

Local Food growing and household food insecurity

Authors:

Liz Dinnie; Kirsty Holstead; Jonathan Hopkins; Joshua Msika

Affiliation:

The James Hutton Institute, Aberdeen, AB15 8QH.

Contacting author:

liz.dinnie@hutton.ac.uk

Contents

1. Aims.....	2
2. Background: Local food growing and food insecurity	2
3. Terms and definitions	3
3.1 Community growing.....	6
3.1.1 Allotments.....	6
3.1.2 Community gardens.....	6
3.1.3 Other forms of community growing	7
3.1.4 A Framework for Community Growing Activities in Scotland	8
1.1.1 Summary	9
1.2 Local Food	9
1.3 The community food systems approach.....	10
2. Benefits and drawbacks of local/community food growing	10
2.1 Local food.....	10
2.2 Food growing	12
3. Mapping Local Food Growing	12
4. Policy and local/community food growing	16
4.1 “Recipe for Success” and its Aftermath	16
4.2 “Becoming a Good Food Nation” and its Aftermath	17
4.3 Summary	18
5. Governance of local food growing.....	18
5.1 Support for community growing in Scotland.....	19
6. Further ideas to develop.....	20
7. What happens next?	20

1. Aims

This is the report of Objective 4 in RD3.3.2 of WP3.3 in Theme 3 of the RESAS Strategic Research Programme 2016-2021 – Enquiry into Local Food Growing. This Enquiry explores the nature and extent of local food growing in Scotland. It asks what role local food growing could play in enhancing household food insecurity.

Drawing on literature on local food growing, and interviews with food growers in Aberdeen city and shire, this reports looks at the motivations of those who grow their own food; the benefits, opportunities and challenges faced by local food growers; and policy and institutional support for the practice of local food growing. The report highlights the potential of food growing in creating a more localised food system and the barriers that currently keep food growing and access to healthy and affordable food separate.

2. Background: Local food growing and food insecurity

- Urban agriculture is promoted as a way to create more sustainable food systems around cities that would have multiple benefits of not only tackling food insecurity but would also create greener cities and tackle climate change through reducing distribution miles (Hallberg, 2009).
- While food security activists promote local food growing as the foundation of a more sustainable food system it also faces many challenges and barriers including start-up costs, knowledge, land tenure, crime and vandalism, climate and seasonal limitations, and labour.
- Meaning that the two goals of creating a local food system and increasing access to local and healthy food have been kept separate.
- Uncertainty remains over the role local food growing can play in creating a more localised and fairer food system, and the extent to which local food systems can address food needs in deprived areas and among low-income populations.

There is increasing public and policy concern about the extent of household food insecurity (HFI) in the UK (Tait, 2015a). These concerns centre around the twin issues of affordability and accessibility of healthy and nutritious food (Tait, 2015b). The Fabian Commission defines household food insecurity as the inability to acquire or consume an adequate or sufficient quantity of food in socially acceptable ways, or the uncertainty that one will be able to do so (Tait, 2015a). A lack of official measurement means that it is not known how many people are affected by household food insecurity in the UK (Tait, 2015a). Research which is starting to emerge is disparate with little coherence on theoretical and empirical questions concerning the nature and extent of HFI and what is to be done about tackling it (Lambie-Mumford and O'Connell, 2015). The lack of a body of evidence makes translating research into policy difficult. Much current policy which does exist places the emphasis on personal responsibility for health and economic wellbeing, rather than upstream

approaches targeting poverty alleviation or food system approaches, which some academics and activists see as crucial to tackling HFI (Lambie-Mumford and O'Connell, 2015).

The issues of access and affordability, which lie at the heart of HFI, are difficult for individuals and individual households to overcome (Hallberg, 2009). Food security activists advocate for the adoption of a food systems approach which focuses on the consumption needs of low-income communities on the one hand (often with low access to affordable, nutritious food) and the production of food through a more local and sustainable food system on the other. Taking a food systems approach to understanding and addressing HFI has the additional benefit of connecting HFI with other related social challenges, such as environmental sustainability and community empowerment, that are often left out of discussions on food and poverty (Lambie-Mumford and O'Connell, 2015). Food systems are understood as having multiple actors, and social, economic and health implications that extend beyond agricultural policy to include policy and planning decisions concerning not only production but also processing, distribution and retailing of food and food products (Hallberg, 2009).

Local food growing is promoted by food security activists as a way to create more sustainable local food systems that would have multiple benefits including not only tackling HFI but also creating better, healthier environments and addressing climate change through reducing food distribution miles (Hallberg, 2009). This approach has focused on urban agriculture; little work has been done in and on rural areas to understand how food growing could address food poverty among rural residents, and what other benefits it would bring.

3. Terms and definitions

Despite the popularity of the term 'local food growing' with activists and policy-makers alike, it is frequently used to refer to several distinct practices. 'Local food growing' is used to refer to both commercial and non-commercial activities, which can be managed by individual(s) or by a community. Table 1 shows how these criteria create a four-fold classification for understanding local food growing activities:

	Commercial	Non-commercial
Privately managed	Market gardening, horticultural enterprises	Allotments, home growing
Communally managed	Community-supported agriculture (CSA)	Community gardens and orchards

Table 1: Local food growing classification

The term 'community growing' is often used interchangeably with local food growing where it tends to be used to refer to activities taking place in community gardens and orchards, as well as to community-supported agriculture schemes. 'Community growing' is also often used to refer to allotments, although the latter are usually composed of many individual plots, which may or may not be managed collectively through a members association (Greenspace Scotland, 2011).

'Local food' (i.e. minus the growing part) is also used regularly but refers mainly to the commercial end of the spectrum. It also tends to include non-horticultural production such as dairy, eggs or

meat, and can extend to include processing and retail. Moreover, local food growing activities are often included in academic studies of “alternative food networks” (AFNs) because modes of food production that forge closer links between food producers and consumers differ from, and challenge the conventional food supply system. Local food is not only about geography however, although the extent to which food businesses sell and source within a local area is important. Local food is also concerned with social proximity and trust between producer and consumer (or co-producer or citizen). It is therefore a relationship not just a commodity, and the way local food is traded preserves the meaning and story of the food. Produce that comes under the umbrella of local food is typically unprocessed or minimally processed, with no hidden ingredients, and is produced on a human not industrial scale. The term ‘short food chain’ (SFC, or ‘short food supply chain’ SFSC) is increasingly used instead of local food to draw attention to the social relationship through the proximity of the producer and consumer, rather than geographical distance covered (Scotland, 2014; Marsden, 2000). Within the European Union (EU), SFCs are “understood as being the chains in which foods involved are identified by, and traceable to a farmer and for which the number of intermediaries between farmer and consumer should be minimal or ideally nil” (Kneafsey et al, 2013:13). There are many different types of SFCs such as on-farm direct sales, farmers markets and shops, delivery schemes and more formal partnerships between producers and consumers (Kneafsey et al, 2013). As the global food system expands, consumers have become disconnected from the food producers, meaning consumers know less about where their foods come from whilst farmers have seen the value of their produce decrease, and the value of the foods sold by large businesses, retailers and other intermediaries increase (Kneafsey et al, 2013). Therefore, the utility and applicability of SFCs as models to circumvent this disconnect, and a means to foster food security has come to the attention of policy makers and researchers over the past years (Kneafsey et al, 2013). The Campaign to Protect Rural England (CPRE) (2012) report in this regard offers a participative model for mapping the scale and value of local food webs in England which could be emulated in Scotland. They define a local food web as “the network of links between people who buy, sell, produce and supply food in an area. The people, businesses, towns, villages and countryside in the web depend on each other” (CPRE, 2012). The CPRE report, based on the study of 19 local sites, strengthens the importance of local food webs through several findings, e.g. “local food sales through independent outlets support total turnover of £132 million a year”. Overall, the report highlights that sustainable local food webs create more choices on where to purchase quality foods. According to CPRE, they make it possible for people to support local producers and ultimately the local economy and to eat seasonally, as well as to reduce food miles. Furthermore, being anchored in the local community, small food providers may act as social hubs, which can offer for example personal services suited to people’s needs in the community, and informal support for the elderly or less mobile people; as well as support local good causes (CPRE, 2012). The report provides ten recommendations for government, local authorities, food retail businesses, local communities and individuals to strengthen the engagement in local food webs such as “Local authorities and other public bodies should form partnerships in their areas to develop food strategies and action plans” (CPRE, 2012).

Local food can be distinguished from ‘locality’ food. The first refers to foods that are produced, processed and retailed within a defined area, usually 30-50 miles radius of retail, while the second are foods that are produced and processed in a particular place but often circulate more widely (e.g. Stilton cheese) (Ilbery et al., 2006). Even in the peer-reviewed literature, unclear and inconsistent usage of terms and concepts relating to local food remains problematic (Tregear, 2011).

Given the multiplicity of both terms and definitions, taking account of the context for the document at hand is crucial when reviewing the academic, activist and policy literature on 'local food growing'. Likewise, it is important when writing to be explicit about the area of interest and to provide a clear definition and examples to avoid confusion.

In this report we use the term 'local food growing' to refer to both community and commercial enterprises. We often distinguish between the two where research findings point specifically to one or the other.

The policy relevance of local food growing has increased recently due to increasing food prices leading to concerns over food security (Revoredo-Giha et al.), and public health scares about the safety of the food supply chain. Local food growing is also a relevant area for policy because it can make a contribution to regional and rural development (Marsden, 2000). The relationship between local food growing and household food insecurity has not been explored in detail. Recent reports into the extent of food poverty have advocated for greater community responses to tackle the problem, with programmes that offer a range of services and training and not just free food handouts (Douglas et al., 2015a; Douglas et al., 2015b). However there are a number of caveats that accompany food growing as a potential solution to household insecurity. The suggestion that community gardening and growing schemes enable all community members to become more food secure requires some investigation to provide the evidence to inform its use in addressing this problem (Douglas et al., 2015a). There is therefore a need for research to find out if community gardens and growing schemes make a difference to HFI or not. Community gardeners may not see addressing HFI as their responsibility as many gardens are created for other reasons, such as being outside, having a shared community space or growing and eating more local produce.

Evidence from community food initiatives on the role which activities such as food growing can play in addressing HFI are currently lacking. In Scotland there are a number of community food hubs which aim to use food to tackle inequality (Scottish, 2014) Other examples of where such action points have been implemented are the US Supplemental Nutrition Assistance Program (SNAP) (USDA, 2017), and the Brazilian Zero Hunger strategy (FAO, 2011). SNAP, which has been serving millions of people on low incomes over the past 40 years, helping to prevent food poverty, reportedly supports local economies (USDA, 2017). According to the USDA (2017), "[e]very time a family uses SNAP benefits to put healthy food on the table, it benefits the store and the employees where the purchase was made, the truck driver who delivered the food, the warehouses that stored it, the plant that processed it, and the farmer who produced the food. Each \$1 billion increase in SNAP benefits is estimated to create or maintain 18,000 full-time equivalent jobs, including 3,000 farm jobs." The Zero Hunger Strategy sets out a number of policies aimed at alleviating the experience of hunger of 44 million people living below the poverty line in Brazil (FAO, 2011). Despite the local and home growing landscape is different in Brazil, the Zero Hunger Strategy sets an example for a range of policies in this area. For example, it addresses support for family farming, the connection between local agriculture and production, initiatives such as Farmers Fairs and fresh food home supply, as well as training courses for establishing vegetable gardens, etc. Furthermore, in the UK, there are some restaurant initiatives, which are aimed at reducing food waste, making food more affordable and promoting an understanding for the value of food. For example, the "Real Junk Food Project" in Sheffield uses surplus foods and sells it at a "pay as you feel" rate (Real Junk Food Sheffield, 2017).

There is a long social and cultural history of food growing being used to tackle social inequality, food security and public health (McKay, 2011). More recently interest has turned to the social, environmental and ecological benefits of urban gardening and urban agriculture, including the illegal activities of guerrilla gardeners (Adams and Hardman, 2013; Dennis et al., 2016).

The next section describes different forms of community growing and commercial local food production in more detail, and outlines their extent in Scotland.

3.1 Community growing

The study by Greenspace Scotland (2011) found that community growing happens in Scotland in a range of forms and models. Allotments are the most prevalent form of community growing but other models such as community gardens, community orchards, land share, community supported agriculture and workplace growing can also be seen across the country.

3.1.1 Allotments

Allotments are the most popular form of growing outside the private garden. Allotment plots are rented from allotment providers to allotment holders who can then use the space (typically between 200-250 square meters) to grow their own vegetables. In 2007, the Scottish Allotments and Gardens Society recorded 211 allotment sites containing 6,341 plots. The audit Finding Scotland's Allotments (2007) found that 69% of sites in Scotland are owned by the local authority. Other plot owners include universities, various trusts and estates and private land owners. The long waiting lists for local authority allotment plots are testament to the popularity of this form of grow your own. In fact over 3,000 people were on allotment waiting lists in 2007. Today this number has increased to around 5000 people. Glasgow city has the largest waiting list today with around 1000 people in total (Greenspace Scotland, 2011).

Allotments are legally protected in statute, and while this gives them a level of security not enjoyed by other forms of community gardens, it also puts pressure on landowners, mainly local authorities, looking to capitalise on their resources, to sell the land for other purposes (McKay, 2011). It may make local authorities unwilling to create new allotment spaces, leading to increasing waiting lists as popularity grows while allotments become harder to obtain, particularly in urban areas. While the rent on an allotment is usually well below market value, produce cannot be sold for profit.

Restrictions in the sale of produce from allotments mean growing on such sites is only for personal consumption. The plot holder must set up a private enterprise if he/she wishes to sell for profit. . Such sometimes restricted possibilities for setting up allotment spaces for the wider community, benefitting the gardeners and their communities, means some allotment food production is likely to be viewed more as a leisure-based activity rather than a commercial enterprise. Some allotments do offer their produce for donations which is then invested back into the allotment upkeep. Although the potential production from allotments is great, its impact on vegetable imports and commercial growers would not appear to be significant (McKay, 2011)

3.1.2 Community gardens

After allotments, community gardens are the next most common type of community growing in Scotland (Greenspace Scotland, 2011). Community gardens are locally managed pieces of land that are developed in response to and reflect the needs of the communities in which they are based (Greenspace Scotland, 2011). But not all community gardens are associated with growing food, some are developed as sites of biodiversity or recreation. Some may include some fruit and vegetable

growing but not as the main priority. Unlike allotments, community gardens tend to arise opportunistically because there is no legal requirement for local authorities to provide these spaces. Community gardens tend to be less formally organized than allotments, are variable in size and can be linked to other community activity such as a community centre or school (Network, 2015). Land for community gardens can be owned or leased, and gardens may be linked to other initiatives such as education, health promotion, skills or employment creation. Community gardens can sell produce to offset costs and/or contribute to wider healthy eating initiatives.

Interest in creating community gardens, particularly in areas of disadvantage has been encouraged by the activities of third sector organisations seeking to promote health and well-being (Network, 2015). The Federation of City Farms and Community Gardens identified 38 community gardens with growing space across 17 local authority areas (Greenspace Scotland, 2011). In 2015 CSGN identified at least 84 community gardens in the SCGN area, but suspected that the figure was actually greater. Between 2010 and 2015 the number of sites (in SCGN area) grew by 37 which represents a 79% increase. This popularity may be due to long waiting lists for allotments, and as a localised response to vacant and/or derelict land. It may also be due to public funding initiatives such as the Climate Challenge Fund, discussed below.

Today, in Scotland, community gardens are supported by grants and funding and are widely seen as social projects addressing a variety of local and societal issues, from community cohesion to tackling climate change. However, the community garden movement was born out of grassroots discontent with urban decay and lack of greenspace in cities (McKay, 2011). Communities or individuals would occupy derelict or abandoned land to create a space not only for food growing but for other communal activities and to reduce crime. Such spaces were often temporary, and at risk of being reclaimed by the authorities for 'development'. Like their 1970s predecessors, present-day community gardens fulfil multiple social functions and also raise the contentious issue of land rights and land ownership which can bring community groups into conflict with land owners and planners for control of public and private space.

Ashram Acres was an example of an innovative community growing project born out of urban social deprivation and that sought to tackle problems of multiculturalism, environmental degradation, wellbeing and diet (Shaw, 2016). The large gardens of several houses were dug up to grow vegetables, including Asian and West Indian varieties, that were either not available locally, or were unaffordable for the unemployed residents. The community's needs for food were met through collective activity that although it generated no additional GDP, was fulfilling for those involved.

3.1.3 Other forms of community growing

Above we note the two most prominent forms of community growing in Scotland. Other less common modes also exist such as Community orchards (orchards managed by communities and open to the public to help themselves) and Community supported agriculture (where local people invest in a farm or crop in advance of the harvest, thus guaranteeing an income for the farmer and shares the risk amongst the investors. In return the investors get a share of the harvest, often this is a vegetable box but it could also be fruit, eggs or meat). There are also a few 'community farms', which vary in scale, approach, status and ownership and may in practice closely resemble some of the models described above.

‘Edible landscapes’ is a term covering community growing in unexpected spaces, such as civic areas in towns and cities. Although its origins may have been unauthorised, this form of community action is in places now receiving local authority support as authorities realise that it contributes to ‘gentrification’ and making use of unused land. One example is the Incredible Edible Network (<http://incredibleediblenetwork.org.uk/>) which aims to increase the amount of food grown and eaten locally, as a means of improving the local community.

So-called ‘guerrilla gardening’, or direct community action, concerns unauthorised or illegal planting on public or unused land (Greenspace Scotland, 2011). The term guerrilla gardening covers technically illegal activities of planting, often to make a political point (McKay, 2011). Potential problems of illegal planting include growing on contaminated land, and trees which might impact on other functions, such as overhead cable maintenance or drainage (Greenspace Scotland, 2011). While guerrilla gardening activities can touch multiple contemporary questions concerning land ownership and access, food production and consumption, biotechnology, the environment, sustainability, grassroots politics and empowerment, they are unlikely to lead to long-term solutions, which need more careful consultation and planning with those involved.

3.1.4 A Framework for Community Growing Activities in Scotland

Aiming to find comprehensive information on the extent of community growing activities, and the availability of allotments, the Central Scotland Green Network (CSGN) (2011) report was identified. The report depicts the extent of publicly accessible community growing within central Scotland, including community orchards, community gardens and allotments. The report maps detailed information on the 153 active Local Authority administered allotment sites, 47 community garden projects and 34 community orchards within the CSGN area. Furthermore, the report explores the demand for community growing sites from a variety of perspectives. For example, they find that there are “at least 5,000 people on Local Authority allotment waiting lists. In terms of the ratio of resident population per plots, all of the CSGN area’s Local Authorities fall short of the minimum target set by Scottish Allotments and Gardens Society of 100 people per plot. Indeed, even the best performing areas have well over 350 people per plot in this respect” (CSGN, 2011). The below table depicts the report’s main findings as a starting point towards creating a framework for community growing activities in Scotland.

Issues explored	Findings
Overview of Community Growing within the CSGN area in 2011	<ul style="list-style-type: none"> • 47 community garden sites • 34 community orchard sites • 153 active allotment sites, with a total of 4,835 plots • 140 hectares of allotment space • a minimum of 5,088 people on waiting lists for an allotment • Provision for community growing is greatest in Edinburgh and Glasgow and poorest in East Dunbartonshire • Edinburgh has the highest number of allotment plots per head of population

Demand for Community growing	<ul style="list-style-type: none"> • at least 5,000 people on Local Authority allotment waiting lists • In terms of the ratio of resident population per plots, all of the CSGN area's Local Authorities fall short of the minimum target set by Scottish Allotments and Gardens Society of 100 people per plot. Indeed, even the best performing areas have well over 350 people per plot in this respect
Distribution of growing spaces in respect to the proximity of local residents	<ul style="list-style-type: none"> • over 1.6 million people living more than 2km away from an allotment • over 2.5 million people living more than 2km away from a community garden • just under 2.8 million people living more than 2km away from a community orchard
Relative deprivation of people living more than 2km from a community growing space. (15% of the SIMD dataset - commonly referred to Severely Deprived Areas (SDA) -> This refinement of data analysis was able to provide greater insight regarding the locations in which a growing space project would have greatest impact for the people in most need.)	<ul style="list-style-type: none"> • 212,000 SDA residents who live more than 2km away from an allotment • 381,000 SDA residents who live more than 2km away from a community garden • 278,000 SDA residents who live more than 2km away from a community orchard • Generally, the results of this analysis indicate that the Glasgow Clyde Valley area has the highest number of SDA residents who live more than 2km from a community growing project. • Conversely, Lothians & Fife area has comparatively more growing space within 2km of its' SDAs.
The Local Authorities which appear to be particularly disadvantaged in terms of growing spaces and the proximity of SDAs	<ul style="list-style-type: none"> • Clackmannanshire, East Ayrshire, Glasgow, Inverclyde, North Ayrshire, North Lanarkshire, South Lanarkshire and West Dunbartonshire. • Glasgow stands out due to the high number of SDA residents who live far from growing spaces.

1.1.1 Summary

Community food growing emerges in different forms. In this section we have described the main forms that occur in Scotland. Future phases of this enquiry will be to examine in more detail the opportunities and constraints on local/community food growing; the motivations and perceptions around local/community food growing and which community growing models (if any) have the greatest potential to contribute to enhanced household food security.

1.2 Local Food

- Local food production mainly refers to commercial food growing activities, and, as noted above, can also encompass the wider ideas of short supply chains and alternative food networks. Local food retailers tend to be involved in the primary production of their produce. They can be small producers that only sell locally or larger producers that sell a proportion of their production locally. While community food growing tends to focus on fruit and vegetables, local food includes meat, dairy, eggs. Foraging for seaweed, mushrooms and

other wild food stuffs is becoming a common part of local food, but it is usual for local food entrepreneurs to add value by processing these, and other food stuffs to create a final product (e.g. breads, pastry, jams, and chutneys).

- Local food takes a range of retail models. Farmers markets and farm shops are among some of the most common. Direct sale from the food producers is a common aspect of local food.
- Other ideas - Culturally appropriate food is a term which is discussed in relation to local food and community food practises and is an essential component of WHO's definition of food security. Culturally appropriate food refers not to an item of food but an amalgamation of all the rituals and practices central to its production and consumption. Food is only culturally appropriate in context; the same food, eaten with different people, in a different place and a different time, may hold an entirely different cultural meaning and connotation. Therefore, speaking about culturally appropriate food is not speaking just about what people eat but about how and with whom they eat (Aronson, 2014)

1.3 The community food systems approach

(from slides sent through by Bill & Jaqui – needs expanding – is this the right place to discuss?)

Roots of Food Insecurity are embedded deep within our social, economic and food production structure, those in the food security movement are now focusing on a food systems approach to increasing Community Food Security (Canadian Dieticians 2005; McCullum 2005; Wakefield 2013). In Community Food Systems, the food system involves multiple actors and relationships, including relevant government policies, economic security, the production, processing and marketing of food and food access by households and communities; all are points for intervention (Neff 2009; Gillespie 2000).

According to McCullum, “a combination of practical activities and policy development is needed to build community food security” (McCullum 2005).

Food growing is included in interventions in food availability, for example to facilitate urban agriculture.

Can community food growing be seen as part of a community food systems approach to tackling food insecurity/enhancing food security?

2. Benefits and drawbacks of local/community food growing

This section notes some of the benefits and drawbacks of local food provisioning, and food growing activities, identified from the literature. Although it is by no means an extensive literature review, it begins to unpick some of the ideas that have been used to support the benefits of local food and food growing. We probably need to focus this section more around dietary and nutrition benefits provided through sourcing local food and grow-your-own, in order to show the relation to food insecurity at the household level. From the food growing literature we have looked at, this relationship is under-reported.

2.1 Local food

The benefits of local food include reduced food miles and carbon emissions, creating a stronger local economy, connecting producers and consumers and better understanding of how food is produced.

For example, Community Supported Agriculture (CSA) schemes are considered empowering because they connect farmers with customers, spreading the risks between both, and provide a space where non-growers can learn about food production. Other have pointed to increased social capital through CSA through improved relationships and trust building with other participants and farmers (Sharp and Smith, 2003).

Some studies have looked at behaviour motivations for involvement and engagement in local food. Many studies of local food often romanticise the notion, studies show more pragmatic motivations for involvement. Vendors involved in farmers markets state better profit margins as the main motivation for selling projects (Kirwan, 2006). Winter (2003) shows that farmers who engage in direct selling often do not do so for sustainability reasons, and may continue with pre-existing intensive production regardless of the shorter supply channels. Shoppers on the other hand give access to reasonably priced, fresh, high quality food as the main reasons for consuming local foods purchased at farmers markets (Trobe, 2001).

Tregear (2011) notes that criticism of local food lies along several lines of academic enquiry including that of political economy, rural sociology and 'modes of governance and networks'. Political economists for example argue that work in the field of local food and AFN, does not take sufficient accounts of the wider political and economic forces at play and suggest that research which proposes local food as means of community integration and development often positively frame and overlook inequalities and injustices. Some point to the exploitation of certain groups of labour (e.g. immigrant farm workers, women) and even argue that localised food initiatives may maintain and intensify pre-existing inequalities between participants. Hinrichs and Allen (2008) identify some Buy Local campaigns, where disadvantaged groups falling outside a campaigns' defined constituency end up excluded from the network. While research on local food often gives the impression of positive impact on welfare, looking to gender studies of the labour impacts of local food shows that food purchased and produced locally tends to be fresh and unprocessed which requires a larger time and effort which can often fall on the shoulders of the women of the household (Little et al., 2009). Other studies have highlighted the problematic, ambiguous and socially constructed aspects of 'local' and the tensions and exchanges this creates in specific localities (Hinrichs, 2003). However, there is reason to also question such accounts. Whilst short food chains and local food will only have a minor role in directly tackling household food insecurity, it is arguably a more dignified, empowering and healthy approach than some current models of redirecting food to people on low incomes, such as food banks. There is a number of projects in Scotland whose positive feedback and outcomes would open up quite a different discussion. For example, the Granton Community Garden Project, in one of North Edinburgh's most economically deprived social housing estates, is community driven and has flourished over the past seven years, now involving 100 locals growing foods at five different growing areas. Besides food growing activities, the Granton Community Gardeners also organize local activities, and have run a pilot Community Café providing two meals per week free of charge to their community using the local produce (Grow Your Own Scotland, 2017). There is relatively little research on the nutritional benefits of a local diet, affordability or accessibility (in an urban context). The general perception of local food outlets is that they stress the quality of produce, and prices are higher than those in supermarkets, but we have little empirical evidence of this – one exception is the study by Lucan et al (Lucan et al., 2015) in the US which concluded that 'farmers' markets may offer many items not optimal for good nutrition and health,

and carry less-varied, less common fresh produce in neighbourhoods that already have access to stores with cheaper prices and overwhelmingly more hours of operation' (p.23).

2.2 Food growing

The benefits of food growing are closely linked to benefits of gardening and greenspace use, and focus around health and wellbeing, including mental health, (Buck, 2016; Nordh et al., 2016; Ohly et al., 2016), politics and urban transformation (Certomà and Tornaghi, 2015), environmental benefits, cohesive neighbourhoods and enhanced food security and food justice (Miller, 2015), and economic impacts (Quayle). Authors have also critiqued food growing projects, particularly in urban contexts, for the ways in which they reproduce exclusions and neoliberal regimes (Miller, 2015; Barron, 2016). Often positioned as 'alternative' systems of food production, authors have argued that the differences in 'local' food growing schemes might make it difficult to challenge social justice (Allen et al., 2003). With few exceptions, little academic study has been carried out to examine the relationship between food growing and household food security.

Studies looking at the relationship between food growing and diet mostly come from the US and Canada, which is considered to be more 'alternative' than other areas in how local food activities and networks are enacted (Allen et al., 2003). Napawan and Burke, for example, examine the potential of residential lots to provide for the calorific needs of residents within the San Francisco Bay Area, considering existing lot size and configuration (Napawan and Burke, 2016). (Badami and Ramankutty, 2015) take up this theme of land requirement in the context of urban agriculture and its potential to address food security and poverty alleviation.

Studies into food growing focus on it as an urban phenomenon; little mention is made of grow-your own schemes in a rural context. For example, (Partalidou and Anthopoulou, 2016), (Nordh et al., 2016) focus on urban gardening, (Badami and Ramankutty, 2015) on urban agriculture

Studies focusing on community growing as a form of renewed localism suggest rather normatively in some cases that new political processes and modes of production are fostered through these activities, as well as modes of belonging and place-making e.g. (Seyfang, 2006; Partalidou and Anthopoulou, 2016; Nordh et al., 2016). Others argue however that such activities do not necessarily create new forms of political processes, but act to support existing neoliberal rationalities through recreating subjectivities and processes of privatisation and reduced state welfare provision, resulting in a polarised debate over the potential of (urban) food projects to reduce inequalities (Barron, 2016; Miller, 2015).

3. Mapping Local Food Growing

- This section examines whether there are spatial patterns to community food growing. Using this type of spatial data, we could then look to explain rural/urban patterns, whether food growing is related to deprivation, or to other factors such as local authority policies. In this document this is an introduction to mapping of what might be possible.
- An audit of community growing activities in central Scotland was published in 2011 and updated in 2015 (Network, 2015). The update report states that anecdotal evidence would indicate that there is an increase in community growing activity (across the UK). In Central Scotland there are around 233ha of community growing space, in 2015. The vast majority of this is allotments (72%)

with the rest taken up as community gardens (12%) and orchards (16%). The average size of a community growing space is around 0.6ha, with wide variation depending on the primary function of the space. Allotments tend to be the largest (at around 1ha) and community gardens the smallest (0.3ha). In terms of numbers, over half of all sites are allotments (53%), just over a quarter (28%) are community gardens, with evidence that this is the fastest growing area since 2011. Nearly three quarters of community growing sites are in urban areas, and nearly one fifth in accessible rural areas. This raises questions about the extent of community growing activities in remote rural areas.

- Over 40% of all the allotment plots are in the council areas of Edinburgh and Glasgow (Greenspace Scotland, 2011). There are some particular ‘hotspots’ for community growing activities, namely Edinburgh and Glasgow. Some areas appear to have no such activities – namely East Dunbartonshire and Falkirk. Figure 1 shows potential sources of locally grown food across Scotland, including markets, city farms, farm outlets, community gardens and allotments.
- Although some geographical analysis has been carried out on community growing in Scotland (Greenspace Scotland, 2011a; Central Scotland Green Network, 2015), information on the locations where local food growing activities (of the types outlined within Section 2) could be taking place is available in several additional sources. Examples of these are shown in Figure 1. The location and size of allotments and community growing areas can be identified from greenspace mapping¹; relevant online inventories of farm shops² and city farms/community gardens³ are available, and other locations can be identified using large spatial datasets⁴. Further information sources (not shown within Figure 1) which may be used to identify the production of local food are:
 - Information on registered companies, available through the Free Company Data Product produced by Companies House⁵. This includes information on the Standard Industrial Classification⁶ associated with different organisations, which can be used to identify, for example, organisations involved in the manufacture and retail of food products. This approach has been used to identify companies involved in food and drink manufacture in Scotland within the previous RESAS Strategic Research Programme.
 - Data from the EU Farm Structure Survey (The Scottish Government, 2013). This includes information on farm diversification and “other gainful activities” including “processing farm products”.
 - Data on registered Scottish Charities⁷
- Therefore, diverse information sources could be combined and analysed to identify locations where local food growing activities are (or could be) taking place, and identify regions of Scotland where the frequency of these activities is particularly high relative to population size or geographical area. Inevitably, the work produced is likely to be a partial overview of all activities;

¹ Online description available at <http://greenspacescotland.org.uk/1scotlands-greenspace-map.aspx>

² http://www.sruc.ac.uk/info/120460/think_local/998/scottish_farm_shops

³ <https://www.farmgarden.org.uk/your-area/scotland>

⁴ <https://www.ordnancesurvey.co.uk/business-and-government/products/addressbase-premium.html>

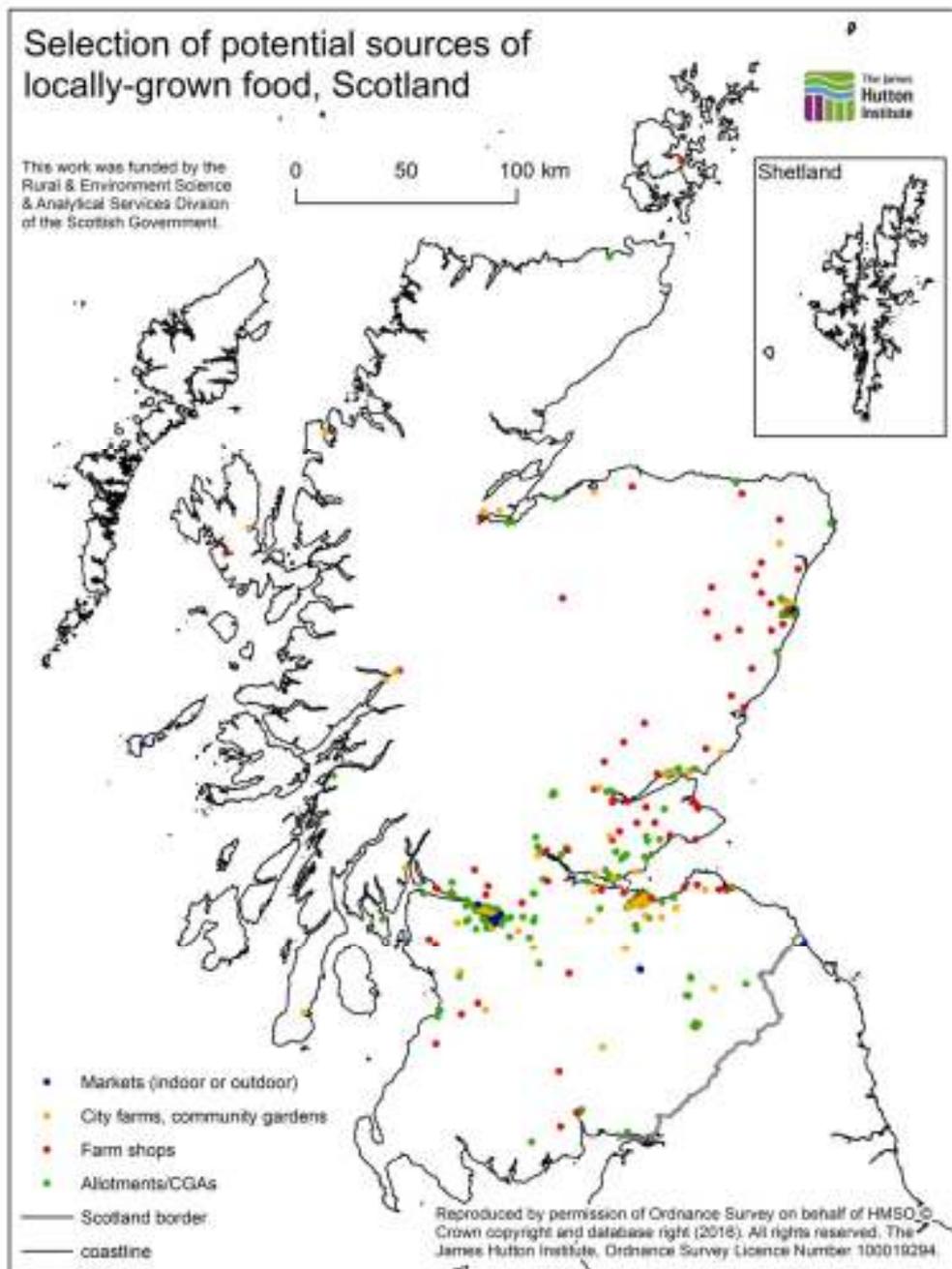
⁵ http://download.companieshouse.gov.uk/en_output.html

⁶ <http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/standard-industrial-classification/index.html>

⁷ <http://www.oscr.org.uk/charities/search-scottish-charity-register/charity-register-download>

however, it would complement the qualitative research by providing a broader overview of food growing.

Figure 1: Potential sources of locally grown food in Scotland



Scotland/England border and coastline from Ordnance Survey Strategi® data.
 Other data sources - Markets: derived from Ordnance Survey AddressBase ® Premium data. City farms, community gardens: derived from Federation of City Farms & Community Gardens inventory available at <https://www.farmgarden.org.uk/your-area/scotland>. Mapped based on postcodes. (sourced from inventory and online search) linked to Ordnance Survey Code-Point® data. Farm shops: sourced from SRUC data on Scottish Farm Shops available at http://www.sruc.ac.uk/info/120460/think_local/998/scottish_farm_shops (Google Maps KML data). Allotments/CGAs (Community Growing Areas): derived from Scotland's Greenspace Map. Reproduced by permission of Ordnance Survey on behalf of HMSO. Crown copyright and database right 2011. All rights reserved. Ordnance Survey Licence number 100002151.

4. Policy and local/community food growing

This section provides an overview of the development of 'local food growing' policies in Scotland. Food growing contributes to a wide range of policy priorities including food, healthy eating (Scottish Diet Action Plan), physical activity (Let's Make Scotland More Active), wellbeing (Towards a Mentally Flourishing Scotland), tackling health inequalities (equally well), sustainable communities and climate change, regeneration and placemaking, and biodiversity and integrated habitat networks (Greenspace Scotland, 2011). The Scottish Government 'Community Empowerment Act 2015' requires that local authorities develop, promote and review food growing strategies (pp. 104-105).

In the following section we present an outline of food growing in the context of the two main Scottish government food policies in the past decade, "Recipe for Success" (Scottish Government 2009) and "Becoming a Good Food Nation" (Scottish Government 2014).

4.1 "Recipe for Success" and its Aftermath

In 2007 the Scottish Parliament resolved that Scotland should have a national food policy. The ensuing consultation, analysed by Leat (2008), contributed to "Recipe for Success", the policy document published by the Scottish Government the following year. This policy highlights the importance of food in Scotland, arguing for the economic, social, cultural and health aspects of food diet and nutrition. It noted that: "The food and drink industry is a key sector of Scotland's economy. It generates over £9.5 billion per year for Scotland and employs over 360,000 people from farmers and fishermen to shop assistants and waiters" (Scottish Government 2009, p.iv) and also emphasised that "the importance we attach to our food and drink reflects its significance to our health and wellbeing, its contribution to our environment and its meaning and culture in the communities which make up Scottish society." (Scottish Government 2009, p.iv).

The policy mentions local food growing in the context of 'Access and Affordability'. However, the link to household food insecurity is not made explicitly, with emphasis placed instead on health, wellbeing and the environment:

"It is clear that more people are interested in growing their own fruit and vegetables – because of the potential health, wellbeing and environmental benefits of doing so. Since last year we have awarded almost £700,000 to grow your own and community food projects through the Climate Challenge Fund. We have also been liaising with public sector bodies and Allotment organisations about how we can all take the grow your own agenda forward." (Scottish Government 2009, p.28)

Two action points are identified on the next page:

"Ensure that allotments and 'grow your own' projects are strategically supported."

"Produce practical advice and best practice guidance that will appeal to public bodies, communities and individuals to help them develop local 'grow your own initiatives.'" (p. 29)

The Climate Challenge Fund (CCF) has been a key funder of community-based growing activities since its inception in 2008. In its aims to support projects that reduce emissions associated with food by lower carbon diets by encouraging local food growing, it has provided grants to community groups supporting 59 growing projects in 24 local authority areas (Greenspace Scotland, 2011).

One such project for example 'Charlies plot', funded by the CCF, is a project led by young people in Methllhill, Fife, and aims to teach people how to cook and grow their own fruit and veg, learn about climate change and share that information with their community. They received a grant of around £30,000 to pay for costs of set up equipment, wages and advertising and promotion.⁸ Further examples of community related food growing activities that have been funded by the CCF include the creation of maps to promote local producers and retailers that include all retailers selling local produce; events and information sessions including courses and classes on cookery, gardening and composting and Produce, and seed swaps. The promise to liaise with public sector bodies and Allotment organisations to take the "grow your own" agenda forward was also taken up. In June 2009, Roseanna Cunningham, Minister for Environment and Climate Change, established the Grow Your Own working group. This working group published a report (Mollison et al. 2011), comprising 27 recommendations submitted by its members to encourage 'Grow your Own' activities across Scotland. Simultaneously, Greenspace Scotland were commissioned to research the state of community growing in Scotland (Greenspace Scotland 2011b) as well as to develop a range of support materials for individuals interested in starting new community growing projects (Greenspace Scotland 2011a).

Overall, "Recipe for Success", the Climate Challenge Fund and the Grow Your Own working group were the main Scottish Government-led policies to support local food growing activities in the period from 2009-2011. They were mainly focused on "the potential health, wellbeing and environmental benefits" (Scottish Government 2009, p.28) of these activities and did not explicitly make the link to household food insecurity.

4.2 "Becoming a Good Food Nation" and its Aftermath

In June 2014, the Scottish Government launched a discussion document entitled "Becoming a Good Food Nation" (Scottish Government 2014), inviting stakeholders across Scotland to help them update "Recipe for Success" and to provide suggestions as to how the vision of a "Good Food Nation" could be achieved in Scotland by 2025. The document outlined 5 key priorities: Food in the public sector; A children's food policy; Local food; Good food choices; and Continued economic growth. The consultation responses were analysed by Platts and Waterton (2015a; 2015b). The respondents agreed particularly with the priority areas of "food in the public sector" and "local food". Respondents also pointed out an additional priority area: "tackling food poverty should be central to any aspiration Scotland had to be a Good Food Nation" (Platts & Waterton 2015a, p.1), the first mention of food poverty in a food policy context. Many suggestions were put forward as to how local food growing could be encouraged and food insecurity could be addressed. However, the responses do not seem to make a strong link between these two areas.

The Scottish Government has not published a new food policy document to replace "Recipe for Success" but the 2014 consultation has led to the creation of the Scottish Food Commission (Scottish Government 2015). The Food Commission lists the following priority areas: "Food in the public sector, Children's food policy, Local food, Good food choices, Continued economic growth, and from the consultation responses – access to affordable food." The commission's first report was published in February 2016 (Scottish Food Commission 2016). In it, the commissioners state their 3 main aims: "Re-write the vision; Develop progress indicators; [and] Create a 'movement for change'" (Scottish

⁸ <http://www.keepsotlandbeautiful.org/media/338817/charlies-plot.pdf>

Food Commission 2016, p.5). The vision, the indicators and the “Good Food Nation” are all still under development as of July 2016 and more detail can be found in the report. The Scottish Food Commission will probably be a key shaper of food policy going forward and, if the ‘movement for a Good Food Nation’ materialises, they might also be key actors in the field.

In addition to the Scottish Food Commission, whose work will continue into the medium-term future, the Scottish Government also set up an Independent Working Group on Food Poverty. Their report, entitled “Dignity. Ending Hunger Together In Scotland” “makes a number of recommendations relating to how the income of people living in food insecurity can be increased, the quality of food provision can be improved, while it is still required, and more transformative community food models can be established” (Johnstone & Independent Working Group on Food Poverty 2016, p.3). Local food growing is given several mentions as a possible ‘transformative community food model’ but always in the context of other actions. This report will likely shape future action to address food insecurity.

4.3 Summary

In this section, we have briefly reviewed the two main Scottish Government food policies and highlighted elements of particular interest to local food growing and enhancing household food security, and the relationship between the two. While it is obvious that local food growing has established itself as a key area of action (with the caveat that definitions are still unclear – see chapter above), and that food poverty has been firmly placed on the food agenda since 2014, the idea that the former could address the latter is not really in evidence. Indeed, the Independent Working Group on Food Poverty states: “We have been clear throughout that the causes of food insecurity and hunger are not, primarily, about a lack of food, but a lack of money” (Johnstone & Independent Working Group on Food Poverty 2016, p.36). However, we note the paucity of evidence regarding the relationship between local and community food growing activities and mitigating household food insecurity and hope to shed light on this area. One avenue for further investigation in this regard would be to examine food poverty alleviation schemes, as well as food growing initiatives, to see if they include local food growing alongside other activities, such as bulk purchasing, food education and cooking.

5. Governance of local food growing

Much local food growing is managed through local authority support through the provision of allotment sites as the most popular form of food growing and cultivation outside of private gardens. In recent years a large number of voluntary, third sector and charitable organisations have either emerged or have been co-opted into managing food growing activities as public funding has become tighter. Allotments, community gardens and community orchards are often/usually organised as independent associations, with their own constitutions and articles of agreement; they are supported in this management through network organisations such as the Federation of City Farms and Community Gardens, a nationwide organisation of around 80 members. Network organisations offer support with legal advice (e.g. over tenure and leases) as well as horticulture and peer-to-peer advice.

5.1 Support for community growing in Scotland

Greenspace Scotland (2011) carried out a stakeholder mapping exercise to show the range of community growing stakeholders in Scotland. This list is not exhaustive but shows a range of organisations. In total the study identified over 100 organisations grouped into 6 main categories that operate in a number of sectors and support community growing in different ways. These include:

- Enabling organisations - those directly supporting, generating and facilitating community growing action on the ground (i.e. Fruitful Schools or Federation of City Farms and Community Gardens);
- Campaigning and membership organisations - those involved in developing, promoting, informing and influencing the community growing agenda (such as Nourish or National Trust Scotland);
- Government and national agencies/organisations fulfilling a range of different roles including policy development, advisory, guidance and funding support (i.e. Greenspace Scotland, Central Scotland Green network);
- Skills and training providers - professional training and qualifications providers, as well as less formal community based skills and training delivery (for example SRUC, Royal Horticulture Society);
- Land controllers - key land holders who have the potential to provide land for community growing and those who can facilitate access to land and land holders (i.e. universities, and social housing providers) and finally,
- Funders - offering opportunities for funding community growing projects (i.e. Big Lottery Fund or the Climate Challenge Fund).

Local Authorities play a particularly important role in community food production, especially through the provision of land for allotments (the most common form of non-commercial, community food growing in Scotland). Around two thirds of allotments in Scotland are owned by local authorities. Local authorities are legally obliged to provide space for allotments through the Allotments (Scotland) Acts 1892, 1922 and 1950 and the Land Settlement (Scotland) Act 1919. Taking Aberdeen City as an example – the local Authority has 468 council owned plots located across 22 sites. The fees⁹ () show that a full allotment (300 square metres) costs £82.92 for the year, and a microplot (50 square meters costs £11.85). Individual allotments are often governed by ploholders associations (such as the Garthdee Field Allotments Association), groups of allotment holders on site who collectively manage and supervise on-site amenities such as water and waste/compost collection, vacant plots and enforce rules on behalf of members of the Association and in accordance with Aberdeen City Council Rules and Regulations.

Unlike allotments, local authorities are not obliged to provide space for community growing so community gardens have a wider range of organisational forms than allotments, depending on their land tenure and other factors. The lack of formal protection of sites means it is important to have strong agreements with the land owner, especially for temporary spaces; organisations such as the Federation of City Farms and Gardens have developed exemplar approaches in relation to leases and

⁹ available here

http://www.aberdeencity.gov.uk/community_life_leisure/parks_open_spaces/pos_allotments.asp

agreements. Community gardens are often seen as an easier access point for people to get involved in growing (Greenspace Scotland, 2011).

6. Further ideas to develop

This report has highlighted some potential knowledge gaps and interesting avenues for future study. They are noted below.

1. Idea of 'staged authenticity' of community groups/community growing. Tregear (2011) notes that while this concept has been applied to agro-food studies of gastronomic tours and wine routes (Brunori and Rossi, 2007) more engagement with this idea may offer important insights into critical perspectives of local food production and peoples interaction with local food.
2. In the same vein it has also been contended that there is a lack of views of the consumer of local food, and in particular with AFN, where research tends to focus on the needs of stakeholders at the top of the supply chain.
3. From this review it appears that there is a lack of research that engages people who do not agree with, or choose to avoid community/local food production activities. The reasons why people do not engage in community growing are important.
4. A study of structural aspects of who is growing food could establish a much needed base line in Scotland. This review has found little evidence of who is involved with local food growing, and what they are growing. This study could take the form of a closed structured questionnaire to compliment a qualitative study and would aim to gather data on age, sex, income, ethnicity and other socio-economic variables.
5. A further contradiction that we may or may not acknowledge is the idea that local food growing, farmers markets, CSA & local food movements in general (especially in rural areas?) could be viewed as a rather high quality, expensive, middle-class enterprise which is a long way removed from addressing food poverty through food growing and enhancing local food networks. This would be due to, as noted above, the structural environments, and financial restrictions, which make setting up a local food growing initiatives that benefits the community difficult.

7. What happens next?

- Conduct scoping interviews and field work with growers, allotmenters, and others (NHS? Policy? Food banks? Local authority? Non-growers?) – to include a range of commercial, semi-commercial and non-commercial, local food growers and retailers, and community-growing schemes and programmes. This will be in Aberdeen and Aberdeenshire.
- From interviews to better understand the motivations, barriers and intentions of local/community food growers, and perceptions of local/community food growing from diverse groups of people
- To understand who grows/is involved in local food – age, gender, ethnic diversity, religion etc
- To understand how much food is grown, whether food growing is the primary purpose of community growing spaces (or whether it is health, social capital etc), where the food that is grown goes (individuals, public sector, private)

- Identify, from external sources, where different types of community growing and other local food activity is taking place, and see how this maps onto other social factors of food insecurity

References

- Adams D and Hardman M. (2013) Observing Guerrillas in the Wild: Reinterpreting Practices of Urban Guerrilla Gardening. *Urban Studies*.
- Allen P, FitzSimmons M, Goodman M, et al. (2003) Shifting plates in the agrifood landscape: the tectonics of alternative agrifood initiatives in California. *Journal of Rural Studies* 19: 61-75.
- Aronson RA. (2014) Eating in Crisis: Culturally Appropriate Food and the Local Food Movement in the Lives of Domestic Violence Survivors. UVM Honors Senior Theses.
- Badami MG and Ramankutty N. (2015) Urban agriculture and food security: A critique based on an assessment of urban land constraints. *Global Food Security* 4: 8-15.
- Barron J. (2016) Community gardening: cultivating subjectivities, space, and justice. *Local Environment*: 1-17.
- Brunori G and Rossi A. (2007) Differentiating countryside: Social representations and governance patterns in rural areas with high social density: The case of Chianti, Italy. *Journal of Rural Studies* 23: 183-205.
- Buck D. (2016) Gardens and Health: Implications for policy and practice. London.
- Certomà C and Tornaghi C. (2015) Political gardening. Transforming cities and political agency. *Local Environment* 20: 1123-1131.
- Dennis M, Armitage RP and James P. (2016) Social-ecological innovation: adaptive responses to urban environmental conditions. *Urban Ecosystems*.
- Douglas F, Ejebu O, Garcia A, et al. (2015a) The nature and extent of food poverty insecurity in Scotland. Scotland
- Douglas F, Sapko J, Kiezebrink K, et al. (2015b) Resourcefulness, Desperation, Shame, Gratitude and Powerlessness: Common Themes Emerging from A Study of Food Bank Use in Northeast Scotland. *Public Health* 2: 297*317.
- Greenspace Scotland. (2011) Community growing in Scotland: Towards a framework for action.
- Hallberg B. (2009) Using Community Gardens to Augment Food Security Efforts in Low-income Communities. Virginia: Virginia Tech
- Hinrichs CC. (2003) The practice and politics of food system localization. *Journal of Rural Studies* 19: 33-45.
- Hinrichs CC and Allen P. (2008) Selective patronage and social justice: Local food consumer campaigns in historical context. *Journal of Agricultural and Environmental Ethics* 21: 329-352.
- Ilbery B, Watts D, Simpson S, et al. (2006) Mapping local foods: evidence from two English regions. *British Food Journal* 108: 213-225.
- Kirwan J. (2006) The interpersonal world of direct marketing: examining conventions of quality at UK farmers' markets. *Journal of Rural Studies* 22: 301-312.
- Lambie-Mumford H and O'Connell R. (2015) Food, poverty and policy: evidence base and knowledge gaps. Sheffield.
- Little J, Ilbery B and Watts D. (2009) Gender, consumption and the relocalisation of food: A research agenda. *Sociologia Ruralis* 49: 201-217.
- Lucan SC, Maroko AR, Sanon O, et al. (2015) Urban farmers' markets: Accessibility, offerings, and produce variety, quality, and price compared to nearby stores. *Appetite* 90: 23-30.
- Marsden T. (2000) Food Supply Chain Approaches: Exploring their Role in Rural Development. *Sociologia Ruralis* 40.

- McKay G. (2011) *Radical Gardening: Politics, Idealism and Rebellion in the Garden*, London: Frances Lincoln Limited.
- Miller WM. (2015) UK allotments and urban food initiatives: (limited?) potential for reducing inequalities. *Local Environment*: 1-21.
- Napawan NC and Burke E. (2016) Productive potential: evaluating residential urban agriculture. *Landscape Research*: 1-7.
- Network CSG. (2015) Community Growing in the CSGN area - update. Shotts.
- Nordh H, Wiklund KT and Koppang KE. (2016) Norwegian allotment gardens — a study of motives and benefits. *Landscape Research*: 1-16.
- Ohly H, Gentry S, Wigglesworth R, et al. (2016) A systematic review of the health and well-being impacts of school gardening: synthesis of quantitative and qualitative evidence. *BMC Public Health* 16: 286.
- Partalidou M and Anthopoulou T. (2016) Urban Allotment Gardens During Precarious Times: From Motives to Lived Experiences. *Sociologia Ruralis*: n/a-n/a.
- Quayle H. The true value of community farms and gardens: social, environmental, health and economic
- Revoredo-Giha C, Watts D and Leat P. An analysis of Marketing Channels of Local Food in Scotland. Scotland N. (2014) Growing the Local Food Economy in Scotland. Edinburgh.
- Scottish G. (2014) Becoming a Good Food Nation. Edinburgh.
- Seyfang G. (2006) Ecological citizenship and sustainable consumption: Examining local organic food networks. *Journal of Rural Studies* 22: 383-395.
- Sharp JS and Smith MB. (2003) Social capital and farming at the rural–urban interface: the importance of nonfarmer and farmer relations. *Agricultural systems* 76: 913-927.
- Shaw H. (2016) Identifying and Overcoming Barriers to Healthy Eating Faced by Ethnic Minorities in the United Kingdom. In: Lindgreen A and Hingley MK (eds) *The New Cultures of Food: Marketing Opportunities from Ethnic, Religious and Cultural Diversity* Oxford: Routledge.
- Tait C. (2015a) Hungry for Change. London.
- Tait C. (2015b) A Recipe for Inequality. London.
- Tregear A. (2011) Progressing knowledge in alternative and local food networks: Critical reflections and a research agenda. *Journal of Rural Studies* 27: 419-430.
- Trobe HL. (2001) Farmers' markets: consuming local rural produce. *International Journal of Consumer Studies* 25: 181-192.
- Winter M. (2003) Embeddedness, the new food economy and defensive localism. *Journal of Rural Studies* 19: 23-32.