

4C: WHO'S DRIVING THE FOOD SUPPLY?

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Do we choose our foods wisely?

We all eat and many people therefore believe they must be good at it. In fact, when faced with literally thousands of food products, we do not always choose wisely. Increasingly we are in the hands of marketers who influence what we believe, what we buy and when and how we eat.

Commonsense should alert us to the obvious sales pitch for the quick diet fixes and the downright ridiculous claims made for some products, yet scams and crazy diets continue to sell, making a mint for their promoters. One step up from this situation are claims about foods, nutrients and diets that may seem sensible because they use scientific-sounding jargon. Faced with claims that sound promising, and without specific and up-to-date knowledge of nutrition, many people spend their food money foolishly. Governments are failing to provide nutrition facts free of commercial influence.

Some genuine scientific findings are skewed to promote particular products. Funded by industries whose main aim is to produce profitable value-(p)added products, some nutritional scientists try to produce packaged foods that can compete nutritionally with fruits and vegetables. It seems a futile game when commonsense would tell us to eat fruit and vegetables. But who champions the carrot or the humble spud when they don't even have a label to list their glories?

In looking at the current state of food consumption in Australia, it is important to look at the possible drivers of the food supply.

Nature?

Until recently in countries like Australia, and still in most developing countries of the world, nature has dictated that people eat what is available. For example, in areas where barley is the only grain crop that will grow, and goats and chickens are the only animals the barren environment will support, people eat barley products, use goat's milk for yoghurt and cheese, enjoy eggs and the occasional chook when it has passed its egg-laying days, and add the manure from the animals to the meagre soil to grow a few vegetables. Their food supply is driven by their environment.

Culture?

Division of food has always evoked cultural practices, usually made according to social hierarchy. All societies have had cultural influences on what, when and how people eat. Many of these are being eroded with the advent of technological change and changing social structures, although we might question whether changing social roles alter the food supply or whether changes in the food supply alter the social milieu.

Prosperity & the green revolution?

In all societies, as people have more money, their food intake changes. They begin to import food from other areas, and divisions in what people eat become more apparent, with wealthier people diverging most from traditional foods. In some countries, people sell

their native food crops for cash and use the money to buy imported canned foods, soap powder and transistor radios while their children grow sick for want of the fresh foods that have been sold. In such cases, the desire for material goods or an easier lifestyle drives their food supply.

The green revolution created huge changes in the food environment. Chemical fertilisers improved crop yields. Crops could be sold and more money became available, some of which was needed to buy machinery to apply the fertilisers and the pesticides that helped increase yields. Once they had expensive machinery, peasant farmers then needed to increase their land holdings to justify their purchase, so bigger farms bought up the smaller ones, and more land was cleared for more crops. This revolution, which undoubtedly helped many nations to feed more people, dramatically changed the food supply. The driving force appeared to be increasing prosperity and a desire to compete with and do better than your neighbours.

The green revolution was hailed as a saviour and some countries previously short of food became food exporters. In some places, however, the green revolution left a trail of destruction. Soils are no longer rested between crops as they once were, sections of the environment have become increasingly degraded as fertiliser run off has destroyed the health of rivers, the irrigation needed for fertilised crops has produced salinity, and pesticide residues have created problems for wildlife, and possibly also for humans.

There have been social implications too. Greater productivity on farms, somewhat ironically, has decreased the need for labour and one farmer can now feed thousands of people. So rural unemployment has increased and other opportunities for employment have not materialised as businesses downsize to increase their efficiency and profits. Many rural communities are in a downward spiral as fewer people working on the land means fewer support services in nearby towns.

In some third world countries, increased incomes for some and unemployment for others has created new social divisions. Prosperity has been a good driver for some, but a disaster for others, as the big have grown bigger and the small struggle to survive.

Consumers?

The food industry says it produces what customers want. Customers, meanwhile, say they buy what is available. Even when they complain - for example, about the problems finding tomatoes with flavour - they still get tasteless tomatoes.

The food industry obviously tries to make products customers will buy, but there is so much choice that even if you ate 30 different foods a day and never repeated your choice, it would take more than a year to try every item in the supermarket. No one ever asked for so much choice.

Food companies? Marketers? Advertisers? Retailers?

Food companies take note of consumer trends, but increasingly most people buy what is produced, marketed and advertised. Without an advertising budget and marketing plans, and the fees to pay for shelf space in supermarkets (higher if you want a particular spot), a company will find it difficult to sell its product. So is it the marketing and advertising industries or perhaps the retailers who are driving the food supply?

These groups are inextricably linked. Ultimately the marketing and advertising 'boys' do the bidding of the food industry, which shapes our food habits. Sales and marketing staff in food companies wrack their brains trying to think of new profitable ideas that spin off from current successes. The number of products increases, the packaging increases, the people who have to create new advertising campaigns are pleased, the supermarkets expand and the small shops disappear as they can't compete with the huge choice. But what about people? Did they need or want such abundance? Or such mediocrity?

Taste?

Few products sell well unless they taste good, although there are examples (such as unprocessed bran or margarine), where marketing efforts have overcome initial resistance on the grounds of taste.

Flavour obviously has some impact in determining what we eat - and is a major reason why most people won't buy unsalted bread or wholemeal pasta. It was also a major factor in the failure of the first genetically engineered tomato in the United States - it didn't taste good enough to justify its higher price.

However, considerations about flavour have given way to convenience and mediocrity, with some companies deliberately 'dumbing down' the flavour of foods so that many people now choose foods that have no flavour to which they object rather than seeking the joy of true flavour. A prime example of this can be seen with bland-tasting fast foods, which people buy for convenience, not because they are the best-tasting hamburgers or the best pizza or chicken in the world.

Convenience? Time saving?

Do we even have time to consider flavour any more? Is time - or the lack of it - the main driver of the food supply? It would certainly seem so, as more convenience foods appear - 'meal solutions' as they are now called. Why are we all in such a hurry that we can't cook for ourselves any more? Or have we just been convinced by the convenors of convenience that we don't have time for cooking or even eating that involves chewing? Is this the driving force that has seen huge increases in ready-prepared foods, in fried chicken that is so moist with grease that you no longer have to waste time chewing it and mixing it with saliva before swallowing it?

In studying time and food, Dr Joan Gussow, nutritionist and ecologist, has found that most of the time people once spent in the kitchen is now spent watching television. And it's by watching television that most people learn about the latest instant foods, which mean they can spend more time watching television to be persuaded to buy more instant foods - and so it goes on.

Dr Gussow also found that shopping now takes much longer. That's not surprising, as the typical supermarket now stocks about 12,000 items. Our parents and grandparents had 600-800 foods to choose from, with many only available in season. It is almost certainly the complexity of the food supply, the need to seek out what you have seen advertised on television and the need to read labels that takes much of the time once spent preparing family meals.

Who is responsible for the cooking, shopping and cleaning up after meals? Most women now work outside the home, yet few have relinquished their role as 'queen of the kitchen'.

Many have not tried to teach their partners and children how to take responsibility for dinner. Some are too worried about mess. Kitchens are supposed to be showcases and kitchens depicted in modern magazines usually have no sign of any food to muck up the gleaming benches or the pristine cooking equipment.

How to prepare your own food needs to be taught in infants' and primary schools. No subject is more important. At high school, there is a need to reclaim home economics for cooking real food; it has currently been hijacked by 'food technology', with its implication that ready—prepared food is 'normal'.

Nutrition?

Nutrition is a major selling point for food. But who is driving the nutrition bandwagon? Is it people, with their high expectations for super health and a desire to pursue - and pay for - anything that might push back the ageing process? The worship of youth and the need to stay young-looking for acceptance in Western society is almost certainly fuelling the interest in nutrition.

The food industry has responded to the interest in nutrition with the promise of functional foods. Who is driving this push, and why?

Is it the scientists who can deliver the studies to prove that adding lycopene or fenugreek extract or pre- or pro-biotics to your breakfast cereal or yoghurt will confer super health? Is it the industries that want to be able to make health claims on their packaging? Is it the regulatory authorities who rightly demand that health claims be verified?

Only a few years ago, the food industry told us that nutrition wouldn't sell foods and healthy foods were boring. A recent consumer research study commissioned by Murdoch magazines found that almost three quarters of Australians now reject the idea that healthy foods are boring. Why has this turnaround occurred?

Almost everyone claims to have made some dietary changes as a result of health and nutrition concerns. This almost certainly represents good intentions more than actual practice, but it emphasises nutrition's high profile.

If nutrition is a major force driving the food supply, we need to consider foods as much more than the sum of their analysed nutrients. Gussow reminds us to use local foods that have not created environmental problems being transported long distances, to recommend seasonal foods, to choose foods with minimal packaging and consider the environmental impact of producing foods.

Conventional growing methods have contributed to environmental destruction. It is time to support organic growing techniques. I suspect many don't because they swallow the line from mainstream food companies that we couldn't feed the population from organically-grown produce. Possibly not, if you're talking monocultures, but their real concern is that organic growing needs more people and that would create lower profit margins for large companies. The larger and more 'efficient' the company or the farm, the more workers it dismisses.

Some nutritional recommendations lead to wasteful use of the world's finite energy resources. Fake fats and sugars - which use enormous amounts of energy - are the ultimate nutritional obscenity.

Nutritionists said "eat less fat" and the food industry gave us low-fat chocolate cookies (with almost as many calories as other cookies and the implied permission to eat the whole packet at once). Nutritionists recommended more fruit and we got Roll Ups. The advertisements for the Roll Ups had small children expressing disgust at the messiness and squashiness of real fruit.

Some fake fats remove fat-soluble vitamins and valuable carotenoids from the intestine. The makers 'solved' this by agreeing with US regulatory demands that they fortify products with some of these vitamins. It was a good selling point. The loss of carotenoids was dismissed, however, as being an unproven argument, even though literally dozens of epidemiological studies have shown those with high carotenoid intake from fruits and vegetables have lower incidence of many common cancers.

The same 'unproven' argument about carotenoids, however, is being used to develop functional foods enriched with these same carotenoids on the basis that they are related to reduced risk of cancer. In every study that has shown reduced risk, the carotenoids have come from fruits and vegetables. Five major studies that have given supplementary beta carotene have not only failed to show benefit, but have shown adverse effects. The nutrition arguments are invoked only when they suit the food industry.

On its own, nutrition probably isn't the biggest driver of the food supply. If it were, we would expect to see big increases in consumption of fruits and vegetables.

Consumers may buy the new super functional foods - if they are advertised and carry health claims. The food industry has therefore enlisted the aid of scientists to push for health claims to be allowed on packaged foods. The scientists may be pawns in this, although some see opportunities for potentially valuable research work to prove the efficacy of functional foods. Basically, however, the concept of functional foods is a marketing ploy. If the industry were truly interested in health and nutrition, they would stop making so many junk foods. In fact, they are only interested in health and nutrition when it opens up markets for new products, preferably those that are value 'padded'.

We already know what constitutes a good diet. What we don't know is how to get people to eat it. Many scientists are trying to develop functional food products and supplements *because* consumers are not eating enough fruits and vegetables. But the more packaged foods there are - including the functional ones with their message of *eat, drink and be healed* - the harder it will be to get people to eat basic foods such as fruits and vegetables. If we devoted a fraction of the money spent on researching, producing and marketing functional foods to promoting fruits and vegetables, it would almost certainly benefit society. Some functional foods may well be useful, but many will further usurp the place that should be going to fresh produce. Do we really want children to eat snack bars with added lycopene instead of tomatoes?

Why do we spend so much energy finding alternatives to fruits and vegetables when the chances of producing something as good are so remote? Nutrition is only a relief driver of the food supply, and then only when it coincides with profits for food companies.

Agribusiness?

The fortification of foods has also moved beyond the packaged food area with agribusiness and scientists working together to develop genetically modified (GM) foods.

If they succeed in dominating the food supply, agribusinesses will become major drivers of the food supply.

Proponents of gene technology claim that genetically modified organisms (GMOs) are designed to be environmentally desirable and will lead to a reduction in harmful pesticide sprays (whose hazards companies play down when they are trying to sell the pesticides). But they reject the possibility of potential hazards, even though gene technology is plagued with uncertainty. So is traditional plant breeding, say the GM promoters. But many people feel more comfortable with breeding programs that stay within species, as nature allows. With GM products, you can make unnatural crosses between species - and you can do it relatively quickly. The speed is necessary because each company wants to sign up farmers before their competitors do – hence the reluctance to accept full environmental impact testing.

Consumers don't have problems with the medical applications of gene technology, because they can see a use and a containment of them. By contrast, few people can see that genetically-modified foods are of benefit to anyone except the companies marketing them.

Arguments that GM foods will help to feed starving people are insulting and absurd. The poorer nations can't afford them. And mortgaging farms, houses and well-being to large agribusiness companies is not an attractive option. This would really put these companies in the driver's seat.

There is already enough food produced in the world; its uneven distribution is the problem. And that is not about to change. Nor is it helped by food companies in wealthy countries using more of the world's energy and water resources.

The GM crops grown extensively in the United States are soy and corn - primarily as food for lot-fed animals. Environmentally, it is crazy to grow crops to feed animals when humans could eat the crops or eat animals that graze on areas where many crops won't grow. The next crop to be widely engineered is sugar beet - hardly an important nutritional component of the diet.

Canola oil is being genetically altered so it contains more saturated fat and will be more useful for confectionery and biscuit manufacturers, who will then be able to label these foods as containing "vegetable oil", even though it is saturated vegetable oil.

Where is the evidence of advantages from genetically-modified foods? Are they cheaper?

We don't know enough to be completely confident about the total safety of GM foods and ingredients, and it is arrogant to assume we do. We should have learnt that sometimes we don't even know what we don't know. For example, we assumed we understood carotenoids, limiting our appreciation to their ability to form vitamin A and ignoring the hundreds of other carotenoids in foods. We are doing the same thing with forms of vitamin E other than alpha tocopherol. We initially ignored DHA in fish, and believed those who said we should eat imported, cold water fish because they had more EPA. We assume antioxidants (of which there are literally thousands) and antioxidant vitamins (of which there are 4 or 5) are interchangeable. Scientists - using traditional breeding techniques took linseeds and bred out the very long chain fatty acids - just as we discovered they were the bits we wanted. We also bred beta glucans out of barley - and then found out how important they are. We should be humbled by our lack of knowledge

of food and human nutrition. We should be equally humbled by our past lack of knowledge of agricultural sustainability.

Who stands to benefit from gene technology? Is it us and our farmers? Let's take a simple example of genetically-modified potatoes. Some types have been produced, not for any benefit to consumers or farmers, but for potato processors who want potatoes that don't go brown when they are pre-cut for chips or crisps. The crisp and chip industries also maintain that GM potatoes will absorb less fat than other potatoes and this will be a benefit for consumers. Overwhelmingly, however, the benefit is for the food company. Turning potatoes into potato crisps means you sell them for about 20 times the price of a straight potato. The farmers, however, do not get any greater return for their potatoes. If you are a chip or crisp eater, you can be sure that anything labelled as having even a slight reduction in fat content will almost certainly cost more. The driver for these changes is the processed food industry and the company that holds the patent for the GM potato. For most products, most of the financial benefits go out of the country to those who hold the patents and then control the food supply. Is this the driver we want?

The final driver

There is no one driver of the food supply. And ultimately, it is up to us all as citizens to determine who should be in control. Regulatory authorities, scientists, food companies, marketers, advertisers, retailers, and departments of health, agriculture and education need to take a wider perspective, placing sustainability at the top of their agenda and giving greater voice to consumers, environmentalists and advocates for community action than they do at present. Our future, or at least that of our children, may depend on it.

We all hold the purse strings. The danger lies in coming generations having so little knowledge of food - the way it is grown, what is sustainable, what is truly nutritious, what real flavour is, how to prepare meals - that they allow themselves to be manipulated by drivers whose major aim is short-term profit from their purchases. There is nothing inherently wrong with profit itself, but unfortunately its pursuit brings out the worst in some people, so that profit is put before the needs of people and before the environmental impact of their actions.

Discussion notes

- Useful messages for the discerning consumer are that fake fats and sugars use enormous amounts of energy and are the ultimate nutritional obscenity, and that people watch television in the time they save by not cooking. The recommendation to eat more real fruits and vegetables is clearly the way to go, but there is the question of how nutritious these are when they are grown on depleted soils
- The idea that food is no longer nutritious is a marketing ploy used by those who want us to take supplements or supplemented processed products. Conventional agriculture, which treats unhealthy soil and plants with chemical “medicines”, is analogous to conventional medicine, which treats unhealthy people with pharmaceutical products. An alternative is to aim for sustainably healthy soils and healthy humans, which can be achieved through organic farming and healthy lifestyles
- There is some evidence that organically grown foods contain slightly higher levels of minerals – especially if they are grown on soil that has had extra organic nutrients added – but there is little evidence of changed vitamin content. On the other hand, locally grown organic food tastes better and will contain more vitamins if eaten fresh and not allowed to wilt

- If we are to wean people off pre-packaged foods it is essential to encourage cooking classes from primary schools onwards, and including boys and men. Cooking and eating can be very enjoyable shared activities and they are too important to be left to those who would sell us high-priced, packaged, highly-processed products. We need food by and for people, not just food for maximum profit
- Food preparation and cooking time has certainly decreased over the past 50 years. We need to look carefully at why we don't have time. Maybe it's because we waste too much time watching television, and some people also sit in traffic jams, which encourage body fat storage and lack of fitness. We need to re-think our whole attitude to the way we use (or waste) time
- Dana Meadows (6H) tells us that (1) 24,000 people (mostly children) die from insufficient food every day, and (2) we grow enough grain to feed 8 billion people. On the other hand, there is no single food to sustain life apart from breast milk for infants. In a survival situation, we may be able to live on grain alone for a while, although some of it would need to be sprouted, and some would need to be fermented to provide certain nutrients such as vitamin C and vitamin B12. Living on grain alone would not be a good idea in the long term, and would be unlikely to promote good health. The minimum food types for promoting sustainable good health would be vegetables, fruits, grains, some source of concentrated protein and other nutrients (choose from legumes, nuts, seafood – salt or freshwater -,meat or milk) . The greater variety in most diets, the more adequate they are likely to be
- In emergency situations, management of relief and development supplies should ensure that local breast feeding practices are not undermined, e.g. by pharmaceutical companies offering free supplies of artificial infant formula foods. In affluent countries, the Human Milk Banking association provides supplies to a number of very ill adults or older children, e.g. with immune problems, severe allergies, digestive disease, etc, and in some cases this is the only food that keeps them alive, either temporarily or over a longer period.
- It is possible to break the nexus of exclusive supermarket outlets by shopping around, particularly amongst small shopkeepers who provide locally grown organic food products. The Slow Food Movement embraces the time it takes to enjoy food – the growing, buying and cooking, as well as eating – this is something that, if one is interested in food, it is hard to resist talking about

Further reading

Biotech - The next generation. Good for whose health?
published by The Food Commission and Gene Watch UK

The Food Commission web site:www.foodcomm.org.uk

Eat Your Genes by Stephen Nottingham, Choice 1998

A Sociology of Food and Nutrition ed John Germov & Lauren Williams, Oxford University Press - particularly chapter 3 Food and the Environment by Terry Leahy

Fast Food Nation by Eric Schlosser, Allen Lane, The Penguin Press, 2000