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Nourish Scotland

What
would
Boyd
Orr
do?



The state of nutrition of the people of this country is surveyed here on a broad scale and from a new angle. Instead of discussing minimum requirements, this survey considers optimum requirements. Optimum requirements are based on the physiological ideal, which we define as “a state of well-being such that no improvement can be effected by a change in the diet.”

John Boyd Orr (1936) *Food, Health and Income*

About Nourish

Nourish Scotland is an NGO campaigning on food justice issues in Scotland.

We believe tasty and nutritious food should be accessible to everyone, be sustainable, and be produced, processed, sold and served in a way that values and respects workers.

We campaign for solutions that work across the board: we take a systems approach toward food and health, poverty, fairness, workers' rights, economy, environment, climate change, land use, and waste.



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Find us at
Summerhall
1 Summerhall Place
Edinburgh EH9 1PL

T. 0131 226 1497
E. info@nourishscotland.org.uk
www.nourishscotland.org



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What would Boyd Orr do?

Pete Ritchie

Pete is the Director of Nourish Scotland, as well as an organic farmer in the Scottish borders.

This edition of Nourish's magazine honours John Boyd Orr, founder of the Rowett Institute, first Director General of the UN's Food and Agriculture Organisation and Nobel laureate.

We invited food and nutrition experts and legislators, in Scotland and further afield, to reflect on how Boyd Orr's work should inform our contemporary debate. If one thing stands out from their diverse and thoughtful pieces, it is the need for a step change in the way we do food and farming, and the necessity for leadership from governments. Food as usual won't do.

There's an opportunity and a will in Scotland to make a step change, and there is leadership from government:

"We are going to consult on a Good Food Nation Bill in 2017. ... Work in shaping the course of the Bill will involve colleagues and stakeholders in a number of areas across Government, including health, food standards, waste, social justice, agriculture, education and procurement." Fergus Ewing, Cabinet Secretary for Rural Economy and Connectivity, 29th June 2016

When John Boyd Orr wrote *Food, Health and Income* in 1936, there were still 110,000 horses working on Scottish farms. World population was a third of today's 7 billion, and intensive livestock production was in its infancy.

On average in the UK, we spent 30% of our income on food, rather than the 11% we spend now. Boyd Orr's primary concern was with undernourishment, while in today's Scotland (and globally) obesity is also making people's lives shorter and less healthy than they should be.

So how relevant are his analysis and his solutions today as Scotland shapes its Good Food Nation Bill? His analysis showed that the poorest 10% of the population were living on a diet 'deficient in every constituent', and that food, health and income were locked together in a sharp gradient of inequality.

Today, as then, people are not dying of hunger in Scotland, and there is no shortage of food: but in 2016, around 10% of the UK population is moderately or severely food insecure – trading down, filling up on cheap calories, feeling hungry, skipping meals, or using food banks. The poorest 10% of households spent 23 per cent more on food in 2014 than in 2007 and purchased 8.5 per cent less.

Writing ten years before the start of the NHS, Boyd Orr is crystal clear: when it comes to health, we should make nutrition do the heavy lifting: *"the standard is not just to provide a diet which will keep people alive, but a diet which will keep people in health; and the standard of health adopted is a state of well-being such that no improvement could be effected by a change in the diet."*

Boyd Orr's solutions are set out more fully in his 1943 report 'Food and the People', written when his wartime food rations scheme was levelling up access to food and making a significant contribution to public health.

He argues for a food policy based on nutritional needs, which would involve a levelling of incomes as well as keeping food prices low and making special government provision for groups such as children and mothers.

He is clear that, in today's language, food poverty is a part of structural inequality, and he links his food policy with full employment and a national minimum standard wage. But he also wants to sever the link between income and nutrition, even arguing that equal access to food would make it harder for employers to break strikes, and encourage greater political participation.

He calls for a global expansion of agriculture, but within a global governance framework working to align national and international food policies: while at home government

would be closely involved in managing the market. He writes *"A world food policy... could not work without State and Inter-State guidance and control."*

This core idea was rejected by the US and the UK, leading to Boyd Orr's resignation from the FAO: but 70 years on, he would have welcomed the Paris climate change agreement and the Sustainable Development Goals as steps to strengthening global governance.

Closer to home, the post-war settlement in Britain established the National Health Service despite strong opposition, while in food policy the 1947 Agriculture Act focused on increasing production through guaranteed prices for farmers. The policy split between food and health which Boyd Orr worked so hard to heal has continued ever since. As Wendell Berry comments *"People are fed by the food industry, which pays no attention to health, and are treated by the health industry, which pays no attention to food."*

We have been so worn down over the last forty years by the mantra of market good, government bad, that Boyd Orr's schemes for governing the food system seem at first sight not just naïve but undesirable. After all, food production per head has more than kept pace with population growth, global food distribution is a logistical triumph, and look at the failure of collective farms.

And yet... despite there being enough food for everyone, there are still 800 million people undernourished in the world, alongside an epidemic of obesity. And as Carlo Petrini describes, our unplanned agricultural expansionism has caused massive deforestation, soil degradation and loss of wildlife, accelerating climate change while externalising costs. Closer to home, dairy farmers go out of business while food banks proliferate.

Boyd Orr's central argument was that malnutrition was an injustice caused by the organisation of society, not a necessary feature of the world.

His proposition was simple: the food system, locally and globally, should be designed and managed to nourish everyone: food for people, not food as just another commodity.

So, as Scotland debates its Good Food Nation Bill, we should take three lessons from John Boyd Orr:

- 1 Ensuring good food for all is a responsibility of government – this means intervening in the market. 'Education' is not enough.
- 2 Farming matters: in planning what to do after the current round of the Common Agricultural Policy, we have to align what we are asking and supporting our farmers to do with our wider policy goals for food and health.
- 3 This is a global issue: Scotland's approach to food – in terms of trade, research, climate change, biodiversity and waste as well as nutrition – should, like Boyd Orr, make a positive contribution.

We have a unique opportunity with the Good Food Nation Bill to draw together different threads of food policy into a robust, people-centred framework which becomes a core part of how we do things in Scotland. Food is integral to our approach to environment, land reform, animal welfare, and climate change; community empowerment, human rights and social justice; circular economy, rural resilience and sustainable development. Boyd Orr saw the big picture – we need to see it too.

John Boyd Orr, a Scottish visionary on science, politics, food and peace

Dr. Sue Bird and Prof. Peter Morgan

Peter is head of the Rowett Institute of Nutrition and Health at the University of Aberdeen. Sue is Rowett's Communications Manager.

John Boyd Orr (1880-1971) was a true polymath and arguably one of the great humanitarians of the last century. His lifelong campaign and passion is very clearly articulated in his acceptance speech for his Nobel Prize for Peace, which was awarded in 1949:

There can be no peace in the world so long as a large proportion of the population lack the necessities of life and believe that a change of the political and economic system will make them available. World peace must be based on world plenty. The road to peace lies only through the cooperation of governments in developing the vast potential wealth of the earth for the benefit of all.

How did he arrive at this view? His very early experiences as a teacher in some of Scotland's most deprived communities probably contributed to his burgeoning interest in the link between poverty and poor diet. However, it was the landmark dietary surveys that he led while Director

of Aberdeen's Rowett Research Institute that really cemented his concerns about the impact of poverty on poor diet and health.

In the early 1920s Orr's team demonstrated the nutritional benefit of milk in the diet of young schoolchildren, with the effect being most marked in children from the poorest families. These were key studies as they ultimately led to the introduction of free school milk in Scotland, with England following at a later date. The research was also important as it saved the dairy industry from economic collapse.

Further dietary surveys of families across the UK led to the seminal book *Food, Health and Income* by Boyd Orr, published in 1936, which revealed that one third of the population were too poor to afford an adequate diet. These findings were of great consternation to the UK Government of the day.

Another major survey was undertaken from 1937-39 with funding from The Carnegie Trust. 1300 households across the UK and all socio-economic groups were studied. For each household, an assessment of what food was eaten and its nutritive value was made, together with a clinical assessment of the health of the children. The results were used during the second world war to produce, for the first time, a food plan based on the nutritional needs of the population, with priority in rationing for mothers and children.

On his retirement from the Rowett Institute, Boyd Orr became the first Director General of the Food and Agriculture Organisation of the United Nations in 1946. He immediately tried to put in place the necessary funding and structure to devise a World Food Plan. Unfortunately, there was not the combined political will to make this happen and so ended one of the most ambitious attempts to get the world to cooperate in the fair production and supply of the world's food to alleviate the malnutrition and hunger prevalent in so many countries of the world.

Boyd Orr received the Nobel Prize for Peace in 1949 in recognition of his efforts to secure world peace through the equitable distribution of the world's food resources and the alleviation of hunger.

Farming should feed people for health

Prof. Tim Lang

Tim is Professor of Food Policy at the Centre for Food Policy of City University of London.

Everyone is agreed that, while it is economically desirable to make agriculture prosperous, it is equally desirable to ensure that the food supply of the nation is sufficient for health, and is available at a price within the reach of the poorest. John Boyd Orr (1936) *Food, Health and Income*

Political language is replete with homilies about the poor. They are said to always be with us. Some deserve help, some not. They are architects of their own fates. They sponge. And so on. I keep a photo of Boyd Orr on my desk to remind me that this fatalism is corrosive nonsense. Boyd Orr and his generation confronted these ideological mantra by injecting some rationality and decency into modern food policy. We could do with him again. The levels of income-related inequalities in the UK – not just Scotland – are shocking and unacceptable. They fissure the food system. Food banks are a growth sector. Diet again is the major cause of premature death and drains the NHS. How did this happen? What would Boyd Orr say and do today?

John Boyd Orr was arguably the greatest among many great food scientists who pushed and shoved in the 1920-50s, determined to assert reason over ignorance, to show that it was possible to produce enough nutritious food to feed ordinary

people decently, and to argue for the creation of a new infrastructure for health. Farming needed to be overhauled, helped and reconnected with feeding people. The food policy model they promoted was what we call today 'productionist': if science and technology are applied to the land, it'll produce more, better and cheaper food which, if better distributed, will lower prices and ensure people are fed sufficient to unleash their potential. Policy must ensure good soil, good nutrients, good distribution for good health.

This was an effective political message, emerging in Boyd Orr's elegant powerful 1936 *Food, Health and Income* book, a treasured copy of which I keep at home. This was written to be understood. If you haven't read it, do. (And note the pre-computer graphs hand-drawn by his collaborator and son-in-law David Lubbock!) But don't stop there. For me, his most inspirational work is the 1943 *Food and the People*. Written in a bad time in World War 2, it sets out a political challenge. Enough is known about what's wrong with the food system to put it right. It's a message of hope. The food system can be fixed. The point of evidence is to inform change. And people not just scientists must push for this.

That's what I respect about Boyd Orr. In everyday English: don't moan, get on with it, talk to the people. He did. Training as a teacher in Glasgow he witnessed shocking food poverty and ill-health, and resolved to become a doctor to do something; he retrained. Realising this required change in agriculture, he took the shell of an idea for a nutrition and farm centre, and went out and got funding and built the Rowett Institute in Aberdeen into the UK's foremost research centre linking nutrition and farming.

It's hard for us today, used to global news and the internet, to appreciate how radical *Food, Health and Income* was. It attacked the heart of Empire, showing that millions of British were badly fed. It made headline news around the world.

Today there may not be the stunting and disease profiles that he exposed then but



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we have diseases of poverty that he would have been perplexed about but equally angry about. Today, the poor still die early. Indeed, the gap between rich and poor is massive again – within cities, between towns and country, between regions.

And although we can point to these similarities between early 20th and 21st centuries – again we have the revival of demagogues and the retreat from internationalism - there are important structural differences. It is inconceivable today that one single book could have the power *Food, Health and Income* did.

We live in over-data world. Politics has internationalised. We live in a multi-level world. The power of food corporations dwarfs what states can do. Diseases of over- and mal-consumption exceed those of under-consumption, yet both scar the food system.

And above all, food's impact and reliance on the environment is now the pressing need. For Boyd Orr and that generation, the environment was to be manipulated, drained, mineralised, 'improved'. Today, the 'efficient' food system is the greatest driver of ecosystem damage. Growing food is destroying biodiversity when each needs the other.

Yet I retain deep respect and affection for Boyd Orr. He spoke out, advised, pushed, led, criticised. We need more scientists like that. We need Advisory Councils like the one he was on in World War 2. We need to be prepared to break up food power blocs. We need better wages in the food system. But his core message that farming should feed people for health clamours for our support. What would Scotland's food system look like if designed for ecological public health? I know that's what Boyd Orr would be asking today.

A people-driven food system

Anna Taylor

Anna is Executive Director of the Food Foundation, a London-based independent think-tank.

This new knowledge of nutrition, which shows that there can be an enormous improvement in the health and physique of the nation, coming at the same time as the greatly increased powers of producing food, has created an entirely new situation which demands economic statesmanship. John Boyd Orr (1936) *Food, Health and Income*

In 2016 I attended the International Symposium on Sustainable Food Systems for Healthy Diets and Improved nutrition convened by the FAO. Eight FAO Director Generals after Boyd Orr, Graziano da Silva is now seized with the challenge of how we nourish, rather than feed the 9 billion people who will be living on the planet by the middle of the century.

This new challenge demands economic statesmanship and the Scottish Government, with its proposal for a Good Food Nation Bill is promising to provide it.

The issues which Boyd Orr wrote about in his book *Food, Health and Income*, are in some ways unrecognisable today, but in other respects little has changed. Since the 1930s the world has swung from facing a crisis of undernutrition to a situation where now 1 in 3 people are malnourished but the majority of these people are affected by overweight and obesity, and where the greatest numbers of people with malnutrition are not living in low income countries.

Malnutrition manifests itself in many different ways: as poor child growth and development, as individuals who are skin and bone or prone to infection; as those who are carrying too much weight or whose blood contains too much sugar, salt, fat, or cholesterol; or those who are deficient in important vitamins or minerals.

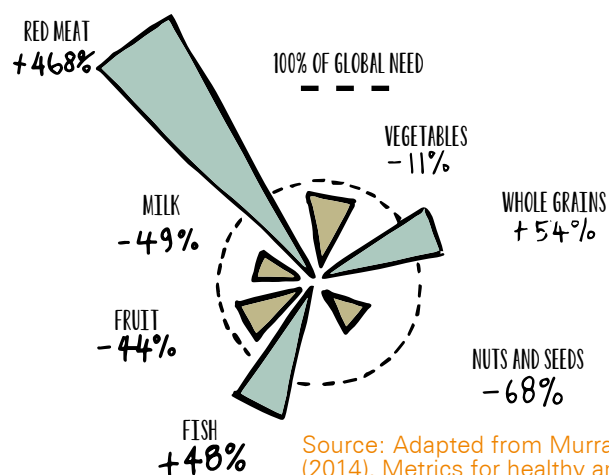
Global Nutrition Report 2016

While Boyd Orr was celebrating the technological innovation around food production, our supply chains have in this period become so complex that it is common place for people to accept the view that what we grow has nothing to do with what we eat. People working on trade refute the argument that intervening in agriculture influences diets and contest whether trade instruments should be designed with public health in mind. They argue that diets are shaped much further up the supply chain closer to the consumer, than by the raw materials entering the supply chain. They are right in many ways, but miss a part of the picture.

The link between food production and health is real, and therein lies a considerable challenge we face. Currently we have a major mismatch between the amount of different foods which we need to protect our health and the amount we actually produce (see Figure 1).

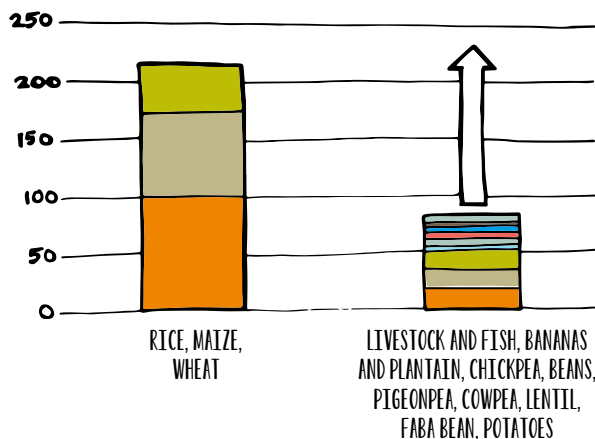
Figure 1 Global production of food items relative to human need

We don't grow enough vegetables, fruits, nuts and seeds for universal optimal human health



We have major mismatch between the foods we are investing research and development funds in and the foods we need to be eating more of (see Figure 2).

Figure 2 CGIAR research funding allocated to specific crops in 2012 (in US\$ million)



Source: Global Panel on Agriculture and Food systems (2016)

And so, the questions in my mind as Scotland considers its Good Food Nation Bill are: How can we connect what we grow with what we eat? How can we strengthen the link between our appetite for nutritious and delicious food and the food our system serves up? How can our citizens create a stronger pull or demand for good food from our food system, rather than simply have their food choices shaped by their food environment?

In short, how do we shift the incentives in the supply chain to make our food system more demand and people-driven than supply driven, and what role does “economic statesmanship” have in this challenge?



EH49 Food Cooperative

A few ideas:

- 1 We can work at investing in new business models which rely on shorter and less complex supply chains. Ultra-processed foods have gone through so many steps of adding commercial value, and often removing nutritional value that we need to look at business models and supply chains which rely on new models of value addition.
- 2 We can work much harder at making our supply chains more transparent so there is a line of sight for consumers from the food they take off the supermarket shelf to the raw produce from which it comes. This way we can drive provenance and quality as the premium. Setting standards for food businesses on transparency would be a step in the right direction.
- 3 We need dietary guidelines which have teeth. Rather than an Eatwell Guide that provides advice for conscientious consumers, we need a Guide that is directly linked to all decisions about food policy, whether it is agricultural subsidies or public procurement of food. I urge the Scottish Government to enshrine this in its Bill.
- 4 We need to invest in ways to connect people with growing food. Not because this will feed the Scottish population, but because if our children grow up knowing how food grows, being familiar with different vegetables they are more likely to be better informed consumers and develop taste preferences which are more diverse.

In its decision to develop a Good Food Nation Bill, Scotland once again has the opportunity to be at the forefront of global efforts to reform and re-wire our food system. I hope the opportunity is seized, as the appetite for strong leadership on food is insatiable!

From under-nourishment to obesity

Prof. Naveed Sattar

Naveed is Professor of Metabolic Medicine at the University of Glasgow. He is an internationally recognised expert in the prevention, prediction and treatment of diabetes, cardiovascular disease, and obesity.

Boyd Orr devoted his life to tackling undernourishment in Scotland and abroad. In 1936 he shocked the world by demonstrating that a third of the population in Britain were too poor to eat enough. Today, just under one in three adults is obese and just over another three in ten is overweight; these levels are significantly higher in the poorest groups in society.

How did we get into a situation where Scotland has become one of the most obese nations in the planet? And more importantly, can we reverse these trends and tackle the major drivers of obesity?

The overwhelming evidence points to excess in calorie intakes as the dominant driver for obesity, much more so than lower activity levels. Scotland is eating (and drinking) its

In 1835 the consumption of sugar was 20 lbs. per head. Now it is five times as great. (...) This five-fold increase in sugar consumption is the most striking change in the nation's diet during the last 100 years. It has, of course, been rendered possible by the great fall in price. A hundred years ago sugar cost about 6d. a lb. (39). It now costs less than half. John Boyd Orr (1936) *Food, Health and Income*

way to obesity-related ill health in a manner never seen before.

In an article I wrote with colleagues in 2007 we remarked that *"what is provided is what is eaten, so what is provided has to change"*. I now even more firmly believe this to be true, and as do many experts in the field. If we are to make genuine inroads into tackling obesity, we have to remove many of the cheap, calorie dense foods from our food environment, and replace them with healthier, low cost alternatives so that folk are nudged or directed towards healthier eating habits.

This will be a very hard battle that will require academics and civil society to form strong alliances. I see the main stumbling blocks as threefold.

First, strong resistance rather than reluctant cooperation will come from the food industry. This industry is primarily interested in making



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profits for its shareholders and pays only lip service to health needs, doing as little as needed to satisfy relevant food legislation.

Second, in the current economic climate, the Scottish Government is unlikely to jeopardise the significant revenue brought in by the food and drinks industry. We will need to make the business case for long-term changes towards a healthier food environment while advocating for a package of cost-effective measures to be implemented urgently.

Finally, unlike the smoking ban there is simply no easy fix that would change all bad foods into good ones in the short or long term; we can all see this complexity in the huge range of foods available. It is also clear that tasty foods and treats with dense calories have always existed although never in such abundance and covering all meal types. In short, instead of a single fix, we need to chip away at the problem from several angles so that the whole difference will be greater than the sum of the small changes.

Education can help but will not suffice. Once taste buds become programmed for adverse foods, considerable effort is needed to retrain them towards healthier foods. Rather, I would like to see the effect of putting total calorie content in big fonts on all foods so that everyone quickly gets to know how many calories they are putting in their mouths. Preliminary data from several studies testing this measure shows improvements in eating habits and reduction in calorie content, so a nationwide experiment would be timely. This would incentivise manufacturers to make healthier, lower-calories alternatives, which if scaled up over time could have significant benefits. In addition, regulation is needed to reduce the calorie density of many foods, alongside fiscal measures moving beyond a simple tax on sugary drinks. Any tax revenues should be used to subsidise the prices of high quality vegetables and fruit.

Only substantial changes to our food environment will make a real difference to obesity statistics. The government needs to stop paying lip service to this issue, and to act now with the help of experts and civil society. Failure is not an option.

Supporting children and young people's health

Dr. Catherine Calderwood

Catherine is the Chief Medical Officer for Scotland and an expert in maternal health.

In 1927, a series of tests was carried out in Scotland in which about 1,500 children in the ordinary elementary schools in the seven largest towns were given additional milk at school for a period of seven months. Periodic measurements of the children showed that the rate of growth in those getting the additional milk was about 20 per cent, greater than in those not getting additional milk. The increased rate of growth was accompanied by a noticeable improvement in health and vigour. John Boyd Orr (1936) *Food, Health and Income*

As Chief Medical Officer for Scotland I provide a clinical voice shaping the direction of Scotland's future health policies and its approach to healthcare and public health. As an undergraduate in Glasgow at the beginning of the 20th Century, Boyd Orr explored the many poverty-stricken slums and tenements and saw first-hand the effects of malnutrition. This led to him introducing the first 'school milk' programme to improve nutrition of children from low-income families. Now of course we have free school meals in Scotland.

Sadly, children today, 90 years on, still have poor diet related health. Eating well while developing can mean a fit, healthy young adult, while eating poorly can lead to serious medical conditions later in life. Habits formed

in childhood last a lifetime which is why it is vital to make healthy eating a normal, easy option. Despite research over the past three decades showing the health benefits of breastfeeding for women and children, breastfeeding is no longer a norm in many communities and the UK has some of the lowest rates in the world.

There are however a number of initiatives in Scotland that I am glad are making an impact:

- **Breastfeeding** – supporting through legal and policy directives to social attitudes and values, changes to women’s work and employment conditions, and health-care services to enable women to give their child the best start.
- **Eat Better, Feel Better** - encouraging parents of young families to cook at home from scratch. It presents home cooking as simple, affordable and healthier than the alternative of ready meals.
- **Healthy Living Award and Healthy Living Programme** - rebalancing what is available in a retail or catering setting ensuring healthier options are available and given prominence.
- **Hungry for Success**, in education enabling young people to make better food and drink choices. It set the scene for what is now an internationally admired model of school food provision and food education. The Nutritional Requirements for food and drink in schools (Scotland) Regulations 2008 set high nutritional standards that all food and drink served in Scottish schools must meet.
- **Curriculum for Excellence** – teaching children and young people about the importance of making balanced food choices, **Better Eating, Better Learning (BEBL)**, published in 2014, aims to move this agenda on in the coming years.

- **Quality physical education** - providing fundamental competences and skills for lifelong participation in sport and physical activity. With our Sports Strategy for Children and Young People, 98% of primary and secondary schools across Scotland continue to provide at least two hours or two periods of PE, which demonstrates remarkable progress since 2004/05 when only 10% of schools did.
- **Childsmile** – delivering free, daily, supervised tooth-brushing and dietary and oral hygiene advice in nursery schools, primary schools, and dental practices. Prevention, rather than treatment, has resulted in significant improvements in children’s oral health. The Dental Inspection Programme reported in 2016 the proportion of primary 1 children with ‘no obvious decay experience’ at 69%, compared with 54% in 2006. In 2015, 75% of children in primary 7 had ‘no obvious decay experience’ – up from 59% in 2007. The Fairer Scotland Action Plan commits to extending coverage of the ‘Childsmile’ national oral health improvement programme to reach even more comparatively deprived communities from 1 April 2017.

We owe a great debt for Boyd Orr’s work to connect nutrition with health and I hope in Scotland we can build on his pioneering spirit and make an impact in our efforts to support children and young people’s health outcomes.



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Scientific approaches to increase vegetable consumption

Dr. Wendy Russell

Wendy is a researcher at the Rowett Institute. Through her research on dietary metabolites, she seeks to improve the understanding of the balance between diet and human health.

Boyd Orr identified the importance of fruit and vegetables as a protective component of our diet. Despite the vast majority of our society also recognising that we should eat at least five portions of fruit and vegetables per day, many people still fail to achieve this target. Although there are some excellent initiatives to address consumer barriers to increasing vegetable consumption, it is essential that we also find new ways, throughout food chains, of getting the beneficial components of vegetables back into our diet.

We know that vegetables are a rich source of important macronutrients such as protein and fibre and are also responsible for delivering essential micronutrient vitamins and minerals. These are compounds that are essential for us to live and grow. In addition to these nutrients, vegetables also contain a wide range of bioactive phytochemicals. Increasing scientific evidence suggests that phytochemicals could protect us from several life-style associated disorders including cardiovascular disease, type 2 diabetes mellitus and cancer. Many of our commonly consumed vegetables have been adapted by breeding programmes to be more productive in terms of growth, value and taste. There is a concern that such crops may contain a lower content of these phytochemicals.

Current research is allowing us to understand how domestic crops compare with their wild relatives. This will provide important information to breeders and growers that could yield crops with increased levels of phytochemicals delivering benefits when consumed in lower amounts, as well as the ability to explore commercialisation of underutilised plant species. Additionally, certain phytochemicals are responsible for the organoleptic properties in plants and are also part of the plant's natural resistance to pests. Increasing the phytochemical content of vegetables could bring the additional benefits of tastier vegetables with a lower requirement for insecticides.

'Health by Stealth' approaches utilising novel reformulation strategies to incorporate more vegetable-based ingredients into ready prepared meals are also of value. Not only can less healthy components of our diet be directly replaced by vegetables and vegetable extracts, but the products could be enhanced by processing methods. This includes exciting new technologies such as microencapsulation, which can be used to protect bioactive compounds and increase their bioavailability in the body. It also facilitates targeted delivery of specific nutrients to enhance the potential health benefits.

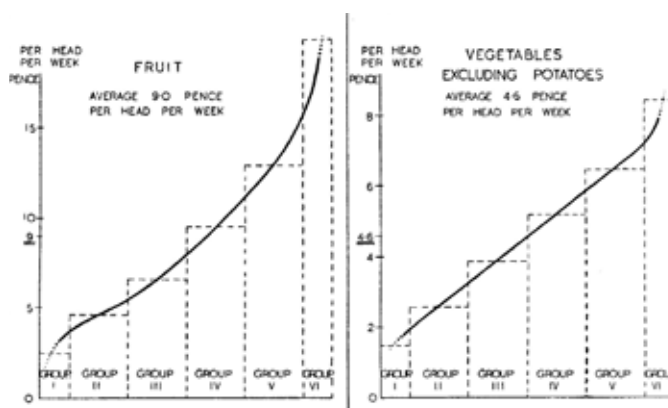
As certain vegetables are also rich in protein, another important aspect of food formulation is the capability to partially replace meat and other non-sustainable ingredients such as imported soya with UK-grown vegetable protein. The world-wide population approximately doubled from 2.7 billion in 1950 to six billion in 2000. Within this time, meat intake increased five-fold. If consumption of meat continues to increase at this rate, by 2050, when the population will be around 9.1 billion, production is unlikely to be sustainable. It is essential that alternatives to meat-based protein are identified. The good news is that several high-protein vegetable crops grow well in the UK. These include currently produced crops such as peas, faba beans and lupins, but also novel high-protein alternatives such as quinoa are also starting to be grown on these islands. These products can be used directly or prepared in the form of protein isolates

and can provide both sustainable and healthy ingredients across many sectors of the food and drink industry.

Research plays a significant role in understanding and raising awareness of the potential benefits of increasing vegetable consumption in our diet. It can inform breeders to consider traits for health and the potential of underutilised and wild species. It identifies new opportunities for our growers to produce sustainable and healthy

vegetables and in particular, the potential of high-protein crops. It supports industry in the selection of sustainable and healthy ingredients and in the development of novel technologies, as well as prospects for food reformulation. It can also contribute towards persuading consumers to consider their food choices and governments to support these initiatives. Addressing these aspects across the food supply chain has the potential to improve not just our health, but also our economy and our environment.

Graph 1 Expenditure on fruits and vegetables, by income groups

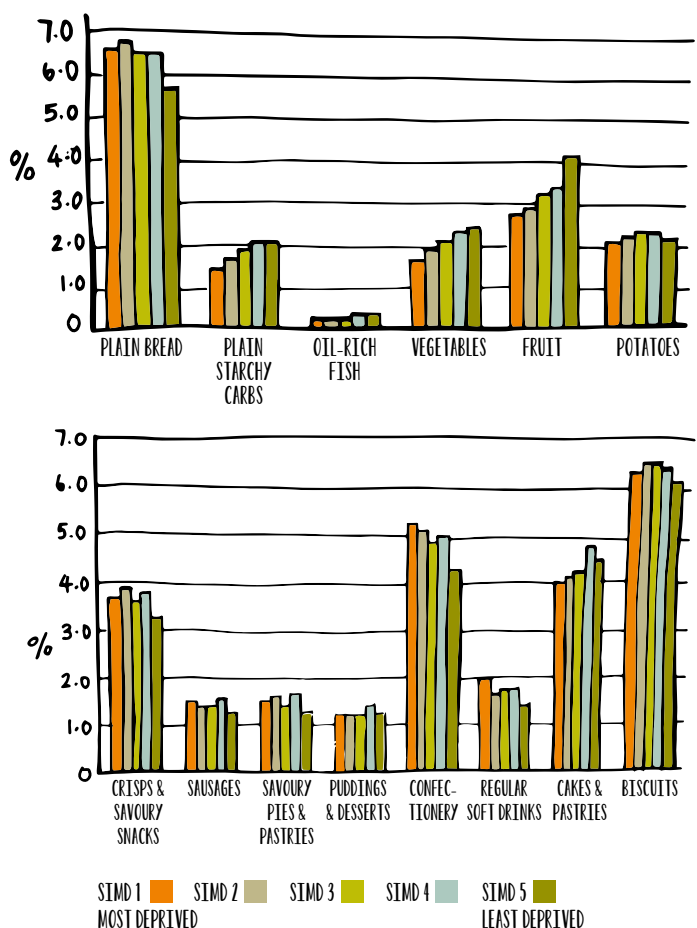


Source: John Boyd Orr (1936) *Food, Health and Income*

In Graph 1, John Boyd Orr divided the population into 6 income groups, Group I being the poorest and Group VI the richest, and estimated their consumption of fruit and veg based on their expenditure on these commodities.

Graphs 2 and 3 show the quantity of calories bought from different food categories, including fruit and veg, for home consumption for home consumption, in areas with different levels of deprivation. The Social Index of Multiple Deprivation identifies the level of multiple deprivation in small areas across Scotland. It is used here as an indicator for different socio-economic groups, where SIMD 1 are the most deprived groups and SIMD 5 the best-off. The percentage is a proportion of total calories in Scottish groceries baskets (so for example, the richest groups get just over 4% of their calories from fruits, while the poorest get less than 3%). These graphs show that the reality Boyd Orr exposed in 1936 - that consumption of food items that are essential for health increases with income - is still dramatically unchanged.

Graphs 2 and 3 Proportion of calories from healthy and unhealthy food categories bought for home consumption, by area deprivation



Source: Food Standards Scotland (2016) *Food and Drinks Purchased into The Home in Scotland*

Ignorance or poverty?

Dr. Flora Douglas

Flora is a researcher at the Rowett Institute. She currently leads community-based studies on the factors that predispose, enable or reinforce nutritionally poor food choices, with the aim to inform public policy and programmes.

There is now a good deal of discussion on the extent to which malnutrition due to faulty diet is prevalent, on the relative importance of ignorance and of poverty as the cause of faulty diets, and on the means which should be taken to ensure that every member of the community may have a diet adequate for perfect health. John Boyd Orr

(1936) *Food, Health and Income*

Boyd Orr may well have been reflecting on debates that were taking place between the British Medical Association (BMA) and the government of the day in the early 1930s when writing this passage in his seminal work, *Food, Health and Income*. During this period of history, according to Hunt (1985) in her article *And the poor? They shall eat carrots...* the BMA had been taking issue with the government over the causes of under-nourishment in the population. The latter blamed ignorance, but the former considered economic factors the main cause arguing that *"when sufficient money was available to the average working-class, she purchased by rule of thumb methods, food stuffs that were broadly approximate to dietaries considered by physiologists to be satisfactory ... But when the amount of money for food is not enough experience has taught her that she must avoid complaints of hunger and of 'emptiness' from her family, so she buys a higher proportion of cheap carbohydrates"*.

The notion that ignorance was the primary cause of poor diet amongst the poorest in our society was not new in the '30s. Finding

that a significant proportion of the population were malnourished when called up to fight in the Boer war during the Victorian era, the government committee convened to investigate the causes reinforced the establishment's views of the poor, claiming in their findings and recommendations that *"a large proportion of British housewives are tainted with incurable laziness and distaste for the obligations of domestic life"* and that there was *"widespread indifference as to the proper distribution of meals and gross ignorance of the right selection of food required of them"*.

Prompted by these attitudes, a group of Fabian women set out to record the daily living habits of 42 working class families living in the east end of London, to record exactly how they survived on low incomes. They meticulously recorded every farthing spent on household necessities, recording at the same time the vagaries of life as they occurred such as sickness and death; the universal causes of fluctuating incomes. They also deliberately avoided recording the very poorest family's experiences, choosing those with manual working men, the so-called ordinary working class who were earning a pound a week, the average wage at the time. What they found in those women caregivers and cooks was extraordinary skill and ingenuity in household management practices. They concluded from their research that *"Experience shows how fatally easy it is for people to label all poverty as a result of drink, extravagance or laziness ...but ignorance and indifference of their mothers is untrue"*.

Sadly, these competing ideas have not changed much to this day. The recent Fabian Commission on Food and Poverty, in its report *Recipe for Inequality*, drew attention to the tendency of politicians (and I would add the mainstream media and some in the professional class) to blame ignorance rather than income as the primary cause of food poverty. The Commission, like the Fabian women a century earlier, investigated the issue empirically: they undertook a series of national hearings throughout the UK with people experiencing food poverty, representatives of agencies concerned with supporting people in poverty and food poverty, and academics and analysts. They

concluded that there was little evidence that the poor were any less knowledgeable or capable of cooking than those on higher incomes.

Furthermore, analyses of food market trends and purchasing behaviour over the recent recession points to low-income households behaving as the “true economists” in the ways they manage their budgets. There is a lot of evidence, both academic and market research studies, that indicates that low income households are seeking out low cost (so called best value) products, and adopting buying strategies to gain maximum number of calories for the least amount of money. For example, purchasing multiple items of the same product when it’s on offer, and shopping at the end of the day for to buy reduced price items.

Research we conducted at the Rowett with people using a food bank in Aberdeen recently also showed considerable skill and knowledge amongst those we interviewed. It was clear from talking to people there that careful management of their donated food parcels was the norm, and that making the food parcel stretch out as long as possible, with a concern to preserve fuel, and make a balanced diet possible over a few days, rather than every day, was common practice

amongst this group of people. Their problem is not lack of knowledge or skill, but lack of money!

Poor households are spending a higher proportion of their household incomes on food and fuel than their wealthier counterparts – and it’s been this way since Boyd Orr’s time. In another recent study we conducted of food poverty in Scotland, we found that poor households were spending 18-23% as a proportion of their income on food, compared to 10-11% of household income spent on food by the rest of us. At the same time, they were spending far less in actual pounds and pence on food too.

John Boyd Orr had intimate knowledge of these material and economic circumstances, and of the capabilities of the poor of both Kilmarnock and Glasgow, where he spent his formative years. I therefore like to think that, if he were here today, while he would agree that education and being knowledgeable about cooking plays a role in being able to eat well, he would also call on our Government to recognise that having sufficient household income must be at the heart of any legislation aiming to improve the nation’s diet - in order that every one of us can be full participants in a Good Food Nation.



Mihaela Bodlovic, with permission from Edible Edinburgh

Food is a right

Carlo Petrini

Carlo is the founder of the international Slow Food Movement. He is a prominent food activist campaigning for cultural food diversity and the right to pleasure in food. In the spring of 2016 he was named FAO Special Ambassador Zero Hunger for Europe.

Each nation should undertake the primary responsibility for seeing that their own people have the food needed for health and life. Governments should co-operate with each other to achieve this end for the people of all nations. John Boyd Orr (1943) Speech at the United Nations Hotsprings Conference founding the FAO

This statement by Sir John Boyd Orr could seem obvious, something we would like to take for granted; but that's not the case, and even if seventy years have passed by, these words are still very topical.

The food crisis in war-torn Europe placed nourishment at the centre of discussions. Hunger was wide spread, especially in big cities, where the more fortunate sought refuge in the countryside, where the peasant communities could make space around the table and share some soup, offering shelter not only from bombs, but also from starvation.

In 1943, we were well into the second world war, nations were facing different problems from those our generation is dealing with. Yet, these words continue to convey a largely neglected hope.

The world has changed very much during these seventy years and it's still changing. The political and economic contexts, technological development, and mankind's impact on this planet have changed very much. Our world has become much more globalised, connected and virtual. We've been living in wild consumerism, and the communication era has arrived, it's a very noisy and confused epoch. Nowadays there's food, it's abundant but badly provided. The whole world produces more calories than would be needed to feed the entire world population, yet

almost 800 million people suffer from starvation, and a lot of food is wasted. I find this fact the strongest, most disconcerting and depressing sign of the disease that affects a dying system.

Unfortunately, nowadays food supply chains are largely and firmly in the hands of few multinationals that hold an economic power able to make governments sway. The lobby of agricultural industries has a huge influence on politics and holds striking data. Let's think, for example, about the ten largest seeds companies, which control 75.3% of the seeds market; let's think about the eleven largest pesticide companies, which control 97.8% of the market (of which 52.5% is owned from the first three ones). Simultaneously, we attest to a relentless loss of genetic and cultural biodiversity, impoverishment and suffering of small farmers, trapped in or cut out from the dominant system.

Faced by such a concerning scenario, one question arises: why do governments struggle to undertake a serious and complex discussion about the importance of food topics?

In fact, when we talk about food we can't forget that we don't only talk about nourishment or health, but also about culture, anthropology, landscapes beauty, pollution, development. We talk about life and love.

For these reasons, it's important that governments decide to put on the agenda the problems linked to producing, processing, and consuming food: because the impact that our production chains have on our planet concerns all of us and future generations.

In these stormy years, the whole humankind is facing common problems that will continue for decades - I am sure - to occupy our political agenda: large-scale migrations and climate change. We can't pretend anymore to ignore that these topics are intertwined with food production. Nowadays there are many members of civil society who have become aware of these complex systems and who try to stress the need for political bodies to take a position that goes beyond rhetoric, to produce concrete, necessary and urgent changes.

Once again, politics is one step behind the citizens: our job is to keep the attention high and prompt our representatives to understand that good, clean and fair food for everyone is a right.

Views from Holyrood

We asked a Member of the Scottish Parliament (MSP) from each of the five parties represented in Holyrood to share with us their thoughts on how the Good Food Nation Bill can join up food, farming, poverty, and health.

Richard Lochhead, Scottish National Party

Richard has been the MSP for Moray since 2006. Between 2011 and 2016 he was also the Cabinet Secretary for Rural Affairs and the Environment in the Scottish Government.

The future of food has never been higher on the political agenda in Scotland.

The fact that there was recently a debate in the Scottish Parliament dedicated to the importance of tackling food waste illustrates the point, given that this issue would have barely been mentioned in Parliament a few years ago.

Food activists the length and breadth of Scotland are playing a crucial role in highlighting the importance of food in tackling poverty, improving our health record, and protecting our environment. The food industry remains central to Scotland's economic success but now factors relating to how and where our food is produced and consumed is receiving a lot more attention. Awareness of the different dimensions of food has never been greater.

During my years as Food Minister in the Scottish Government, I set out to create a national food policy for the first time with a view to understanding better how food production and consumption affects Scotland's future. In the past, Government was stuck in silos with different Ministers with different responsibilities often ploughing their own furrows. Now our approach to food

is beginning to be much more joined up to ensure that food policy takes into account all the different ways in which production and consumption impacts on society and the world around us.

The Scottish Government is set to bring forward a Good Food Nation Bill in this Parliament providing the opportunity for a trailblazing and, hopefully, radical approach to food in Scotland. If we get it right, then the rest of the world will be able to learn from Scotland's approach to food and we can create a lasting legacy for which future generations will be thankful.

Scotland is a lucky country blessed with a rich natural environment with talented, skilled and innovative people to make the most of our natural assets including producing nutritious, sustainable food from our land and sea. The food revolution is underway and much has been achieved.

However, there is some way to go to ensure that Scotland's larder supports local and national economies, makes us healthier, is sustainable and available to all. With passionate leaders, communities, civic society and government all working together, I am confident that we will get there.

Finlay Carson, Scottish Conservatives

Finlay made his entry to the Scottish Parliament in May 2016 as an MSP for Galloway and West Dumfries. He is the Scottish Conservative spokesperson for fishing and farming and sits on the Environment, Climate Change and Land Reform Committee.

"The process of depletion of the Scottish hills has been going on with increasing rapidity since the time when the produce of the animals, instead of being consumed on the land and being returned to the soil, began to be driven off to be consumed in the industrial districts" John Boyd Orr (1929) Minerals in Pastures

It is very difficult to put together any written piece or any speech without looking at the huge implications of the recent vote to leave Europe. Brexit is a real game changer for agriculture and the environment. I may not have voted to leave; however, we must realise the potential positives that lie ahead of the industry post 2020.

For longer than most people can remember agriculture has been bound by controls set at a European level. Control which have to be agreed by many counties with vastly differing climates, ecology, and farming practices. Much of European legislation is unavoidably a negotiated compromise. Now policy makers in the UK have the opportunity to create new uncompromised plans for the future that can bring benefits to the industry and to the environment.

The Scottish Parliament passed world-leading climate change legislation in 2009. There is absolutely no reason why we cannot bring forward equally ambitious and innovative agriculture and the environment policies which are cross sector and sustainable.

However, emerging technologies and practices are producing increasing evidence that one does not have to choose between preserving the soil and using it for agriculture. In fact, profitable agricultural practices exist that not only preserve the soil, but also regenerate it. These practices revitalize the farm's entire ecosystem, resulting in multiple benefits, including:

- **The removal of greenhouse gas emissions from the atmosphere to be stored in the ground in the form of carbon.**
- **Greater yield stability due to a reduced reliance on fertilisers (crops will eventually become more resistant to virus and weather changes because healthy soils cope better with droughts and floods).**
- **Decreased water usage.**
- **Production of healthier food with a higher-quality nutrient profile than if chemical fertilisers or pesticides are used.**

- **Giving farmers better control over their cost base (as the inputs needed for a farm are generated by the farm itself).**

The idea at the core of these 'regenerative agriculture' technologies and practices is that everything in the farm should be reinvented to mimic nature; in the words of agri-pioneer Leontino Balbo: *"If we can restore soil to natural ecosystems conditions, nature will do the rest"*. This shift goes far beyond resource efficiency, which focuses on using water and other inputs economically. Pioneer farmers, landowners, and scientists are starting to think "outside the box" on many levels, such as the choice of plants and animals; harvesting methods and equipment; management of water, waste, energy, and land. A shift in all these factors could mean that nature is able to revive the entire ecosystem. These are all successful techniques that build soils and their fertility, clean water, and do it all while increasing farm yields and profit margins.

Experts agree Scotland can be a success story when it comes to 'regenerative agriculture'. Mr. Sait, who has been on a 30-year mission to change thinking on soil and nutrition, who spoke in November 2016 at Piperdam said Scotland was 'uniquely placed to benefit' from a move towards what he described as 'regenerative' agriculture.

He added 'despite a steady decline in organic matter over recent decades, Scottish soils still contain more humus than in many regions of the world'. Scotland clearly has untapped potential when it comes to soil quality and possibility.

Fertility of the soil is still good in Scotland, but strategic, sustainable initiatives could boost the fortunes for food producers. We can produce food with forgotten flavours, extended shelf-life, less chemicals and greater nutrient density. Europe is experiencing unprecedented demand for excellent, fresh and cleaner food, thus Scotland is perfectly positioned to make the most of that. Through 'regenerative agriculture' farmers can reclaim their profitability and satisfaction while helping to counter climate change in the process.

Claudia Beamish, Scottish Labour

Claudia has been an MSP for the South of Scotland since 2011. She is Scottish Labour's spokesperson for climate change environment and land reform, and sits on that same Committee.

We need a fresh approach to food in Scotland. Food is an intrinsic part of our culture, society and wellbeing. A transformed food and food waste system, built from the principles of social and environmental justice, would bring innumerable benefits. Together we can bring about a healthier and more equal society, and a strong economy.

John Boyd Orr was visionary, arguing cogently for the need to reconcile the interests of agriculture and public health.

The agriculture sector and related land use is the third largest greenhouse gas emitting sector and responsible for a 22.8% sector share of Scotland's total emissions. Today I am convinced that John Boyd Orr would also have something to say about how food policy must be in harmony with the imperative to tackle climate change.

The Research Institute of Organic Agriculture states, *"The main mitigation potential [of agriculture] can be realized by employing sustainable agricultural practices, such as those commonly found within organic farming systems"*. The Scottish Government should be challenged to look at how best to further support the organic sector. Further, all farmers should manage their soils and wider businesses for a better climate. Those who don't yet must be supported and expected to do so, not least because they are in receipt of public money.

The law adopted by the French Parliament on the Future of Agriculture, Food and Forestry is an interesting example of political leadership. The text provides a more ecological focus on the agricultural sector with agroecology as a principal driver of future policy. Assessment of this will be of value for Scotland.

The Scottish Government's draft Climate Change Action Plan will be an opportunity for submissions on the intimate connections between food policy and climate early in the New Year.

In Scotland and across the UK, food poverty is our shame. John Boyd Orr would be horrified if he was reborn in our generation, to find the need for food banks on the increase. This is only a small snapshot of food insecurity, and the problem reaches further than ever.

When confronted with the stark reality of food poverty, the "crime" of food waste becomes all the more shocking. This is also an imperative in tackling our GHG emissions. Much of this must be addressed at a strategic government level. However, there is also a place for community and co-operative solutions, both urban and rural.

There are many other issues which make up the complex way forward for our food and farming future. Some of these challenges can be addressed through The Good Food Nation Bill, while others can be tackled in a range of ways, often but not always, with the catalyst of government support.

I warmly congratulate Nourish for their robust contribution to the development of our thoughts about the future of food in and for Scotland and welcome "Plenty" by the Scottish Food Coalition. I hope this short article has made a contribution to the discussion of the way forward.

Alison Johnstone, Scottish Greens

Alison has been a Green MSP for Lothian since 2011. She is her party's spokesperson for health and sport; social security; and children and young people. She sits on the Parliament's Health and Sports, and Social Security committees.

We need to forge a different relationship with our food in Scotland.

I find it gravely concerning that so many children in Scotland will begin primary school at risk of being overweight. It's a stark reminder of the inequality that exists in our society, because it's no coincidence that there is a link between a family's wealth and their children's health.

When we talk about human rights, we usually refer to freedom of speech, or gender and racial equality. In a report by the Scottish Food Coalition, the organisation called for the Scottish Government to enshrine a right to food in Scots law. I support this call because I believe we need to start thinking about food in a completely new way.

We're a wealthy nation, one of the wealthiest in the world. We're also a food producing nation, famed for our exports of whisky and salmon. Yet food banks are in demand more than ever. We all should have a right to the nutrition we need to live healthy, full lives, yet so many of us are either not getting enough food, or are getting too much food that's bad for us. It doesn't have to be this way with calorie dense, nutritionally poor food, pushed by promotion.

Greens will continue to push for a levy on retailers and caterers who choose to promote too much poor-quality food and we'll also keep supporting local authorities to provide free fruit, practical food education and work towards free school meals for all primary pupils.

The way food is marketed must also change to reduce obesity. The food system focuses on selling sugar and fat because the profits are greater. You will no doubt be shocked to read that 40% of food in the UK is bought on promotion, the highest rate of any European nation. That's why I want to see a levy on retailers and caterers who have multiple outlets. A levy would aim to discourage the promotion of unhealthy foods. It would hit companies whose sales failed to meet nutritional targets and encourage the supermarket chains, who are the source of most of our food, to become much healthier places to shop.

For many of us, our relationship with food begins from the point it touches our mouths.

Too few of us know, or question, where our food comes from or how it was made. I was shocked to discover that some councils in Scotland were sourcing chicken for school meals from Thailand. Of the nine councils we obtained information from, seven said that they sourced chicken products from Thailand, five from the Netherlands and Edinburgh schools are also serving chicken from Poland and Brazil. All of them said their UK sourced chicken was indoor reared, rather than free range.

Supermarkets play a part in the problem. Earlier this year, one of the big retailers unveiled plans to sell "wonky veg" they had previously been dumping. That's not to say that the supermarkets have gone cuddly – they are desperate to revive their image, following the horsemeat scandal and public anger at the way they have squeezed suppliers such as dairy farmers.

It's time we reconnected with food and it's time for government and local authorities to enable a good food culture. After all, we are what we eat.

Mike Rumbles, Scottish Liberal-Democrats

Mike sat in Holyrood between 1999 and 2011, and was elected again in May 2016 to represent North East Scotland. He currently sits on the Rural Economy and Connectivity Committee and is Scottish LibDem spokesperson for Rural Affairs.

"The first objective of state policy must be ensuring that sufficient [quantity] of the right kind of food is available, within the purchasing power of the whole community".

Though written in 1937, John Boyd Orr's view that the people require access, not just to enough food to combat hunger, but to sufficiently nutritious food to better their health is now regarded as a truism. The Good Food Nation Bill presents a golden opportunity for the Scottish Government to take meaningful steps to improve public access to good quality nutritious food.

The Scottish Government's vision is a commendable one. A country where we take pride and pleasure from our food; where the people of Scotland take benefit from it, value it and seek out quality where they can. In public consultation this was met with a broadly positive response and further suggested that tackling food poverty and increasing access to healthy and affordable food should be the priority. Contemporary public opinion echoes Boyd Orr's arguments of decades ago.

In its Programme for Government on the matter of a Good Food Nation Bill however, the Scottish Government praises its own 2008 strategy for improving the food and drink sectors economic performance and outlines a focus on more of the same. Deepening collaboration in the sector, introducing an industry strategy and plans to improve the supply chain are positive steps for the food and drink industry, however this does not address access to affordable, quality and nutritious food that the vision suggests and public opinion supports. The Scottish Government must go further and take a cross-departmental approach. This has the potential to benefit not only the agricultural industry, but Scottish public health.

The Scottish Liberal Democrats pledged in the Scottish election to pursue a wide range of actions to tackle various public health issues, including poor diet. Rather than simply seeking economic benefit, the Scottish Government should be pursuing the wider public good and taking the opportunity to positively promote good food.

This could include further incentive for public authorities to source local produce. Public procurement should have an important part to play in helping people eat fresh and seasonal produce, which would present various benefits beyond promoting good food and leading by example.

Boyd Orr's work on the nutritive value of milk led to the provision of free milk in schools to children in Scotland and subsequently England. The introduction of free school meals in England by the Liberal Democrats showed demonstrable benefit in that there was a measurable increase in the attainment of those children receiving them. The provision of free school meals in Scotland should have an academic benefit as well as acting as a vehicle to improve public health and nutrition. Free meals should be used to introduce Scotland's young people to high quality nutritious food.

It may well be time to really start thinking outside of the box, to foster a new public attitude to food. Steps to increase the space allocated to allotments and efforts to encourage people to take one on would foster a more personal and direct relationship with our food production. Not only would people be growing their own food, keeping themselves active and participating in more sociable environments, there would be further public health benefits.

What we have been presented with in the Scottish Government's Programme for Government is simply a proposal for developing the Scottish food and drinks industry. The public wants more than this. What we need is a national food policy, not simply aimed at growing the sector but linked across health, social and agricultural policy in creative ways for the greater public benefit.



Mihaela Bodlovic

Nourish Scotland highlights in 2016 and 2017

In 2016, Nourish Scotland gave evidence to a Committee of the United Nations on the right to food, in a written report and in person in Geneva. The Committee subsequently published strong recommendations to the UK and Scottish governments - for the very first time - on the right to food. We also contributed to the Scottish Government's Short-Life Working Group on Food Poverty. In November the Scottish Government announced that it was considering enshrining the right to food into Scots Law.

We co-authored 'Plenty: food, farming and health in a new Scotland' as members of the Scottish Food Coalition, calling for a just transition to a better food system. This contributed to securing commitments to a Good Food Nation Bill in the election manifestos of three parties and in the Scottish Government's Programme for Government.

Through our mentorship programme, we supported entrepreneurs to make a living out of local food. We also trained 50+ people to campaign on food justice issues through our Food Leadership Programme in 2015, and Turning the Tables Programme in 2016.

In 2017, we hope to see an inclusive, Scotland-wide consultation on the Good Food Nation Bill, ahead of the Government's White Paper expected in the autumn. We would like at least 5000 people across the country to participate in kitchen table conversations about food and fairness to feed their views and needs into the consultation.

This new year will also be busy on the climate change and health fronts, with a Climate Action Plan, a new Climate Bill, and a Diets and Obesity Strategy in the pipeline. The Local Authorities elections and a Planning Bill will also be key opportunities to make Scottish cities healthier, more equal, and more sustainable.

'Peas please' is a new project to make it easier for all of us to eat more veg, working with the vegetable producers, manufacturers, retailers and caterers as well as academia and civil society. We'll be working with the Food Foundation, WWF and others to get support across the supply chain for significant initiatives to make veg a larger part of our everyday diet.

We will continue to listen to people with lived experience of food injustice, and to empower more people to be food citizens, through our Menu for Change project in partnership with Oxfam, our Dignity work funded by the Fair Food Transformation Fund, and food justice workshops and advocacy training as part of our Right to Food work with the support of the Joseph Rowntree Charitable Trust.

Clementine Sandison



Matilda Scharsach





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Join Nourish

Nourish is passionate about creating a fair and sustainable food system. This means a lot of hard work: building coalitions, campaigning from the local to the European level for better laws and policies, reaching out and empowering people to be active citizens and to be heard, and supporting young entrepreneurs to build local food economies.

We can't do this on our own. We need your support to stay strategic and make a real difference in 2017!

Please join us as a Nourish member to work with us in making Scotland a world leader in fair and sustainable food: www.nourishscotland.org/join-us/