide residues that have been found in cocoa pose a hazard to the health of chocolate eaters, they are nonetheless indicative of practices

in cocoa production that raise concerns about plantation workers' health and the environment in countries where cocoa is produced. We would prefer to see no residues and for much more independent testing of food stuffs. Given such a world glut of cocoa the continued overuse of pesticides in much cocoa production seems pointless.

We would be pleased to know what action the BCCCA is taking, in association with its international links, to influence improvements in conditions for workers, to outlaw the most dangerous practices and to encourage the reduced use of pesticides in all countries that produce cocoa. The multinationals may not own the plantations but through their purchasing influence they could effect a change of policy that would not only protect workers' health and the environment, but also reassure the chocolate buying public.

For example, the insecticide lindane is banned as unsafe for food production in the UK and other western countries. Yet even in Ghana, one of the main suppliers of cocoa to the UK where conditions are reputed to be better than in Brazil, lindane is used extensively as an insecticide. Does the BCCCA condone the use in the Third World of a hazardous pesticide highly restricted or banned elsewhere in the world? There is also some evidence of increasing use of pesticides and associated health problems in the Ivory Coast. But there has never been any full surveys of plantation workers' health — a situation which is hardly reassuring.

## Local slaughter

I was interested to see a letter in *The Food Magazine* asking for the names of suppliers of free range meat.

As a nutritionist and part-time small-holder I feel that the way animals are slaughtered and taken for slaughter also has an effect on the meat as well as the way they are housed and fed.

After all, by the time animals are taken a long distance and put through auction rings at cattle markets they've not got a lot of glycogen stores left — which after slaughter breaks down and tenderises the meat.

However one disadvantage in taking them to small local butchers for rapid slaughter is one doesn't get the old fat lamb premiums paid if stock goes through a cattle yard.

**M Blades**  
Rushden, Northants

## Oil extraction (1)

The argument between Professor Crawford and *The Sunday Times* on polyunsaturates (*The Food Magazine* Issue 7) is intriguing. If scientists disagree, what is the bewildered housewife to make of it all?

The *Sunday Times* report did not, as your lead-in suggests, say that all PUFAs (polyunsaturated fatty acids) were a dangerous source of free radicals. It said that 'during processing in the body' free radicals might result, meaning that PUFAs might be oxidised if insufficient vitamin E was present. Guidelines from authorities such as NACNE and COMA rarely stress the importance of adequate antioxidant while exhorting us to eat more PUFAs, yet that is what makes the difference between good advice and catastrophe.

An average intake of PUFAs should carry its own inbuilt protection, but beyond a certain limit there is not enough and extra vitamin E is needed. This was said to me by Professor Crawford himself in a personal interview some years ago, so possibly your excerpt from his reply left something out. The point was also made by Adelle Davis about 30 years ago.

One might guess that during commercial oil extraction, the form usually available in our society, some of the vitamin E in the seed is lost. But if the PUFAs are eaten in oily fish (as in the Japanese case) all is well.

The crux of *The Sunday Times* report comes at the end, where Professor Philip James of the Rowett Research Institute, Aberdeen, reminds us that oxidation is the key feature in cholesterol chemistry. He suggests that the benefits of the Mediterranean diet, based on olive oil, is not so much the oil itself as the presence of fruits and leafy vegetables which contain the antioxidant vitamins E and C.

**Jill Donisthorpe**  
Farnborough, Hants

*Professor Crawford replies —*  
Jill Donisthorpe is quite correct in what she says about the need for anti-oxidants. This issue was expressed by the FAO/WHO Expert Committee on The Role of Fats and Oils in Human Nutrition, 1978, where they suggested the need for oil producers and others who provide unsaturated fats for dietary use to maintain vitamin E levels or replace any lost during processing.

The sources of polyunsaturates in the food chain are seeds, green leaves, fish, sea

# LETTERS

foods of all kinds and lean meat.

In seeds the PUFAs are associated with vitamin E. In green leaves the more unsaturated PUFAs are associated with vitamin E, vitamin C and beta carotene. The cells in the body all have their own armouries against peroxidation for the reason that the very life support system of oxidation involves these types of reactions. The worst offenders are usually the home deep-fat fryers who re-use oil time and time again. Under these circumstances the vitamin E and other protective agents can be demolished regardless of the oil.

It is very right to draw attention to the need for antioxidants and conserving them in foods alongside the polyunsaturates, but as they both go together in the food chain it is difficult to separate them except by bad practice. Yes of course oxidation may occur without vitamin E in the diet but that would happen only if the food was very old or had itself been oxidised. That is not the fault of nature or the polyunsaturates!

Oxidation occurs in response to injury and cell damage and is used by nature to signal its troops to come to the rescue, clear up the mess and initiate the repair. So you

have to have a balance between stopping oxidation and letting it get out of hand.

The best way to stop oxidation is to take cyanide, and the dramatic effect that has tells us something quite important: that nature is not as daft as some imply.

The checks and balances in food and in the body are elegant. There is no doubt that eating good, well prepared food, using oil and vinegar with green salads, using fruits and vegetables of all kinds, eating whole meal bread, cereal foods, fish and sea foods — even the most polyunsaturated of them (cf the Japanese) — is going to help nature in its task of keeping these checks and balances in place. Eating diets full of saturated fats is going to deny the body essential vitamins and the polyunsaturates needed for cell membranes and all the above.

So there you have it. In the end, it is the balanced diet and the way we prepare our food that is important. The problem is — what is the balanced diet? I believe Sir Robert McCarrison had the best description that applies to today when he described the value of the 'unsophisticated foods of nature'.

## Oil extraction (2)

I refer to Professor Michael Crawford's comments on polyunsaturates (*The Food Magazine* Issue 7).

My understanding has always been that there is a huge difference between refined and unrefined polyunsaturated oils and that it is the refined versions which are damaging to health. In his 'Lipids in Human Nutrition' Professor G J Brisson writes: 'Margarines and shortenings are the products of a technology based on chemical and physicochemical reactions which modify, sometimes extensively, the chemical composition of the parent fats and oils. The application of this technology introduces into the food chain some types of fatty acids entirely different from those found naturally in non-treated vegetable oils.' In the *British Medical Journal*, 20/1/79, Sir John McMichael agrees, reporting that some oils can be 'more damaging to arteries than butter', and the American biochemist Roger J Williams writes that 'most commercial polyunsaturated vegetable oils are possibly productive of atherosclerosis and should be avoided by the consumer' (Nutrition Against Disease). Surely the fifteen or so steps used in the refining of most oils are responsible for partly hydrogenating them and causing the formation of free radicals — and the less refined, so-called 'cold-pressed' oils are safer.

The polyunsaturates which are so essential to the growing foetus and to the health of humans and animals are in their original form.

Janet Pleshette  
Writer on alternative medicine  
London

Professor Crawford replies — Janet Pleshette's letter quite accurately questions several authoritative statements in the press about the problem of pressed and unpressed vegetable oils. But there is a need to make a clear distinction between the types of processing. Certain types of vegetable oils may be hydrogenated to the point at which all the essential polyunsaturated fatty acid component is lost. That degree of hydrogenation makes fats that could well be suitable for processed foods, pies, quick chills, pastries and anything where a long shelf life is of interest. The more saturated the oil becomes through this process the more likely it is to be atherogenic and thrombogenic.

In the 1950s and 1960s the bulk of nearly all margarines and cooking fats were of this sort, having originally been made from beef fat, because of its close similarity to butter fat and hydrogenated vegetable or marine oils. With the rising realisation that excess intakes of saturated fats was linked with heart disease and arteriosclerosis and that polyunsaturated fats did the opposite, a very few manufacturers started to work out ways to provide spreads which contained polyunsaturated and not saturated fats.

The proper source of polyunsaturated fats in the natural food chain is seeds, nuts or green leaves. Seed oils were therefore used as a basis for making spreads in somewhat the same way that people had traditionally made mayonnaise, which is an emulsification of oil and egg yolk, the active ingredient in the yolk being lecithin, the emulsifying agent.

It is the margarines and cooking fats made with saturated blended oils and hydrogenated fats, which are Janet's concern. These should be considered as quite distinct from those products which contain a named seed oil and the content of the essential polyunsaturated fatty acid on the label.

It is, of course, true that any processing of a natural vegetable oil is going to change it in some way or other. Even the preparation of butter is a form of processing involving churning, which exposes the material to air and hence the risk of oxidation.

In practice cold pressed oils are usually OK and if they come from a named seed we know what we are buying and what should be in the oil and can always check up on them in the laboratory. The worst offenders are the deep fryers, particularly where the oil is re-used and re-used.

## Alpine apples Alar-free

We have learned with interest in *The Food Magazine* issue 6 about your action against Alar.

It might be useful to you to know that Alar has been prohibited in Switzerland since 1986 and the Swiss farmers of fruit trees have survived this prohibition very well!

Margrit Kruger  
President KonsumentInnenforum der deutschen Schweiz, Switzerland

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# LETTERS

## The hi-tech possum test

I was interested to read Kim Wilson-Gough's account of the problems of the organic apple grower and have pondered, too, on the question of what is 'organic'. Perhaps we should let the animals tell us.

Last year I purchased a box of organically grown fruit and vegetables, which I left out on the kitchen table, leaving, as is my custom, all the kitchen windows open to catch the sea breezes. During the night I woke up to strange thumping noises and found four or five possums having a wonderful time running up and down the kitchen hurling the fruit about and feasting on pears, bananas, peaches and grapes.

Since that night I have left ordinary, shop-bought fruit and vegies out — but no possums even enter through the windows. We may be able to bypass all the high-tech tests on residues and additives and just check our purchases with a possum.

Sandra Heilpern  
Pearl Beach, Australia

customers sunset yellow, carmoisine, amaranth of tartrazine — all ingredients we were being sold before.

Angela Cresswell  
Gloucester

## Gummer's egg hypocrisy

The Minister of Agriculture is perpetrating a grave injustice on British egg producers and a greater hypocrisy on the British public.

Claiming to act in the interests of public health, he is now slaughtering hundreds of thousands of healthy hens because the odd one might be carrying salmonella, whilst allowing increasingly large numbers of imported eggs from untested flocks from the continent to swamp street-corner shops and markets.

His action in making Britain the first country in the world to eradicate salmonella from one species, when it is ubiquitous in nature, and can only be sustained if he prevents forthwith all imports of eggs from infected flocks on the continent.

As the British egg becomes an endangered species, by his own admission, the risk to British consumers will actually increase through his inability to close the flood gates.

To make matters worse, discerning consumers are actually prevented by EC directives from choosing to buy British eggs because the identification of the country of origin is prohibited on imports.

Even the prefix No 9 on the packing station code number, signifying 'British packed,' can be circumvented because millions of eggs now arriving daily are being repacked quite legitimately as 'British' complete with the No 9 prefix.

Article 36 of the Treaty of Rome gives the Minister powers to act in the interests of public health to prohibit such imports. He should stop prevaricating and act immediately to protect both the public health and the British egg, already terminally damaged by his former colleague Mrs Currie.

The testing and slaughter policy was introduced after much pressure by the London Food Commission. Is it now prepared to see all its efforts undermined by 'infected' eggs from the continent?  
Peter A Barton  
Managing Director, Grassington Rangers

## Unnatural batter

I thought I would write to inform you of the colouring we use in our fish and chip shop.

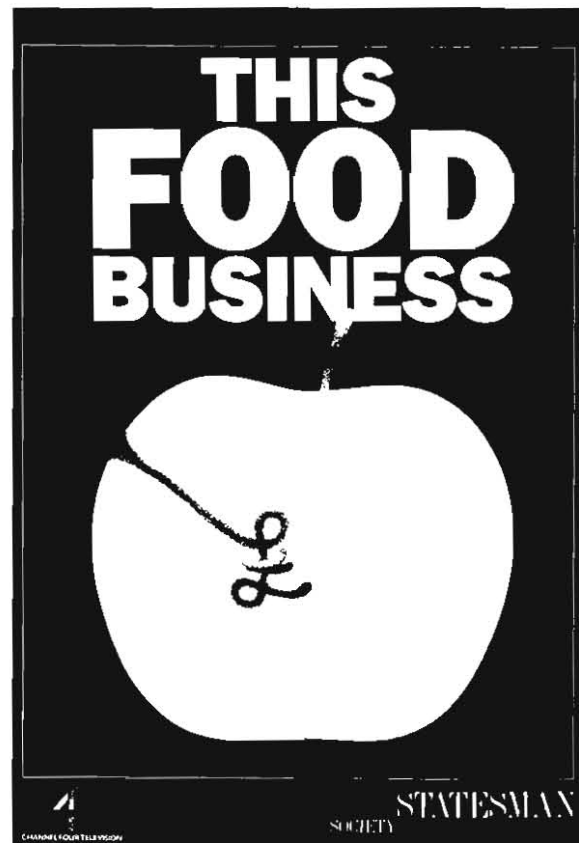
Not long ago there was a lot of publicity about a chip shop in the Midlands that was dying its chips. We had changed over to natural colouring for our batter. We have always mixed our own batter from flour, water and a splash of colour but one day I read the colourings involved, looked them up in *E for Additives* and decided we needed to find alternatives. The were full of 'nasties' — especially those affecting hyperactive children.

We tried writing to trade magazines and Maurice Hanssen and enquired at health stores to try to find something harmless but to no avail.

At last a friend put us in touch with Foodwatch at Sturminster Newton and after much experimentation we now use beetroot and crocin.

When I heard about the fryer in the Midlands, I rang the BBC to say there were safe alternatives for fish shops — though why he should want to colour his chips is beyond me, ours are cooked in best groundnut oil and are naturally golden.

I just thought you may be interested in this information and perhaps there may be other fish shop owners with a conscience who do not wish to give their



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# Patti Rundall's Diary

**The Baby Milk Action Coalition's joint national coordinator contributes a view from the Nestlé boycott campaign**

**I**'ve been musing on the nature of the corporate brain recently and have come to the conclusion that I will never understand it. By the same token I think that activists are destined to be misunderstood by the people who work for corporations.

On the flight home from Manila last month, I happened to be sitting next to the wife of an executive of Nestlé, who had herself — before she had her child — promoted baby milk formula for Nestlé Philippines. Although we got on well and she even invited me for dinner, we both realised that we had entirely bizarre ideas about each other's motives for our work. During our three and a half hour conversation I gave her an enthusiastic account of how the boycott was gaining ground, and told her how moved I had been to see so many Filipino mothers and children join us on our parade (see page 7). Perhaps I should have expected her reaction but I didn't. She said that if she lived on Smoky Mountain, the squatter settlement on a rubbish heap in Manila, she would join any rally for a few pesos.

I knew that even if we had wanted to, our very small budget would have made it impossible to bribe all the hundreds of participants that came, but still. It appears to show that she could not imagine that any

Filipino could genuinely support what we were doing. Was it a coincidence that nearly every Filipino journalist I met on the trip looked worried when I asked if they were going to carry the boycott story? 'You see, Nestlé is one of our sponsors...'

**T**he Young Enterprise group in a Buckinghamshire comprehensive school wrote to Nestlé to complain about the lack of profit from their chocolate vending machine, the result of a boycott by green and peace groups at the school. Alan Allbeury, head of Nestlé UK's public relations, offered to visit the school and sort out any misunderstandings. So it was that on 17 November Allbeury set out with his head of Dietetics, Ron Hendey, on the three hour trek from Croydon to Newport Pagnell. Unbeknownst to them, the green and peace groups had asked the headmaster to invite representatives from the Baby Milk Action Coalition (BMAC) as well.

At 2.00pm, when Allbeury and Hendey are expected to arrive, they telephone to say that they are just popping into a pub for a sandwich. The headmaster and 200 sixth formers wait. At 2.30pm the Nestlé reps arrive saying that they would like to leave at 3.00pm to avoid the traffic. They are ushered into the heads study, where BMAC's Gay Palmer, myself and my husband are waiting with some of the sixth formers. Seeing Gay and me, Hendey says, 'Oh, not you again.' No time to confer. The debate begins.

Speaking first, Alan Allbeury explains that he is a journalist by trade but has had over 20 years of experience in the food industry. Ron Hendey however has 'got all the background'. He's a chartered chemist, a Fellow of the Royal College of Chemists, a Diploma in Biochemistry, and he's worked as a government advisor on infant nutrition. We know that Hendey is also the chair of the Infant and Dietetic Foods Association (IDFA), which represents all the baby food companies that market in the UK, and a chair of IDACE, the Association of Dietetic Food Industries for the European Community, which represents all the European ones too.

Mr Allbeury starts with the first overhead. 'Breast is best'. No question about it. This has been Nestlé's basic position since 1866. We all smile. 'Why then infant formula?' says he. 'The answer is that there's a need for the products in countries all around the world. A need for it in the case of premature birth, there's a need for it sometimes when there are multiple births, when the mother can't feed both or more than one child. There's a need when mothers are ill. This is a problem in many African countries particularly, because of the spread of AIDS. Because

it is possible for mothers to give birth to perfectly healthy babies when they are HIV positive, but they can't then breastfeed because the baby will then run the risk of getting AIDS. Sometimes up to about 50 per cent of people in some African countries are actually HIV positive. It startles me.'

It startled us. Virtually every point was contrary to WHO and UNICEF's clear directives on infant feeding.

Mr Hendey made no effort to correct the statements. He did say that it doesn't make a scrap of difference if you 'stick a bottle' into a baby in the first two or three days — because there's no milk anyway. Referring to Sweden, where nearly all babies are breastfed, Mr Hendey also said, 'I think they [Swedish women] go to prison if they want to bottlefeed'.

Because of Nestlé's lateness we had very little time to put our case, but we were able to counter all the outrageous claims that I have quoted above before they sank too deeply into the minds of the young people. We knew that a PR firm had already advised Nestlé to sponsor AIDS babies, but somehow we never dreamed that they would dare to suggest that AIDS would create an enormous growing need for formula in developing countries. Official WHO data and guidelines strongly recommend breastfeeding for babies in developing countries regardless of their mother's HIV status. The evidence against transmission of AIDS through breastmilk is very slight indeed, while the evidence of the risks from bottlefeeding in poor countries is overwhelming.

Despite the shortness of time, the students insisted that we be allowed to show our film — which thankfully brought the debate back to the real issue of how babies in developing countries suffer and die and the role of commercial milk companies. On the way home we realised the enormity of what we had heard. If we hadn't taped the event I'm sure no one would have believed that Nestlé representatives would say such things. After all, Mr Hendey is a well respected man.

*The Guardian*, *The Lancet* and the BBC ran the story. I rang WHO in Geneva for a comment and they assured me what we had heard was not official Nestlé policy and that the company had assured them it would do everything within the limits of corporate behaviour to rectify the situation.

Later in the week Allbeury wrote to *The Guardian* and the BBC to say that their articles were misleading. 'Nestlé is not seeking to give the impression that HIV infected mothers should not breastfeed.' You could have fooled me.

# Fine Fish

Amanda Goodfellow

scaly, iridescent with light and colour. The flesh should be firm to the touch, and should not retain a dent when prodded, and it should smell faintly and pleasantly of the sea, nothing more.

Fish straight from the water should be plainly cooked as quickly as possible, preferably grilled over charcoal, and embellished only with seasoning, herbs and lemon juice. Fish from the fishmonger can be grilled, fried, poached, steamed or baked. In all cases, very little cooking time is required. The flesh should be cooked until it is just firm, and beginning to flake and come away from the bone.

Fish may also be eaten raw, marinated in lemon juice which coagulates the protein, or in salt. A famous raw fish dish is the Scandinavian 'gravad lax', where the salmon (lax) is rubbed with salt, sugar and ground black pepper, sprinkled with dill and left for a day or two pressed between plates (see below). Another is our own roll-mop herrings — fillets of herring rolled around a stuffing of onion, gherkin and spices, held with a wooden splinter and marinated in vinegar and salt.

Roes are considered a delicacy and are left in the body cavity after the guts have been removed. You may take them out if you wish to cook them separately (roes on toast), or leave them in. The soft roe or milt is the sperm sac of the male fish, the hard roe the egg sac of the female.

can be used with other fish, notably trout.

- 2 lb salmon, boned but not skinned
- 2 level tablespoons of sugar
- 3 level tablespoons salt freshly ground black pepper
- 1 heaped dessertspoon chopped fresh dill

Mix together the sugar, salt, pepper and dill and rub the fillets of fish all over with it. Sandwich the fillets together, skin side out with any surplus salt mixture in the middle. Put in a shallow dish with foil and a weighted plate on top and leave in a cool place for 24-36 hours — no longer, otherwise it will taste very salty.

Then drain off the liquid, rinse and pat dry and wrap the fish in film or foil. Chill through before cutting in very thin slices like smoked salmon. Serve with thin slices of rye bread and butter, with either lemon wedges or a mustard sauce:

- 2 tablespoons French mustard,
- 1 tablespoon vinegar,
- 1 dessertspoon sugar, blended with 6
- tablespoons oil;
- then add 5 fl oz sour cream and plenty
- of finely chopped dill.

**T**he marvellous thing about fish is that you can prepare a delicious meal from it so quickly and with so little trouble. At the same time, it is nutritious, low in calories, with very little waste.

It ranks with eggs for convenience and of all the protein rich foods it is the most healthy. Such fat as it contains (in white fish hardly any) is high in polyunsaturates, and considered by some scientists to play a positive role in the prevention of heart attacks and strokes. Fish is rich in vitamins, particularly the B vitamins, and in iodine.

But it must be fresh. Really fresh fish will have eyes that are bright and clear, not opaque and sunken, and gills that are red. Its skin will be wet and shiny, and, if

## HERRINGS IN OATMEAL

A classic way of cooking fresh herrings is to split them, coat them with oatmeal and fry or grill them. The oil from the hot fish should permeate the oatmeal to make a good, crisp coating.

The fish should be gutted and cleaned, their heads and tails cut off and fins trimmed. Then they should be split down the back and opened flat like kippers, and the backbone and as many smaller bones as possible removed.

Rinse and pat dry. Season with salt and pepper and press both sides firmly into oatmeal until they are well coated. Grill for five minutes or so on each side (ten minutes in all) until the flesh is cooked through and the oatmeal coating crisp and brown.

Serve with a pat of butter, a lemon wedge, some good brown bread and a pot of mustard to hand.

## GRAVAD LAX

The famous Scandinavian pickled salmon is simple to make and extremely good. The same curing method



Text for this page comes from Amanda Goodfellow's *A Household Legacy*, 1989, published by The Brewhouse Traditional and Wholefood Company, (available from The Brewhouse Company, 9 Wallingford Avenue, London W10, 6QA, for £14.95 plus £2 post and packing, or from bookshops).

# WHAT THE JOURNALS SAY

*Learning good habits from Greece, eating snacks and not eating aspirin...Eric Brunner reviews the journals*

## ASPIRIN NOT A WONDER DRUG AFTER ALL?

Contrary to the prevailing wisdom that a daily dose of aspirin protects health, it may be linked with increased risk of heart disease.

Fourteen thousand white, affluent and well-educated people in a Californian retirement community were followed over six and a half years. They completed a questionnaire which asked for a medical history and use of drugs such as pain killers, laxatives and vitamins. Discharge summaries and death certificates were analysed. By January 1988 there were 341 cases of stroke, 253 of heart attack, and 220 of other coronary heart disease (CHD) amongst those who had not reported any previous heart or circulatory problems. Although the risk of sudden heart attack was reduced slightly amongst men who were daily aspirin users, the relative risk of angina and other CHD was almost doubled for both sexes compared with non-users. Kidney

cancer was also more common amongst aspirin users.

Several British and US studies in the past 15 years have looked at the protective effect of regular low dose aspirin. Analysis of 25 randomised trials involving patients with some previous CHD taking anti-blood clotting drugs such as aspirin (ie for secondary prevention) deaths were reduced slightly. There was a 15 per cent reduction in deaths from circulatory diseases and no apparent effect on other diseases. The present study is the third large randomised trial of aspirin for primary prevention, ie in those with no previous CHD. The US physicians health study, of 22,000 male doctors taking aspirin or placebo every other day, shows no difference in circulatory deaths between the two groups after five years. There was a 47 per cent reduction in fatal and non-fatal heart attacks, similar to the findings in this new study. The British doctors' trial of daily aspirin use showed no beneficial effect at all as far as CHD was concerned. A slight, but not signifi-

cant, increase in strokes is seen in all three of these studies.

Stomach ulcers and bleeding are established hazards of aspirin use, especially at high dose. On the basis of the accumulated evidence it seems that the advocates of aspirin may have to eat their words! Paganini-Hill A et al, Aspirin use and chronic diseases: a cohort study of the elderly, *British Medical Journal* 1989, vol 299 pp1247-50.

## GREEK LESSONS

The Western diet may be lacking in n-3 fatty acids, the richest food source of which is oily fish. Eggs too can be a rich source of these fats, provided the chicken's diet is right. Previous attempts to feed them on fish meal produced odd-tasting eggs with a fishy odour, but the green leaves of purslane, which grows wild in Greece, provides the n-3 fatty acids without imparting an unpleasant taste to the egg.

The authors report that the chickens on the farm they visited have a diet of purslane, the richest source of the fatty acids in question of any green leafy vegetable yet examined, as well as insects, fresh grass, fresh and dried figs, supplemented with barley flour and corn. The resulting egg yolks contained ten times as much n-3 fatty acid as a supermarket egg, 500 mg per ounce of yolk, compared with 300 mg in some fish oil capsules. The authors also say that experiments have shown that n-3 fatty acid-enriched eggs do not raise plasma cholesterol, and reduce blood pressure.

The question is, will purslane grow in Britain? If it does, can we rely on our egg producers to give their chickens a taste of the good life?

Simopoulos AP and Salem N, N-3 fatty acids in eggs from range-fed Greek chickens (letter), *New England Journal of Medicine* 1989, vol 321 pp 1412

## MORE GREEK LESSONS

Since many British people seem to have a strong addiction to fatty foods it may be time to look at diets which allow us to have our grease without guilt. The Greeks eat large quantities

of olive oil, but don't die of heart disease so commonly. One small study found that perhaps we need to think about which oils and spreads we use as much as how to replace them with complex carbohydrate and fibre.

A five-week trial of two diets involving 48 men and women, one a high olive oil diet (41 per cent energy from fat), and the other a high-carbohydrate, high-fibre diet (22 per cent energy from fat) showed the same falls in total cholesterol (TC) of 0.45mM. High density lipoprotein cholesterol levels (associated with decreased CHD risk), however, fell by 0.19mM in the low fat, high fibre group, but rose by 0.03mM in the olive oil group. The olive oil diet, unlike the high fibre diet, appeared to cause a specific fall in TC while leaving HDL-cholesterol unchanged, despite the high level of energy derived from fat.

Mensink RP and Katan MB, Effect of MUFAs versus complex carbohydrates on HDL in healthy men and women, *Lancet* 1987, vol 1 pp122-25

## EATING PATTERNS

Eating small meals often, rather than the traditional square meal, may help to prevent and reduce obesity, and fasting blood fat levels.

A study of healthy men in Toronto looked at the effects of increasing the frequency of meals. Seven men were given, in random order, two metabolically identical meals for two weeks each. On diet consisted of 17 snacks per day, the other of three meals. Compared with the three meal diet, the nibbling diet reduced fasting serum cholesterol and low density lipoprotein cholesterol. Insulin levels were some 25 per cent lower on the nibbling diet, and it may be this difference which accounts for the lower blood cholesterol. Insulin stimulates cholesterol synthesis by the liver. Weight was not changed by either diet. The authors point out that fat deposition is increased after large meals, but this may be balanced on the nibbling diet by a decline in heat production (and therefore energy loss), which is also stimulated by big eating.

Jenkins DJA et al, Nibbling versus gorging: metabolic advantages of increased meal frequency, *New England Journal of Medicine* 1989, vol 321 pp 929-34

## COMING SOON IN THE FOOD MAGAZINE!

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