GROWING TOGETHER

PATHWAYS TO A FAIR FOOD SYSTEM IN IRELAND

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Friends of the Earth

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"My grandfather used to say that once in your life you need a doctor, a lawyer, a policeman and a preacher but every day, three times a day, you need a farmer."

Brenda Schoepp, 2012

1.0 FOOD SOVEREIGNTY: AN INTRODUCTION

Our food system is majorly out of balance with environmental and social justice. There are sustainable and unsustainable ways to produce food, just as there are huge inequalities and power imbalances in the food system, for example between large agri-businesses and small independent food producers. This booklet will explore some of the environmental and social inequities of our food system, and it will outline the potential that the concept of food sovereignty holds to make our food system more ecologically and socially just.

According to the Nyéleni declaration of 2007, food sovereignty can be defined as:

> the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems. It puts the aspirations and needs of those who produce, distribute and consume food at the heart of food systems and policies rather than the demands of markets and corporations.[1]

Food sovereignty not only puts ecological sustainability at the heart of the food system, but also ensures that social and cultural equity is at its core. In considering food sovereignty we need to examine the impact of the food system on the environment, and on the social fabric of communities where it is produced and consumed.

A key question in this regard is whether or not the food system promotes local and traditional food cultures, and how the needs of minorities in a society have their distinct food needs met. For example, in an Irish context, the system of Direct Provision for asylum seekers is often criticised for not providing the facilities for residents to cook their own food, while the limited state support within the system makes it economically difficult for asylum seekers to exercise freedom regarding their dietary choices.[2] Also of critical importance are the actors that have a say in the design of policies and laws which shape our food system.

This booklet will outline the major environmental and social issues as regards our food system and will go on to suggest practical ways in which our food system can become more democratic, environmentally sustainable and economically viable for small farmers and food producers.

2.0 TODAY'S FOOD SYSTEM: AN UNSUSTAINABLE CORPORATE FOOD REGIME

When we consider the kind of food system we have, we need to look at the prevailing laws and policy which shape the food system, where power lies and the kind of actors that hold the most power. This type of analysis is called food regime analysis. A 'food regime is a rule-governed structure of food production and consumption on a world scale'.[3]

Over the past number of decades, large agri-food corporations have become much more powerful actors in the production and distribution of food, and have put much effort into lobbying governments on the direction and implementation of food policy. As a result, the current prevailing food system has developed into a 'corporate food regime.'[4]

In this regime, food is largely treated as a commodity, squeezing out other non-economic dimensions such as food sharing, seed swapping and food cultural traditions. Indeed, many of the regulations governing our food system are designed for major corporate players and intensive food production systems, making it more difficult for small scale producers, or informal community food sharing practices to exist within highly bureaucratic food safety regulations.[5]

Food systems scholar and activist, José Luis Vivero Pol has described this food regime as 'iniquitous, unsustainable and inefficient'.[6]

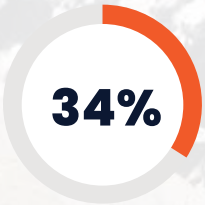
2.1 THE ENVIRONMENTAL TOLL OF THE CORPORATE FOOD REGIME

Globally, we stand on the edge of an ecological precipice. The UN is urgently calling for global leaders to take decisive action in the next ten years to reduce our greenhouse gas emissions in order to avoid dangerous climate change later this century.[7] A major report in 2019 warned that biodiversity is in serious decline and that, unless radical action is taken quickly, we risk losing up to 1 million species this century.[8] According to the UN food and Agriculture Organisation, the foundation of the food system is under severe threat due to the intensification of agriculture.[9]

As well as a serious decline in pollinators, which are vital for the food system, intensive agriculture also leads to a major increase in water-course pollution and soil depletion, with soil being depleted up to 40 times faster than it is formed.[10] Agriculture is both a major contributor to the problem, but also has the potential to be at the heart of a move to a much more environmentally and socially just economic system, as will be discussed later in this booklet.

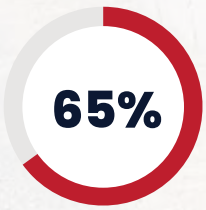
Global human made GHG emissions

Food systems contribute up to 29% of global human made GHG emissions, most of this comes from agricultural production.



Ireland

Greenhouse gas emissions from agriculture make up a much larger share of emissions in Ireland than in other EU countries. In 2018 agriculture was responsible for 34% of all our GHG emissions.[11]



Global emissions from Beef and Dairy

Globally, livestock is responsible for about 14.5% of human-induced GHG emission, with cattle (beef and dairy) responsible for about 65% of these emissions – pig and poultry each contribute less than 10% .[12]

Per person, we in Ireland generate 13.2 tonnes of atmospheric carbon – 50% more than the EU average of 8.8 – the UK produces 8.3 tonnes per person.[13]

Agricultural land use, such as clearing forest to make way for farms and the production of fodder for the livestock industry, is driving these emissions. 44% of recent human-driven methane, a potent greenhouse gas, comes from agriculture.[14]

This is likely to have adverse knock-on effects on agriculture; climate change will likely contribute to food insecurity in the future, causing reduced production and increased prices. Increases in drought and the need for crop water will contribute to water scarcity, and land suitable for food production is likely to be reduced. Extreme weather events, already on the increase, will lead to reduced yields and increased prices.[15]

For example, heat waves in Russia, Ukraine and Kazakhstan in the summer of 2010 led to losses in the wheat yield, contributing to a steep increase in the price of staple foods, forcing local farmers to the verge of bankruptcy, citizens into poverty and threatening the food security of the region, one of the world's largest wheat exporters.[16]

The dry summer that followed the cold, wet winter of 2017/2018 resulted in increased food prices in Britain and Ireland. Wholesale vegetable prices increased up to 80%, and wheat for bread by 20%, while the farm gate price of butter increased 24% by the late summer of 2018. A fodder shortage in Ireland required imports from abroad, increasing demands on land use elsewhere, including Brazil, where the Amazon rainforest is being systematically destroyed to make more space for agricultural production.[17]

Lobby groups such as the Irish Farmers' Association push for the intensification of production for export, prioritising this over environmental measures such as the limiting of slurry and nitrate fertiliser use, which is a threat to biodiversity and a major source of carbon emissions.[18] Smaller farmers who wish to practice more sustainable methods have much less of a say on the future of farming and where their food is sold. The corporate food regime is putting pressure on farmers, and in turn the farmers must put pressure on the environment in order to survive in the industry.

The Irish farming industry has grown by over 20% the last ten years, powered by the increased size of the national herd, the removal of dairy quotas and an economic focus on increasing output for a global market.[19] Farmers are encouraged to maximise production, whatever the environmental cost, in order to produce a low-cost product for the supermarket shelves. In a time of climate change Irish farmers are at the forefront of climate impacts (droughts in 2018 caused a 22% decrease in farm incomes[20]), yet the farming practices that increase productivity for the international markets, such as land drainage and tree removal, are increasing the effect of these major events.


photo credit: Save Leitrim

2.2 CONCENTRATION OF POWER IN THE FOOD SYSTEM

"Increasingly Irish land is not used to maximise the wellbeing of Irish citizens and our shared natural environment, but to meet the demands of food corporations and processors."

–Food Sovereignty Ireland

The industrial food system concentrates power in the hands of major multiples and food processors, leaving small and family farms at the whim of the global markets and price fluctuations. In the context of Irish food policy, research shows that the views of large scale food producers and agri-food businesses dominate, with minimal attention being paid to environmental or public health concerns in what is an 'industry-led' policy development process which privileges the view of food as a commodity, over other legitimate public good concerns.[21] This means that the policy development process is skewed towards the interests of major business and the profit narrative.

Across Europe, between 2003 and 2013, 25% of farms went out of business.[22] Not only does this mean that fewer people are involved in food production, it also means that a once traditional way of life in rural areas becomes less viable. In Ireland, our farmers are struggling, with the beef price protests of 2019 and 2020 highlighting the plight of beef farmers, whose average income is roughly a quarter of dairy farmers.[23]

This huge inequality in incomes, is of major concern to farmers, and is not sustainable in the long run if we are to have a diversified agricultural system.

2.3 VULNERABLE SUPPLY CHAINS

Ireland's main agricultural strategy is to ramp up dairy and beef exports around the globe, with the narrative that increased output is important to 'feed 9 billion people by 2050'. Despite this, our domestic production base is becoming less diverse, while we import the majority of our calorie intake.[24] This is not sustainable, particularly as our food system relies on long production lines, global trade systems, volatile markets and large inputs of fossil fuels.[25] We are also vulnerable and exposed to shocks to the food supply system, which might happen due to extreme weather events because of climate change, or economic crises. As the climate changes, water shortages, or sudden floods, for example have the potential to reduce yields of major staples. Already, supermarket shelves have seen temporary reductions in certain vegetables due to extreme weather in parts of the world, while Irish farmers have suffered a number of fodder crises due to flooding, drought and extreme snowstorms over the last few years.[26]

2.4 UNEQUAL ACCESS TO FOOD

While there has never been a greater amount or diversity of food available on supermarket shelves, not everyone has equal access to food. When food is largely treated as a commodity, to be traded on open markets, and profited upon by companies, a lack of financial means to secure a proper diet often means that people either go hungry, or are dependent on food banks and donations of food. For example, a focus on the overall amount of food produced to meet global food security needs often ignores questions of community and household food security, by failing to take into account other factors which impact on food security, such as economic policy, the adequacy of welfare measures and the ability to access markets and supermarkets.[27]

According to a 2019 UN report on global hunger, over 2 billion people globally are exposed to moderate or severe levels of food insecurity.[28] In Ireland, at least 10% of households are in food poverty, which is the inability to have an adequate and nutritious diet due to issues of affordability and accessibility.[29] This is despite Ireland being one of the wealthiest nations on the planet, and also being described as the most food secure country in the world by the Economist in 2017.[30] This highlights the vital importance of holistic considerations of food policy and food security issues which not only consider the overall amount of food produced or on sale, but the ability of people to access and provide for themselves a sufficient, healthy and culturally appropriate diet.

3.0 A CHALLENGING FARMING ENVIRONMENT IN IRELAND

Brexit uncertainties, Covid-19 and climate change all factor into an unstable export market which affects the price and quantity of food produced here.[31] Supported by the high subsidies of the Basic Payment Scheme under CAP, large-scale landowners can weather these economic shocks, but smaller farming enterprises will struggle to survive.[32]

The agricultural system which has been developed by agri-business and past governments has created a dangerous and precarious environment for small and medium-scale farmers, rural communities and the natural world that surrounds them. The following are just some of the causes of our collapsing economic, social and natural environment:

- **The EU's current subsidy model, supported by successive Irish governments, is based on land area that is productive. This is most suited to livestock and dairy – our largest emitting sectors.[33]**
- **34% of Irish farmers are described by Teagasc as "economically vulnerable" – in the North and West this figure is as high as 41% and rising.[34]**
- **Beef prices have stagnated and declined, undercut by free trade agreements, cheaper EU imports and market shocks.[35]**
- **Milk production increased by 54% from 2005-2018.[36] However, the Covid-19 crisis has revealed the fragility of export markets, with the price of milk set to fall by 20% as a consequence.[37]**
- **Many farmers have to work part-time off farm[38], while many of the "vulnerable" are over 55 years-old and supplement their income with the state pension. The younger generation will not have this safety net when farms are passed on to them, so the decline in farming numbers is likely to continue.[39]**
- **Ireland's political drive for profit in all sectors and every community has necessitated in farming the intensive use of pesticides and nitrate fertilisers as well as intensified land clearance and drainage.[40]**
- **Major climate events affecting farm incomes are increasing, biodiversity loss is accelerating, and nutrient pollution from farms is a major contributor to environmental collapse of Irish waterways.[41]**

4.0 THE COMMON AGRICULTURAL POLICY (CAP) AND LAND ACCESS

The Common Agricultural Policy is the central EU wide regulatory framework for agriculture in Europe. It sets out how farmers can be financially supported in a challenging economic environment, and it also provides avenues to fund environmental protection initiatives on farmland and in the wider countryside. CAP was originally designed to support food producers, improve food security and enhance rural communities across Europe. Every year, the EU distributes €58 billion through the policy.[42] The fund is divided into two pillars:

Pillar I funds go to direct payments, which are the primary means of support to farmers under CAP. In the budget period 2014–2020, direct payments accounted for 75% of the overall CAP budget.[43]

Pillar II receives the remainder and supports rural development policy as well as more targeted agri-environmental projects on farmland, to protect natural habitats and high nature farmland. As the overall CAP budget shrinks over time, Pillar II receives more cuts despite helping communities rather than individuals.[44]

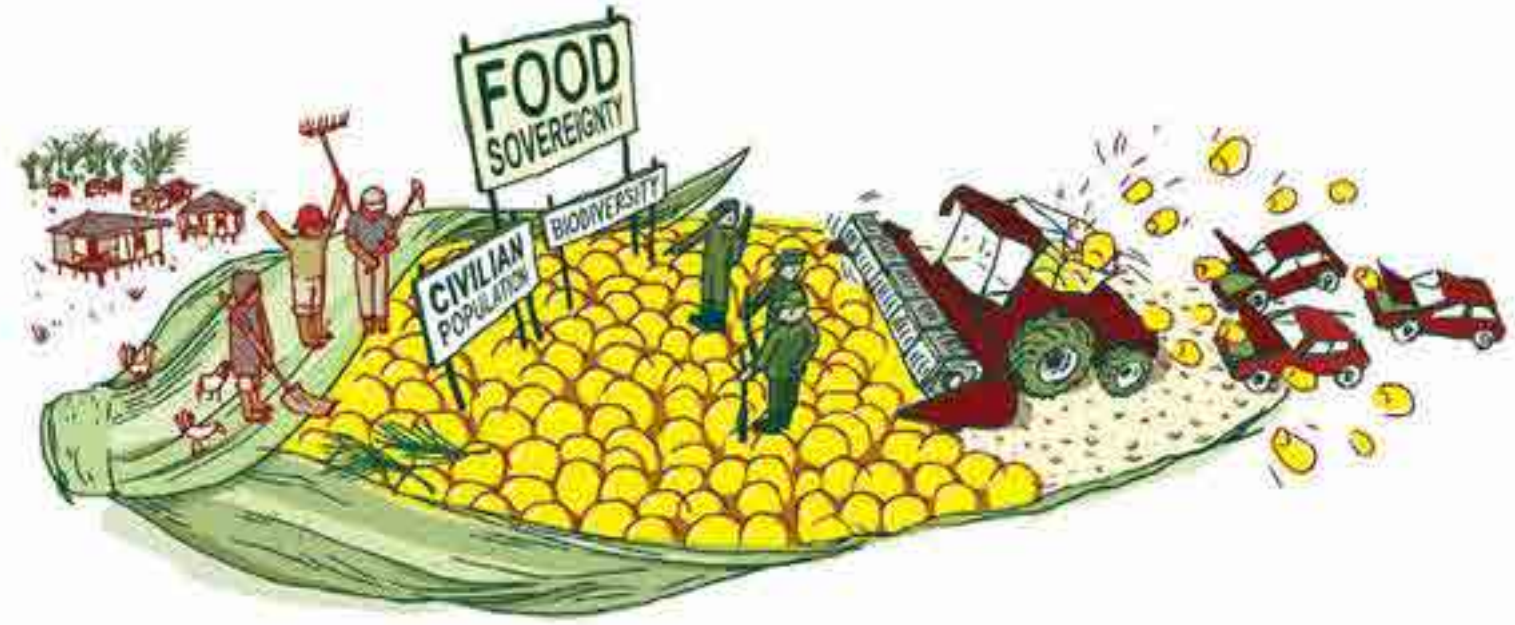
- The focus of CAP has shifted towards the promotion of sustainable farming and protection of the environment, though few funds are directed towards these goals (30% of Pillar II, which is set to be reduced by 26%).[45]

- While all farmers are encouraged to maximise production, those who manage large land areas are awarded much larger subsidies than farmers with smaller holdings. While the receipt of payments are dependent on complying with environmental and animal welfare standards, and adhering to basic good environmental practices, studies of the European Court of Auditors show that the environmental measures under the CAP have had a negligible impact in greening agriculture.[46]

- Larger subsidies for more land encourage larger enterprises to increase their land usage, contributing to increased inequality – in the EU, 3.1% of farming businesses own over 50% of the agricultural land.[47]

There are indications that some of the wealthiest farmers seek to take advantage of this system by buying marginal land with poor production value. They may never set foot on this land but use it as a means of protecting their subsidies into the future. They are entitled to hand the land over to young relatives who can then draw more funds through Young Farmers' Scheme subsidies. The only use these industrial scale farmers may have for property like this may be plantations of sitka spruce monocultures, destroying the environment for the local community.[48]

Central to the concept of Food Sovereignty is the idea that anyone who wants to take part in the sustainable production of food for their communities and fellow citizens has that right.[49] Negotiations for CAP reform for the 2020s are underway – increasing the minimum value and capping the maximum value paid out in direct payments are central to reducing inequality within the industry and a step towards rewarding sustainable practices.



"We recognise that Food Sovereignty is about more than just local food – it is about rights – our rights to access land, resources, seeds and knowledge."

–Food Sovereignty Ireland Proclamation

5.0 COVID-19 – A WAKE UP CALL FOR OUR FOOD SYSTEM

The COVID-19 crisis has shone the spotlight on many of the frailties of our global corporate food system that have already been outlined in this booklet. The food system, crucial to the very basic survival needs of humans, has not been spared the economic and social chaos created by this grave health crisis. In the early days of restrictions, supermarkets saw panic-buying, as people feared shelves may empty, though supply chains have remained robust.

People's fears, however, remind us that we cannot take the 'just in time' supply chain for granted. Given the shut-down in various manufacturing sectors, concern was raised over aspects of the supply chain. For example, there was concern over shortages of egg box supplies due to interruptions in manufacturing.[50]

In Ireland an outbreak of avian flu during the pandemic also caused disruption to egg supplies.[51] This reminds us that the global food system operates long supply chains, made up of many stages from farm to fork, with food and food products often racking up long 'food miles' before they reach our plates.

In Ireland, small food producers faced difficulties in getting their supply to market with the closure of restaurants, cafés and farmers markets at the outset of the lockdown.

Nevertheless, the crisis sparked ingenuity amongst many growers and food activists, with new food box delivery and online ordering systems established, which aim to connect producers and consumers more directly with each other.

For example, 'Neighbourfood' online grocery order, based in Cork has seen expansion,[52] while there are discussions ongoing around the formation of an Irish Chapter of the open source platform, 'The Open Food Network'.[53] Both platforms enable the sale of produce online, offering a much higher margin to the producer than would be the norm via major retail multiples.

Many organic growers with existing box and delivery schemes reported a big increase in demand during the lockdown. Furthermore, sales of vegetable seeds and flour skyrocketed, indicating that many people took to growing and baking their own during the pandemic.[54] While this is positive, many people found it difficult to buy seeds, highlighting the importance of seed sovereignty and a move towards seed saving.

The COVID-19 crisis brought the many social and economic injustices of the food system into sharp focus. Every year, major food producers rely on seasonal, and often-migrant, labour.

This back-breaking work of taking in the harvest, which plays an important role in the food chain, usually goes unnoticed by most. This is also often being low paid, with migrant workers particularly vulnerable to exploitation as a result of informal work arrangements.[55] During the lockdown, countries across Europe have been forced to apply exceptions to travel restrictions and border closures to ensure that the thousands of migrant labourers who usually work on farms in their countries could continue to do so during the crisis. To facilitate this, guidance from the EU during the pandemic aimed to ensure that 'critical workers', including those in the food sector could travel to their place of work within the EU.[56]

Another key concern with labour in the food system is that working conditions and pay are often poor, with mental and physical health problems being common amongst those working on food production lines.[57]

The contradiction between the health of food industry workers and the importance of keeping food supply lines open was highlighted by the fact that numerous clusters of COVID-19 occurred in meat processing plants in Ireland.[58]

Finally, on a global level, COVID-19 has further exacerbated existing inequalities and injustices. Unemployment and economic decline are likely to push people into food poverty, while many around the world do not benefit from government wage subsidies or welfare packages and are reliant on charitable donations. At the outset of the pandemic, the Director of the UN World Food Programme warned that COVID-19 may result in a significant increase in the numbers of people going hungry around the world, which could lead to 'famines of biblical pro portions' if action is not taken to mitigate and improve the situation.[59]

COVID-19 is a wake-up call that all is not well in our food system and that the dominant global corporate food system is a driver of inequality for producers and consumers alike. Grassroots action to build and campaign for food sovereignty, and government policies to enable the development of a socially and environmentally just food system are more important than ever. Will we heed the warning, or continue to sleepwalk from crisis to crisis?

5.1 TRANSFORMATION OF OUR FOOD SYSTEM THROUGH FOOD SOVEREIGNTY

It is clear that our food system is not fit for social or environmental purposes. We need new, more holistic narratives and ways of approaching food policy. Food sovereignty is one such critical approach that holds a lot of potential as we make a just transition to a food and farming model that is in line with the planet's limits and which nourishes communities, providing sustainable livelihoods to food producers. Food sovereignty provides a radical basis for re-orienting the food system in a way that empowers communities to produce food sustainably, in line with local customs and traditions. It also points towards a food system that is democratically created, with different voices being given access to policy making fora, rather than privileging the voices of agribusiness and major corporate players. In our bid to stem the climate and biodiversity crises and to create a world that places human and planetary well-being above private profit, food sovereignty acts as a powerful beacon of hope and transformation.

While undoubtedly it is a major challenge to transform our food system and confront powerful interests, we know it is possible and it must be done. There are numerous grassroots initiatives and campaigns popping up all over the world to develop more sustainable, democratic and locally embedded food systems.

In California, the Food Commons Fresno project is creating a locally embedded food system which prioritises regenerative practices and assists farmers and food producers to get their produce to consumers, while providing support for new farmers and food producers.[60]

In Ireland, there has been an increase in the number of Community Supported Agriculture schemes in recent years, with Dublin City CSA founded in 2012 being one such example.[61] The transformative potential of CSAs will be re-visited later in the booklet.

In Cuba, a rapid uptake of urban agriculture, farmers markets, community growing, and an increase in farmers cooperatives helped to stave off a famine after the fall of the USSR.[62]

La Via Campesina is one of the foremost international organisations campaigning for food sovereignty. It is 'an international movement which coordinates peasant organisations of small and middle-scale producers, agricultural workers, rural women, and indigenous communities from Asia, Africa, America, and Europe'.[63] We will now go on to discuss, in more detail, some pathways and practical examples that can lead us from the corporate food system we have today to a food system rooted in the principles of food sovereignty.

6.0 THERE IS AN ALTERNATIVE – SOME PRACTICAL EXAMPLES

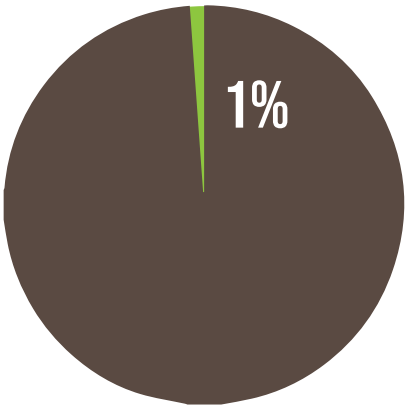
Many farmers in Ireland feel no incentive to diversify and move away from conventional farming, seeing no sustainable market to do so. If the farm is not viable, most will take an off-farm job to boost income.[64] It is difficult to see alternatives when the biggest markets are driven by exports and supermarkets. Conventionally produced meat and dairy follow this supply chain, which often excludes a wide variety of sustainable, organic and local foods.

However, more and more farmers are walking away from the demands of industrialised farming[65] and embracing alternative agricultural practices; they are moving from monocultures of grass to polycultures of animals and crops, to quality over quantity, to working with rather than against nature.

Surveys from Red C and PwC suggest that there is a market there to support these farmers: consumers are enthusiastic about locally produced food, while young people and those without dependents are more likely to buy locally sourced sustainable produce and are willing to pay a fair price.[66]

Despite – or perhaps because of – the COVID-19 pandemic, the market for locally produced food is growing, and fruit and veg box delivery markets are expanding. [67]

As well as this, there is a wider trend of increasing numbers of vegetarians and vegans looking to increase their plant-based intake for the sake of animal rights and reducing our carbon footprint.[68] Irish farmers' ability to supply this market is in doubt when we consider where so much of our nutritious food is sourced:[69]



- 1% of Irish farms produce vegetables for market and even fewer have orchards.

- In 2017, Ireland imported 72,000 tonnes of potatoes, 47,000 tonnes of onions, 31,000 tonnes of other root vegetables and 60,000 tonnes of apples.

But with growing interest in local fruit and vegetable produce, these figures suggest a big opportunity for growth in the market and an incentive to diversify. Small farms can benefit from this: according to a European Commission study, they are more adaptable and resilient in the face of external conditions, and are more able to exploit shorter supply chains in order to generate new income.[70] For those who continue to produce meat, sustainable, organic farming with a local market is seen by many farmers as the best way to future-proof their livelihoods.[71]

The European Commission's Farm to Fork (F2F) strategy is designed to strengthen this resilience by addressing unfair economic returns on the food supply chain. F2F proposes a target for 25% of EU agricultural land to be organically farmed by 2030 and a significant overall reduction of chemical inputs in this time. While this strategy offers support to the EU's 2030 Biodiversity Strategy, it also seeks to preserve the affordability of food, generating fairer economic returns in the supply chain. F2F sets the target that "the most sustainable food also becomes the most affordable".[72]

While the targets of F2F become more enshrined in a reformed CAP going forward, farmers are already innovating solutions to unequal supply chain access at a grassroots level. The internet provides a direct line between farmer and consumer, and Foodture.ie is an example of a simple online directory to local and national suppliers of high-quality organic produce.[73] Systems like this are in a good position to grow. Awareness and concern for how our spending is impacting the world is becoming more pronounced with every new climate and economic shock. Shopping local from farmers looking to reduce their environmental impact is a direct action the consumer can take to reduce their own impact.

6.1 MAKING THE TRANSITION

One of the major deterrents for farmers making the switch from conventional practices to more sustainable and climate-friendly systems is the period of transition itself, which can take between two to five years.[74] This is a time when yields are reduced as farmers adapt to working without chemical pesticide, fertiliser and veterinary inputs, as well as crop seed that has been patented by agrochemical companies such as Monsanto. But with fewer of these inputs, the costs are also reduced.[75]

Current support programmes available for diversification during this process include:

- *Organic Farming Scheme (provides basic payment for land under conversion to organic status)*[76]
- *The Green, Low-Carbon Agri-Environment Scheme (GLAS)*[77]
- *Native Woodland Establishment Scheme*[78]
- *LIFE-IP PAF Wild Atlantic Nature programme (protect and restore blanket bog Natura Network along the Atlantic seaboard)*[79]

Many schemes can be difficult to access, with short application windows, and many new GLAS applications are turned down, which indicates low political will to ensure environmentally beneficial policies are actually implemented on a large scale.[80] *Agri-environmental schemes are set to be updated as CAP (with a new emphasis on the Farm to Fork strategy), government policy and EU agricultural policy is reshaped for the 2020s.*[81] *A great way to start the farm's transformation into a sustainable and biodiverse enterprise is to join the 'Farming for Nature' movement. This is an initiative which promotes sharing knowledge and co-operating to achieve 'High Nature Value Farming' and provides practical tips on how to get started.*[82]

As the sustainable farm is gradually diversified, new markets open up, the produce gains the premium prices associated with organic food and the farmer's relationship with the food buyer is strengthened. The farmer, the land and the community are sustained.

6.2 STEPS TOWARDS CARBON SEQUESTRATION

Pasture

Grasslands cover approximately 31% of the total global land area and about 70% of the total agricultural land.[83] All agricultural land can function as a source or a sink for GHG emissions. Whether our land harms or helps the environment depends on how we choose to use it.

Even the type of animals grazing on pasture influences emissions from the soil. For example, sheep-grazed pasture sites emit less nitrous oxide (N2O) than cattle-grazed ones, particularly during times of spring thaw, while the lowest emissions overall have been shown to come from non-grazed pastures.[84]

Peatlands

Ireland's bogs have a huge potential for carbon sequestration. However, when they are drained and used for agriculture and fuel, organic-rich peaty soils become an "emissions hotspot".[85] Farmers may feel encouraged to drain their peaty soils to increase productivity in the short term, but drained peaty soil increases the risk of flooding and contributes as much carbon to the atmosphere here annually as Ireland's total annual car emissions, and can continue for 20 - 30 years after agricultural activities have stopped.

However, if managed well, bogs can become a carbon sink and act as a sponge to absorb flood waters. To do this we must block drains and restore the natural peatland ecosystems. This would contribute to climate change mitigation, flood prevention and the promotion of biodiversity.[86]

Urban Land

We don't usually think of the city as a place of meaningful carbon sequestration, but urban soils offer a lot of potential for GHG mitigation. Carbon accumulation has been found to be strong in the city's green spaces, from untended wildflower areas in city parks to the trees which line the streets and grow in suburban gardens. Sequestration is especially evident in the soils under trees and woody vegetation, so planting trees in open soils instead of under perforated surfaces, when possible, offers much more carbon sequestration potential.[87]

6.3 CASE STUDY – IAN DOUGLAS, CO. MEATH.

Ian Douglas grew up on his family farm in County Meath. Being in a position to inherit the farm guided his education and career choices and led him full circle back to it.

Ian: Our farm is a typical medium-sized Meath farm. Soils are productive but quite heavy, so crops can be the best in the world in a good year or a total nightmare in a bad year. Beef sucklers and fattening (finishing them off prior to slaughter) have typically been the main farming enterprises in my area and on our farm. We also have a lot of sheep. They were always part of the mix but have become more important in recent years as their price is more reliable.

The main change in recent years is that a small to medium farmer can't make a decent living from beef production anymore. In my lifetime (I'm 30), farmers have always been reliant on subsidies, but with the degree of oversupply and the drop off in demand, factories, supermarkets and suppliers do not have to pay farmers a decent price for their produce.

What are your plans for the farm?

Through a planned succession I will be managing 85% of the property within the next 5 years. Our plan is to move away from the current commodity production model of farming and to reduce inputs as much as possible. Using a whole farm planning approach, we plan to develop a mixed cropping and beef enterprise. Currently less than 5% of our farm would be considered of value for wildlife. In time, through a combination of hedgerow reestablishment, afforestation, agroforestry and the promotion of species-rich grassland, we hope that number gets closer to 80 or 90%.

What state supports/subsidies are you accessing?

Currently the single farm payment is the main cash cow on the farm. Without it we would have gone under a long time ago. Other lesser payments we receive are through afforestation grants under the Native Woodlands establishments scheme, greening grants through GLAS, which is a compliance-based agri-environmental payment for initiatives like planting wild bird cover and fencing off waterways. Additionally, we have planted a crop of fava beans—we get a grant of €250/ha under an initiative to encourage more farmers to produce home-grown protein.

What is your/the farm's relationship with the food consumer?

Non-existent. None of our produce is sold locally and I doubt much of it even stays within the country. Lamb is a little different. Much more of our lamb would be sold nationally. We also supply a small local abattoir that goes on to supply local butchers. A handful of our lambs are slaughtered for family and friends, so at least there we have a short supply chain.

How do you feel about farming as a career?

Excitement and trepidation. Climate change, just like the COVID-19 crisis, is creating as many opportunities as challenges. It is difficult to know if I would be thinking about things like low input and biological farming if biodiversity and climate change were not driving the conversation.

People are waking up to how far farming has gone in the wrong direction and that is creating a market opportunity for truly sustainable, biologically sound food produce that has existed on the fringes of food production for many years. Now, with direct selling and social media, farms can become open to the consumer, and people who are doing right by the land, their animals, crops and society are in a position to ask for more for their labour.

Grants and subsidies will also have an important role, as they always have. It is likely that up to one third of all farm payments will be associated with environmental measures in the future. But we can't bank on this. People who want to make a difference need to go out shout about their produce and encourage the consumer to maybe not buy from the supermarket.

3ha of woodland planted under the native woodlands scheme.

Field of fava beans sowed using a direct drill. Direct drilling means that the soil isn't disturbed like it would be if ploughed. It helps to sequester carbon both in the stable form of soil organic carbon but also as liquid carbon that is exchanged between the plants and the fungal communities in the soil. But like everything it also has downsides; we have to use Roundup to kill off the grass and that it is also harder to incorporate lime and fertiliser into the soil.

7.0 SUSTAINABILITY INNOVATIONS IN FARMING

As discussed earlier, current agricultural methods, as well as the very structure of our agricultural economy, is damaging the natural environment and failing to provide the wholesome food our society needs.

This crisis calls for innovation at all levels of society. Such innovation will move the industry away from the destructive systems of conventional agriculture. This chapter looks at a few examples of non-conventional methods of farming that are already changing people's relationship with food and the land.

7.1 REGENERATIVE AGRICULTURE

Regenerative agriculture is a group of farming practices that restore soil health and biodiversity in degraded land.[88] [89] The aim of regenerative agriculture is to improve soil carbon content, which in turn improves plant health and nutrition, crop productivity and general biodiversity. A key element of this is cultivating a rich ecosystem of soil microorganisms. Microorganisms provide plants with essential nutrients, like nitrogen. In exchange, plants provide the microorganisms with energy in the form of sugars. These sugars are rich in carbon and so this process increases the soil carbon content. Practices common to regenerative agricultural systems include: no tillage, diverse cover crops, use of minimal pesticides, minimal synthetic fertilisers and multiple crop rotations.

7.1.1 NO-TILL FARMING

Conventional agriculture involves ploughing and exposing dug-up soil to the elements. This process disturbs soil organisms and releases carbon by speeding up the decomposition process.[90] No-till farming forgoes the plough and minimises soil disturbance, which helps keep carbon in the soil, enriching soil biodiversity and reducing the need for chemical fertilisers that increase greenhouse gas emissions.[91]

7.1.2 DIVERSE COVER CROPS

Conventional farming systems leave the soil bare between growing seasons. 'Cover Cropping' is the practice of growing plants that stimulate soil health instead of leaving soil vacant during winter or other non-growing seasons.[92] Bare soil is vulnerable to erosion, invasion by weeds and has a harmful effect on the soil microorganisms as it is plants that provide them with food.[93] Cover cropping restores and locks in soil nutrients such as: nitrogen, phosphorus and zinc. Cover crops also out-compete weeds for space. The more diverse the cover crops, generally, the healthier the soil.[94] This is because different plants provide a different complex of food for the microorganisms.[95] Cover crop cocktails in Ireland might include clover, mustard, rye, vetch, peas, beans and buckwheat.[96]

7.1.3 MINIMAL USE OF SYNTHETIC PESTICIDES AND FERTILISERS

While many regenerative agriculture systems are organic, it is not a requirement for the system. For example, some regenerative farmers use small amounts of synthetic fertilisers. They may apply the fertiliser directly to the soil around the plant. This is instead of indiscriminately applying fertiliser across fields. However, synthetic fertiliser use is avoided where possible. Many regenerative farmers who use chemicals are in the process of transitioning to a chemical free farm. Artificial fertilisers have negative effects on the soil microorganisms and lead to a decrease in soil health.[97]

7.1.4 CROP ROTATIONS

As mentioned earlier, different families of plants have different effects on the soil, and rotating many different crops has been shown to increase soil health.[98] Having a diverse variety of crops also acts as an insurance policy in case of crop failure. If a disease invades your farm or you are hit by an extreme weather event, having many species ensures you don't lose all of your crops because different species are vulnerable to different diseases and weather extremes. Diversity will increase the farm's resilience and local food security.

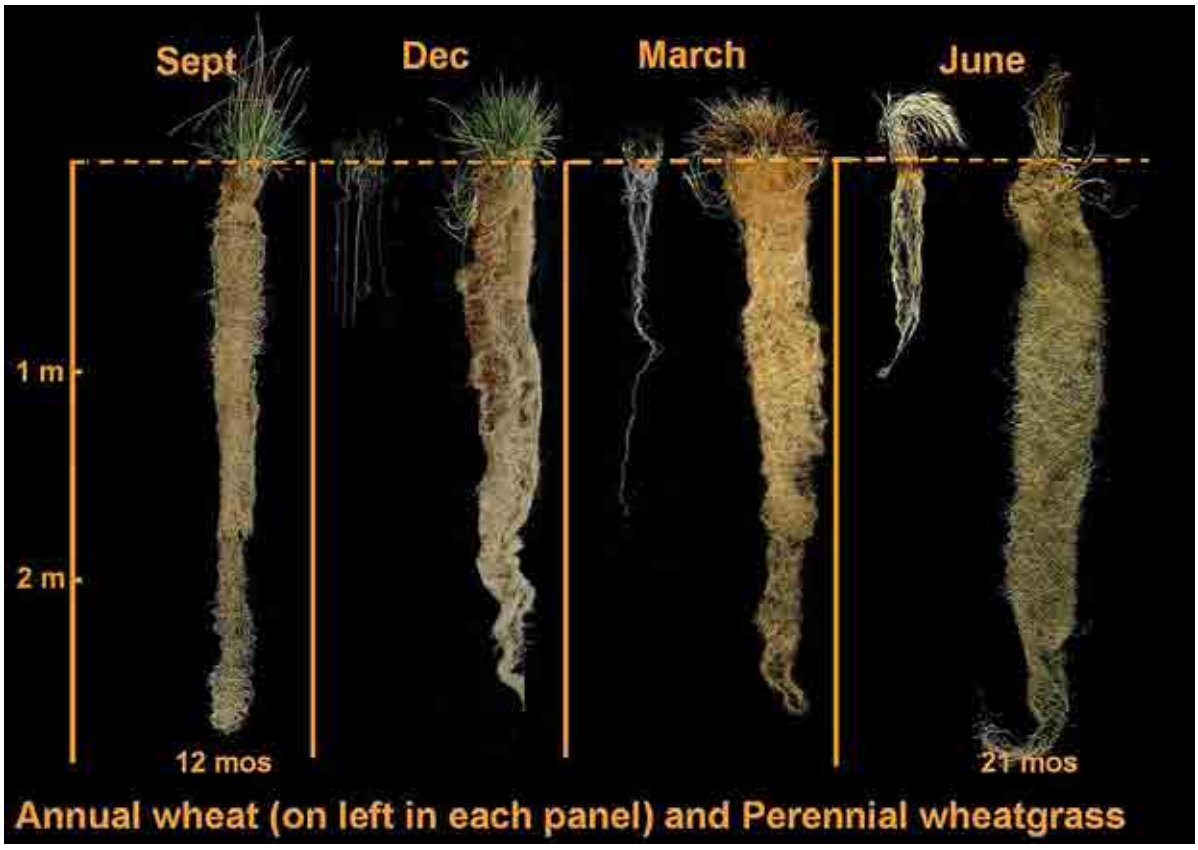
Regenerative agriculture combats climate change by storing carbon in the ground. Higher levels of soil carbon are imperative to a healthy environment – it stimulates microbial life, improves soil texture, enhances nutrient uptake, stimulates roots to go deeper, improves health of plants and increases water retention. Healthier plants are more pest resistant, and soils with increased water retention are more drought tolerant and flood resistant.[99] For more information on regenerative agriculture in Ireland 'Farm 2 Fork 2030 Vision' can be downloaded at www.regenerativefarmingireland.com.

7.2 PERENNIAL CROPS

Most of the food we eat comes from annual plants. Annuals are plants that germinate, reach maturity, fruit and die in one year. Switching our major crops from annual plants to perennial plants could have significant benefits. Perennial plants live longer than a year and do not have to be reseeded annually. They protect the soil from erosion, improve soil structure, increase ecosystem nutrient retention, increase carbon sequestration, water infiltration and compete better with weeds.[100]

In order to produce crops that maintain the seed yield and quality of the annual plant while inheriting the perennial life cycle, agronomists (crop experts) are crossing existing annual grain crops with wild perennial cousins.[101] They are also domesticating wild perennial varieties by identifying a species that has desirable attributes, and subsequently growing large amounts of that species. The agronomists then select the plants with the best attributes. The selected plants will be used for further breeding.[102]

For example, The Land Institute, an independent research facility in Kansas, is breeding perennial grains, pulses and oilseed crops. They have successfully bred and sold a cousin of the annual wheat crop known as Kernza. Kernza's roots reach ten meters below ground which is large compared to annual wheat's three meters. Despite its lesser yield, Kernza is being used by farmers, bakers and distillers in America for its ecological benefits.[103] An increase in root size and depth takes carbon out of the atmosphere, burying it and giving carbon to soil bacteria in exchange for nutrients.[104]



7.3 SILVOPASTURE

Silvopasture is a form of agroforestry [Latin roots: 'silvo', means forest and 'pasture' refers to grazing]. It has been practiced on the Iberian Peninsula for over 4,500 years and now covers more than 350 million acres across the globe. **These systems involve integrating trees into areas grazed by animals.** There are no strict rules for how the trees are integrated, although most silvopastoral systems space trees in a similar manner to Savannah landscapes. Such systems can be created by planting trees in open pasture, by allowing sprouted trees to mature or thinning a woodland and allowing forage to grow between the trees.[105]

7.3.1 SILVOPASTURE AND THE CARBON CYCLE

There is an urgent need to reduce greenhouse gases, and silvopasture systems can help. Silvopasture systems sequester five to ten times more carbon than other conventional tree-less pasture systems. Ruminants — i.e. cows and goats — are better able to digest silvopasture forage compared to traditional forage. When grazing, these animals release significantly lower amounts of methane compared to conventional pasture systems. Methane is an extremely polluting greenhouse gas; It is 25 times more harmful than carbon dioxide over a 100-year period.[106]

7.3.2 SILVOPASTURE AND YIELDS

Yields from silvopastoral systems are usually 5-10% higher than grass-only pasture. This is likely due to the animal's ability to find the forest forage easier to digest. In intensive silvopasture systems, the stocking rate can nearly triple.[107] Therefore, the large-scale application of silvopasture systems would mitigate the damage from deforestation by reducing competition for land. This is a win-win for the farmer and the planet.

7.3.3 BENEFITS FOR THE ENVIRONMENT AND THE FARMER

The combination of trees and livestock helps improve soil fertility and increases soil moisture.[108] The system also benefits farmers by reducing expenditure on expensive fertiliser, feed and herbicides. Silvopasture can extend the grazing period so that animals are able to spend a greater part of the year outside. As a result, expenditure on food supplements during the cold season is reduced.[109]

Silvopasture systems allow farmers to diversify their production. Animal grazing, for instance, can be combined with other forestry products such as nuts, fruit, mushrooms and maple syrup.[110] Having multiple ways of earning a livelihood from your land provides an insurance policy if one or other of what your farm is producing becomes unprofitable.

A diversified, biodiverse farm will be more resilient to extreme weather events. Trees provide shade, protection from wind and create their own cool microclimate that offer protection against heat waves.[111]

Silvopasture can also be beneficial for fruit production. A study undertaken in Northern Ireland suggested that the presence of sheep in apple orchards helps control apple scab and reduce pesticide input. The sheep eat the apple leaves soon after they fall and aid general organic matter decomposition. This stops the apple scab pest from flourishing in decomposing leaf matter.[112]

7.3.4 BARRIERS TO IMPLEMENTATION

Silvopasture is a novel approach for many farmers and seems to run contrary to their traditions and to what they have learnt about good livestock and fruit farming. In Ireland, once forestry has been planted it can be difficult to get permission to permanently deforest the area, and in some cases an equivalent area must be planted elsewhere to make up for the deforestation.[113] There is also a fear among farmers that their land value will be reduced if it is afforested.[114]

Silvopasture systems require additional expertise to manage, and have higher start-up costs than conventional farming systems.[115] The establishment of such a system requires long term planning and investment.[116]

New innovations to Irish farms have been made difficult by the current uncertainties facing the agriculture industry.[117] Traditionally, in a time of such financial hardship, farmers tend to concentrate on short-term goals and needs.[118] At present, therefore, investing in silvopasture may seem unattractive. In reality, however, the adoption of silvopasture systems can provide one approach to help secure the long-term vitality of the industry and the health of Ireland's natural environment.

7.4 MANAGED GRAZING

Managed Grazing carefully controls livestock density and the intensity and timing of grazing. When grasses are grazed continuously the nutrient reserves in their roots deplete to the point of exhaustion, and this in turn depletes the soil of nutrients and carbon.[119] When grasses are given time to recover from grazing they start producing sugar (carbon) again and pump it back into the ground via their roots.[120] Carefully managing grazing can improve soil health, carbon sequestration, water retention and forage productivity. This can be achieved by rotational grazing - systematically moving animals to fresh pasture and allowing already-grazed pasture to recover. Another technique is adaptive multi-field grazing. This involves moving animals quickly between smaller paddocks and then allowing the grazed land to recover. Recovery can take from a month in warm wet weather, and up to a year in cool dry weather. Farms must also stop the use of pesticides, herbicides, fungicides and artificial fertilisers to achieve a productive, ecological and carbon sequestering farming system.[121]

It usually takes two to three years to transition to a managed grazing system of farming. According to Project Drawdown, Managed Grazing has the capacity to sequester 16.34 gigatons of carbon dioxide from the atmosphere over a 30-year period. However, this does not include the 10 gigatons of methane currently being released by grazing animals.

8.0 URBAN AGRICULTURE

Ireland has, over the years, seen a massive movement of people from the rural areas into the cities. Many have lost any real link to agricultural production. Urban agriculture initiatives allow people to develop a closer relationship with the land and educates people about their food systems. At the same time, such initiatives have practical advantages in shortening production lines, cutting transport costs and limiting associated dangerous emissions.

The two specific initiatives we explore in this chapter concern ordinary people growing their own food in cities. These initiatives empower communities and help connect individuals with their food and with the land. Projects of this nature go some little way to restoring sovereignty over our food systems.

8.1 COMMUNITY GARDENS

A community garden is any piece of private or public land gardened by a group of people.[122] The general ethos of community gardens is in sharing resources and time and building social relationships. A community garden does not always have to produce food but, in this report, we will assume that is a primary aim of the garden.

8.1.1 BENEFITS OF COMMUNITY GARDENS

Health of People and Place

Community gardens increase the public's access to affordable, fresh, healthy food.[123] People who participate in community gardens, on average, increase their fruit consumption by 10% and areas with community gardens have less obesity. The act of gardening is a form of exercise and so participation in community gardens promotes physical activity. Involvement in urban agriculture is also linked to reductions in stress and good mental health.[124] Community gardens generally promote public health and improve people's quality of life.

Community Wellbeing

Community gardens promote people's connection with the earth and foster respect for the natural environment and for other people.[125] Working with each other — both sharing resources and time — builds social relationships and stronger communities. Participation in such community gardens is linked with increased voter registration, enhanced levels of civic responsibility, and reduced rates of crime.[126] Compared to other communal green spaces community gardens are small scale, low cost and highly used. Community garden areas of public parks see more visits than any other part of the park.[127]

Resilient Food System and Sustainability

Urban agriculture increases food accessibility and local food security. This is of great significance to food insecure households and food desert communities.[128] A food desert is an urban area in which it is difficult to buy affordable healthy food. According to Safefood.eu, one in ten households in Ireland in 2018 suffered from food poverty.[129]

People who grow their own food, or are a part of a community garden, can augment their household budgets by reducing expenditure on fresh vegetables and fruit. In Seattle, growers were able to supplement their budgets by 30-40%. Many urban agriculture projects produce more than they can consume and donate the surplus food to community members and food banks. Increasing production from urban agriculture and community gardens increases the resilience and sustainability of the city's food system and reduces reliance on imported produce. Locally produced food is generally considered to be more environmentally sustainable due to the carbon costs associated with international trade.[130]

The long-term place of city gardens can serve to neutralise the emissions from the construction and running of the buildings around them. The trees in these gardens serve a vital civic function as carbon storages.[131]

Education

Community gardens can provide an effective platform for sharing knowledge and skills by sponsoring gardening workshops, the provision of tutoring and organising taste-testing or discussion events. In one study 20% of students that started gardening in a community garden went on to take up gardening at home.[132] Community gardens can be used by local schools. Such initiatives are hugely beneficial for children since gardening helps to develop fine motor skills and teaches students about patience. It enhances scientific literacy and helps students to understand the sources of their food.[133]

Community gardens can host a variety of workshops for the wider community and help people develop tangible agricultural and organisational skills.[134]

A community garden is dependent on access to land, good growing conditions, gardening tools, gardening inputs, gardening skills and, crucially, the support of enthusiastic community members. 'Grow your own' initiatives, however, should not be allowed to deflect from the responsibility of the government to deal with the food system inequalities.[135]

Community Engagement

Strong community engagement is vital for a community garden. Adequate staffing, volunteer involvement and access to the necessary skills are all essential for the success of a community garden. Contributions from schools, universities, businesses and volunteers with a wide background can greatly add to the sustainability of the garden. Inclusivity is a great advantage when building a community garden. Support from a diverse base of partners increases the garden's ability to thrive. A successful garden should have ongoing training and mentoring for gardeners and staff, should build

public awareness on the benefits of community gardens and provide experiential work for example classes in gardening or cooking.[136]

Arguably, it is vulnerable families who would benefit most from participation in a community garden. Sadly, such are people least likely to be in a good position to take advantage of such initiatives. It is hard to expect people already struggling with the stress of poverty to start cultivating their own food. Disadvantaged communities are less likely to have the time, land, resources, interest and skills required for urban agriculture.[137]

Image credit: CC Licence kingcountyparks flickr

Acquiring Land

A lack of available land or competition from other users can represent a significant barrier to establishing and maintaining a community garden.[138] This is especially true in areas like Dublin experiencing a severe housing crisis. However, community gardens are flexible in design so innovative solutions can be made like container planting or rooftop planting. Community garden spaces can be incorporated into new developments like schools, parks, estates or apartments.

It is important to ensure that the land is well protected and maintained. There is always a danger that any lack of care will adversely impact the local and environment and thus decrease the value of the surrounding houses.[139] This will turn members of the local community into enemies instead of allies. On the other hand, urban agriculture can also increase the gentrification of an area, making affordable housing no longer affordable. If not done well community gardens can exacerbate tension in an area instead of alleviating them.[140]

Urban agriculture can pose health risks from soil, air and water pollution this is especially prevalent in lower income areas.[141] Urban agriculture's capacity for social and environmental improvement is highly dependent on the socio-economic and environmental context.

A community garden needs the continuing support of local authorities and local community leaders. This is necessary to ensure that the relevant permissions are in place and that there is a long-term commitment from the landowner or manager. Guaranteeing water accessibility is also a potential barrier that might need to be overcome.[142]

8.1.2 CASE STUDY – MUD ISLAND COMMUNITY GARDEN

Mud Island is a 612m2 community garden located in North Strand, Dublin.

Could you describe your garden for us?

We have about 150 people who have ever paid to be garden members and over 1,000 who follow our Facebook group. People can commit as much or as little time as they're able. Some members come weekly or bi-weekly to garden, some prefer building work and have built all our raised beds, our 'hacienda' area etc., others just come when we've an event, or if the weather is fine, and some come to walk their dogs and have a chat. We usually open twice a week for gardening, on Tuesday and Saturday afternoons and more often during summer months. We hold regular social events that are open to anyone in the area. We also hold educational workshops, e.g. over the past 12 months we've run workshops on food fermenting, pruning fruit trees and bushes, and we also held tai chi classes in the garden.

How did your community garden initiative get started? What were the main barriers you have had to overcome to get things off the ground?

A local group started meeting in 2009 to get a community garden started. It took two years of lobbying to get a licence (renewable annually) from DCC (Dublin City Council) to build a garden on the derelict site at Newcomen Court. We had to form a committee, have a constitution and garden rules, and public liability insurance in place before they would deal with us. We also had to get a petition signed by all the neighbours who backed onto the site indicating that they supported a community garden there. They granted us our first licence in October 2011

How do you manage and run your community garden?

We have a management committee that is elected every year at our AGM – it's grown to 18 people who are all key holders. We communicate via WhatsApp and have meetings as needed. Paid up members are on our Gmail list and we communicate with them that way. We also have a website and a Facebook page that we update regularly.

Once established, what are the challenges of running a community garden?

We've successfully managed to run the garden collectively, by consensus, sharing the site and the produce. People don't have individual beds although some people have taken responsibility for different areas, e.g. the rockery, or the social hops project. One challenge has been to give new members a sense of equal ownership of the garden as most of the original members are still involved – we're glad to see new people get involved all the time.

It was also important that we developed a good working relationship with DCC who own the site and we've worked closely with their community development officers. They've now agreed to do up a cottage that they own beside the garden for us, which will give us access to electricity, running water and a toilet and they also plan to landscape the surrounding field that they have maintained ownership of. Up until now we've plugged into houses that surround the garden when we've needed electricity for events. The site is still zoned for social housing but there are no plans for it at the moment, and the council investing in the site is a good indication that we may get to stay for longer. Our licence each year is only for 11 months.

Could you describe the benefits of establishing a community garden?

Benefits have been environmental, educational, social and recreational, not just for members but for the whole area of the North Strand and Ballybough. There are also clear evidence based physical and mental health benefits

What advice would you give to other people thinking about starting a community garden?

Go for it!

How has the community garden changed your personal and your community's relationship with food?

We're all eating that bit more healthily and it's great for children to be involved in growing their own fruit and vegetables

What is the economics of your community garden?

We get grants from several sources – from DCC's community grant scheme, NEIC (North Inner City) development programme, Croke Park Community Fund to name just a few. We also get donations of plants and garden tools and equipment. We fund raise ourselves too – we run a cafe at many of our events (last year we had a community picnic in May, an Open Day in June with live music and workshops, a ukulele festival 'A Strum in the Strand' in July, an experimental electronic music festival and family rave, MIDI, in August, and we ran craft fairs and/or cafes at most of them). We also hold an annual pub quiz in December.

How has the coronavirus affected your community garden?

Because the garden is as much a social space as a gardening one we officially closed the garden to the public on 22nd March because of COVID-19 – we had been open but practicing social distancing for a week or so up until then. Since we closed, the committee are quietly working behind the scenes, one at a time, keeping the garden watered, getting seeds planted for the coming season and picking any vegetables ready to share. We go in singly, bringing our own tools, and we've soap, water, gloves and hand sanitiser there if needed.

8.2 ALLOTMENT GARDENING

What is Allotment Gardening?

Allotment gardens are a type of community garden where a group of people garden a plot of land. What differs in allotments compared to other types of community gardens is that an allotment space is split into plots. Each plot is gardened by a different person or family.[143] Generally you rent your allotment space yearly. For example, the South Dublin County Council charge between €50 to €250 a year per plot, depending on the size of the plot.[144]

Providing allotment gardens started in Europe in the 1700s. Poor labourers were given plots of land to grow fruit and vegetables for personal consumption.[145] In Ireland the urban allotment garden movement started in the 1890s, and took off in popularity in the early 1900s (2). During the First World War government leaflets were distributed encouraging people to grow their own food during a national shortage. 1917, following a growth in allotment popularity, was dubbed 'the year of allotments'.[146] In 2010 there were an estimated three million individual allotments in Europe.

How to Apply for an Allotment

Normally, to secure access to an allotment you need to contact your local authority since many are managed by county councils. If there are no plots immediately available, you may be invited to join the waiting list.

In the event that there is no provision for allotments in your area, or if the waiting lists are frozen due to high demand, you may consider making an appeal to your county council to establish new allotments. If there is sufficient local demand, the County Council can choose to provide allotment gardens under the 1926 Acquisition of Land Act and under Section 67 of the Local Government Act 2001.

There are also private allotment sites to rent. These can be found online, for example allotments.ie has a directory of allotments in Ireland. Alternatively, if these private allotments are too expensive, it is possible to establish your own allotment society and look into buying or renting land together.

Benefits

Gardening, whether at home or in your allotment, is strongly linked to successful stress reduction. It certainly helps increase the level of physical activity and is thus beneficial for general health. Allotment gardeners are often people of retirement age. Some research suggests that allotment gardening is especially positive for people of this older age group.[147]

Barriers

There may not be an allotment if your area. Many allotment gardens in Ireland have long waiting lists and you can end up on the list for years. Allotments with shorter waiting lists tend to be in less accessible locations. The cost of allotments may be a barrier for the poor, although allotments under county council management may be in a position to provide discounts for people on welfare.[148]

8.3 CASE STUDY – GARDEN GNOMES URBAN FARM

The Garden Gnomes are a ¼ acre urban vegetable farm located in Glasnevin, Dublin. Their business is a small-scale intensive, regenerative agriculture project which is owned and operated by three people.

How did the Garden Gnomes get started?

We got started by making a conscious decision to attempt something that "ticked all the boxes" for us and which we later began to describe as triple underlined... economic, social and environmental. The barriers are, obviously, gaining access to land and resources, as well as the appropriate knowledge and infrastructure to make it happen, and finally finding your market.

Describe the economics of your business.

We currently sell through all available market streams. Farmers markets, restaurants, shops, companies and recently online home delivery. We avail of the universal support payment which any small business can avail of when setting up your business. It provides additional supports which help the learning curve of running your own business. We don't avail of any farming grants and are unfamiliar with the farming grant system.

Is this your whole livelihood? Would other people be able to follow in your footsteps and set up similar farms/businesses?

The Gnomes is our full-time job and one of our goals is to create a framework and education process to make small-scale farming accessible to driven individuals who want to succeed in this area. We want to be able to provide context-based learning to small scale ag and show the financial viability of it.

What are the aims of your business?

Our goal is to have a small diverse farm that will support our lifestyle and provide us with a wage which reflects our desired standard of living.

What are the ongoing challenges of running your business?

The ongoing challenges of running an intensive mixed vegetable farm are simply too wide and varied. Experience, season after season, is the only solution, accepting failure and trying to make less of it the next time.

How has your business changed your personal and your community's relationship with food?

Our impact on our local community is still a goal of ours. We are seeing signs and indications that people are becoming aware of what real food is and their connection to the food chain. Our direct customers have no issue explaining the difference in flavour and quality. For us, having access to the quality of food we produce is hard to take for granted. We respect our food in a way we never did before farming.

How has COVID-19 affected your business?

The coronavirus has presented us with an opportunity. Like all obstacles in life, you choose to hit them or go around them. We chose to pivot our marketing and offer a home delivery service to our customers through an online purchase. It has given us the opportunity to learn new skills and dig deeper in tougher times.

9.0 COMMUNITY SUPPORTED AGRICULTURE (CSA)

What is community supported agriculture?

Community Supported Agriculture (CSA) involves a partnership between a group of people or a local community organisation and a farm or an association of farms. Typically, members of the CSA purchase a subscription to the farm, just as one might subscribe to Netflix. In return, the subscribers have a right to receive produce from the farm on a regular basis during the growing season.[149]

One might, for instance, agree to pay €20 a week and, in return, expect to receive weekly a selection of vegetables, fruit and herbs.[150] Some CSA organisations supply other products, like meat.[151]

The purpose of CSA initiatives is to share the risks and rewards of agriculture more equitably within the community. This shared risk is the main difference between a CSA subscription and a veg box subscription. Members of CSA partnerships typically start their financial contribution before the beginning of the growing season.[152] If it is a bad season they may lose out. If it is good, they benefit along with the farmers.

The system promotes distribution networks that are not solely dependent on conventional market dynamics. The objective is to provide healthy, environmentally friendly food to consumers and, in the process, build direct relationships with farmers.

Farmers are guaranteed a regular and fair income regardless of fluctuations in the weather or growing conditions. Consumers, on the other hand, are promised regular shares of farm produce.[153]

CSA initiatives can be broadly classed as farmer-led or consumer-led. Farmer-led CSAs are initiated by the farmer who makes most of the management decisions. In consumer-led ventures these decisions are taken jointly. Consumer-led CSA initiatives, inevitably, provide higher levels of participation by community members in decision-making and sometimes in the farming process itself.[154]

CSA is thought to have its origins in Japan in the 1960's. The idea has since spread around the world and is particularly popular in North America and in continental Europe.[155] The concept is relatively new to Ireland.[156]

9.1 BENEFITS OF CSA

CSA initiatives create a direct link between the farmer and the consumer. They improve the quality of people's food and give farmers a fair price for their produce.[157] Members learn about how the food system operates, the process by which food is produced and the human realities behind agricultural production.[158] [159] [160] Educating people on these realities means they will understand betting the importance of paying a fair price for their food. This is particularly the case when people have a personal relationship with the farmer who is producing the food.[161]

CSA initiatives sometimes allow members to buy a 'worker subscription' whereby it is possible to work on the farm for a specific number of hours in exchange for a discount on purchasing the farm's production.[162]

By signing up to be involved in a CSA initiative, members are taking a conscious decision to restrict their food choices for the common good. This can be beneficial to consumers and producers alike. It encourages the consumer to try out new food and experiment with different recipes.[163] [164] For many, it increases the variety of fresh fruit and vegetables in their diet, which is strongly linked to better health.[165]

CSA initiatives can encourage community development by sponsoring inclusive activities, including pot lucks and tasting events, as well as by mounting educational programmes and providing farm tours.[166] [167]

CSA is better for the environment. Environmentally friendly agriculture approaches – including agro-ecological and organic farming – is normally a key aim of CSA initiatives. Buying locally produced food reduces or eliminates food miles.[168]

9.2 BARRIERS OR DISADVANTAGES TO CSA

CSA is still relatively new to Ireland so there may not be a CSA initiative in your area. CSA reduces consumer choice because members are reliant on what the farmer is able or chooses to grow. If not well organised, members may also be required to go to inconvenient drop-off points to collect their food.[169]

The most commonly documented challenge as far as the farmers are concerned is the danger of a high turnover of members and difficulties in maintaining active participation.[170]

Since the farmers are part of the community they are helping to feed, they can experience excessive pressure to produce high-quality food.[171]

9.3 CASE STUDY – MOYHILL FARM CSA

Moyhill is almost 70 acres of mixed land, including a lake, an orchard, mini woodlands, pasture and market gardens, located near the coast in County Clare.

Could you describe your CSA for us?

We have 50 members from the past two years. We have a lot of volunteers who drop in one day a week, then we have 4 interns for 6 months of the year and a core team of 4. Members collect their boxes at the farm or at our two different markets.

How did your CSA initiative get started? What were the main barriers you have had to overcome to get things off the ground?

I heard about the CSA model from a German farmer and just started. The biggest hurdle of any farm starting out is building infrastructure and starting the farm without any real income coming in at the start. Not until you are in year 3 at least do you start to make any money. So, buying land and building infrastructure and trying to pay any wages is the biggest challenge. Then getting people to understand what the CSA is all about and to support it would be the next issue.

Describe the economics of your CSA

We tried to have people start paying one month before their first box which started in May. The options were upfront payment for the whole year, two instalments, or six. We say the commitment is for the year but if people have to leave for some reason, we just need a month's notice. We don't get any subsidies; we have had some grants but nothing big or regular. There are no supports in place for the likes of CSA farms.

Once established, what are the challenges of running a CSA?

Now hopefully things have changed since COVID-19, but most people don't like the commitment for the year and also they want choice in what veg they get. So, the CSA only appeals to a small group of people who are willing to support the farm for the whole season. The big challenge on the farm is once you take the money you feel a real pressure in having to provide a good box of veg each week despite bad weather or anything. The saying is the consumer shares the risk and reward, but that doesn't happen; the farmer takes the risk and you want to fill those boxes or the CSA's reputation will be bad.

Could you describe the benefits of establishing a CSA?

The money being paid upfront at the start of the season is very good for running a farm because a lot of the costs are at that time of year. There is less risk in knowing will things sell or not, there is a stability. The same sales are done in July as December, which is very good for the farm.

What advice would you give to other people thinking about starting a CSA?

Make sure you have enough interest from the community first. Consumer-led CSAs are much better than farmer-led. The CSA will only work if you have the right community to feed into and the interest is there. Most good CSAs are near larger populations.

How has the CSA changed your community's relationship with food?

It does bring the members on a seasonal journey of the year, and some people hate it, but most people, once they can accept the seasons and what they bring, start to really love that connection to food and start to understand what it takes to feed ourselves.

10.0 FISHING AND AQUACULTURE

Solutions that aim to transform fisheries systems and are rooted in food sovereignty begin with place-based initiatives that involve those actively engaged in working towards social and ecological justice. [172]

Ireland places second on the "Overfishing League Table" behind Spain, setting quotas 24% above scientific advice for maintaining a sustainable stock.[173]

"Super trawlers" are sweeping oceans clean, and evidence mounts of the poor practice among multinational fleets fishing in the deepest parts of Irish territorial waters. Increased numbers of dead sea mammals such as dolphins are washing ashore and traditional fishing communities have declined while multinational industrialised fishing continues to dominate Irish waters[174]. Industrial fishing and government implementation of unsustainable quotas are combining to cause biodiversity loss and stock collapses, risking the loss of fishing livelihoods.[175] Reliant on feed caught in the wild, industrial fish farming practices pose many of the same risks.

If practiced sustainably, aquaculture can provide food for the growing human population and reduce overfishing.

Firstly, fish farmers must eliminate the demand for wild-caught fish for feed. This could be achieved through farming animals that require little to no feed, such as freshwater carps and bivalves such as mussels.[176] An alternative feed for those that need it includes high protein meal derived from insect farming.[177]

Bivalve species, such as mussels, offer a more secure, humane and sustainable future for those who want to produce and consume seafood. Ireland's nutrient rich waters with many sheltered bays are ideal for mussel farming,[178] which offers farmers the opportunity to grow a sustainable and in-demand product and consumers a tasty protein-rich food. By choosing to buy sustainably farmed products such as farmed Irish mussels, we can contribute to the development of Irish seafood production and fisheries and the protection of coastal communities.

11.0 FOOD DEMOCRACY: ENSURING MANY VOICES ARE HEARD

A key component of food sovereignty is the possibility for citizens, food producers, and a wide range of actors who shape and are impacted by the food policy to take part in shaping the food system.[179] At present, the corporate food system prioritises the voices and needs of big agri-business, often at the expense of small producers, consumers, and other interests in the food system, such as health and environmental concerns, or the interests of non-commercial food practices, such as food sharing and seed swapping. For example, a key criticism of the development of Irish food policy is that it failed to properly consider health and environmental implications in the policy making process, with a majority of those tasked with drafting both Food Harvest 2020 and FoodWise 2025 representing major farm lobbies and those in the agribusiness sector.[180]

To make the food system more democratic and representative of a wider range of issues and actors, new pathways and opportunities for a greater variety of players, voices and farming experiences, to become involved in policy making must be developed.[181] As well as giving diverse voices an opportunity to shape policy, governance structures from local to European and international levels should be designed to minimise the power imbalances between multi million euro agri-businesses and small-scale farmers.

11.1 'ALL MEMBERS OF AN AGRO-FOOD SYSTEM'

Food democracy is a promising concept. According to Eva Hassanein, food democracy, 'ideally means that all members of an agro-food system have equal and effective opportunities for participation in shaping that system, as well as knowledge about the relevant alternative ways of designing and operating the system'.[182] Looking at this definition we see that food democracy means that a wide array of actors must have their voices heard in shaping food policy and law. 'All members of an agro-food system' should be defined widely, and not just include big agri-business, but representative numbers of all types of farmers, including urban farmers and Community Supported Agriculture[183] Farmers.

This can be widened out even further to say that consumers are also actors in the agro-food system, as purchasing choices are important and powerful acts of food citizenship. What about those who grow food in community gardens and allotments, artisan bakers and cheese makers? We can also say that people who campaign on and make policy regarding the health impacts of food system choices should also be considered, given the impact of food choices on health. When we think about food democracy holistically, we start to see the many actors that have a role to play in shaping our food system, and we can consider how to break down the barriers between policy areas.

11.2 FROM CONCEPTS TO ACTION: FOOD POLICY COUNCILS AS AN AVENUE TO GREATER FOOD DEMOCRACY

The proposal for a European Common Food Policy suggests that food democracy must be central to new policy development at all levels, from local to European policy making.[184] How then can we make sure that decision-making on different scales includes 'all members of an agro-food system'? At local level, food policy councils can allow different actors to come together and discuss issues related to food in a town, city, or county and engage with local policy makers.[185] While there is only one Food Policy Council in the Republic of Ireland (See Cork Food Policy Council below), they are particularly common in North America and increasingly so elsewhere in Europe. Food Policy Councils take different forms.[186] Some are divisions within local authorities, others operate semi-independently of

local government, but are connected with local government, by, for example, having a local government representative on the council, others are purely grassroots organisations that operate entirely independently of local government, but which, nonetheless aim to lobby and shape policy and decision-making.[187] Not only can they bring together different stakeholders in the food system to share ideas and experiences, they can also serve as the 'go to' body for local authorities when they want to get an insight on issues affecting the food system locally, or if they want to make decisions which might impact local food production, for example whether more community gardens or allotments are needed. Given that a key aspect of food sovereignty is about ensuring marginalised voices are heard, food policy councils, if they are truly representative, are one avenue for achieving greater food sovereignty. Ideally food policy councils would be funded so that they are not reliant exclusively on voluntary effort.

11.2.1 CORK FOOD POLICY COUNCIL

In Ireland, the Cork Food Policy Council was established in 2014.[188] It is a partnership between representatives of the community, food retail, farming, fishing, restaurant / catering, education, environmental and health sectors as well as local authority representatives. It aims to promote healthy eating habits in Cork, access to sustainable food and provide educational opportunities about food, including how to cook and grow healthy and sustainable food. It aims to influence policy outcomes to achieve its vision. It has made submissions to various policy consultations since its foundation, including the Local Economic and Community Plan of Cork City Council.[189]

CORK FOOD POLICY COUNCIL
Pure Cork – real food for all

Cork Food Policy Council originated out of a project that had taken place in the Knocknaheeney area of the city, supported by Healthy Food for All. They wanted the success of the project to continue. According to Prof. Colin Sage, the community garden in Knocknaheeney allowed people to connect in a deeper way with their place, and also to connect with each other due to the social bonds that are created by growing together.[190] The Cork Food Policy Council launched with an event called 'Feed the City', where 5,000 people were provided a meal from food which otherwise would have gone to waste, representing one of the other follies of the corporate food regime, the waste of perfectly edible food. In 2018 / 2019, the Cork Food Policy Council commissioned the development of a Food Map, which maps food businesses and retailers in the City, in order to gain a better insight into the types of food businesses that operate in Cork.[191] In particular, the map aims to have objective evidence of the types of healthy / unhealthy eating establishments in a particular area to focus on delivering change in the food landscape that promotes greater wellbeing.

ACTION POINTS

STEPS YOU CAN TAKE NOW TO HELP BUILD A MORE SUSTAINABLE FOOD SYSTEM:

• Narrow the gap between the farm and the table – where we shop and what we buy is important. There are places online to improve these links between the farm and the table. Foodture.ie is a good first stop in seeking the most ecologically minded food producers.

• Base your meals on vegetables rather than meat.

• Eat seasonally.

• Activism – join our agri-activist group Growing Together Ireland, get in contact with your TD and voice your support for the principles of food sovereignty.

• Educate yourself and others:

• Find an organic horticulture course that suits you, there are lots of affordable and short courses from groups like Irish Seed Savers, Brown Envelope Seeds and the Gaia Foundation.

• Check out Slí Eile's online list of horticulture courses at: https://app.luminpdf.com/viewer/5f078fc5eb7f6d001335c55e

• Volunteer or help out on an organic farm (the Foodture website and map can show you if there is an organic farmer near you) or community garden.

• Grow your own food.

• Start a community garden.

• Start food and seed swapping with your friends and family or start a swapping group in your community.

• For farmers looking for further support in their food sovereignty journey, joining organisations such as Talamh Beo opens up a network for food producers to support each other and share knowledge.

CONCLUSION

"Food Sovereignty is about more than just local food – it is about rights – our rights to access land, resources, seeds and knowledge."

–Food Sovereignty Ireland, "Proclamation"

Central to a change in food systems is changing the relationship of citizens to the land. The development of CSAs, allotments and community gardens is central to a future in which those who want to use and take care of the land have access to it.

As farmers and citizens, we can take action to secure our futures, our neighbour's future and the planet's future. The only way to secure our food supplies in times of crisis is to develop self-sufficiency within communities, to allow access to the land for those who wish to grow and sell their produce. While the Irish have an attachment to ownership of the land, we also have a long history of economic precarity on that land, and as more of us lose out on our rights to it to agribusiness, we know that relationship needs to change. Ireland has a long history of struggle for peasants' rights and now it is again time to remember that we all have the right to a plot of our own, especially those amongst us who are deprived of one.

THE VULNERABILITY OF FARMING COMMUNITIES

Food production is one of the most important undertakings on the planet. We take this for granted when the aisles of the supermarket are lined with processed foods that are imported from around the world. The panic that took hold at the outset of the COVID-19 pandemic revealed a lot about our knowledge and trust in the supply lines on which that food travelled. As "consumers", we understand that food companies rely on a vast web of just-in-time supply that is vulnerable to global market shocks.

At the other end of the supply chain, the uncertainty in the dairy and beef industries here in Ireland demonstrates the vulnerability of farmers. The food they have prepared to feed unknown people in other countries will lose its value and go to waste when the supply chain breaks down. Farmers are once again depending on state and EU support to survive the crisis. And while that support may come, it will be to secure the future agribusiness and corporate food regime, not that of smaller farms, their communities and the environment.

CHOOSING FOOD SOVEREIGNTY

Respect, social justice, a democratic community stake in food production, and preservation of the environment – these are the principles of food sovereignty. Farmers and communities alike can change the cycle of uncertainty, stress and destruction when these principles are applied to our relationship with food.

Collectively, we can:

DEVELOP SUSTAINABLE AND RESILIENT APPROACHES TO AGRICULTURE

PRESERVE THE TRADITIONS AND LIVELIHOODS OF SMALL-SCALE FARMERS

END AGRIBUSINESS CONTROL OVER THE COUNTRYSIDE

SAVE THE ENVIRONMENT

TRANSFORM COMMODITIES FOR EXPORT INTO THE FOOD WE EAT

Endnotes – The full reference list with URLs for online texts is available on the Friends of the Earth Ireland website.

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