

**Eat The City:
Models Of Urban
Agriculture & Their
Relevance To Milton
Keynes**

Introduction

The Food MK project is intended to be a practically useful piece of work, providing arguments for, and suggesting solutions to the question of how we can grow more food in the new city.

This report focuses on the feasibility question, by drawing upon national and international case studies of how food is grown in cities to make recommendations appropriate to the Milton Keynes situation.

Despite what might initially come to mind, there are many different ways in which we can access food in cities. From growing your own in a window box or a garden through to using the local street market or picking wild fruit and nuts, there are options beyond the supermarket or corner shop.

This is not meant to deny the real issues that arise for some people in accessing the full range of options, an issue which we look at in more detail in section 1 of the report.

Some of the methods for accessing food are within our own control, such as whether we choose to grow vegetables rather than ornamental plants in our back garden. Others options require intervention by local and regional organisations in order to create the circumstances which enable food production to take place.

This section of the report will consider both the individual and community action that might be taken, and the action needed by the public, private and voluntary sector to begin to build a sustainable food system in Milton Keynes. In making this assessment we have made the following assumptions based on the conclusions of the preceding sections of this report:

- That more food could and should be grown in Milton Keynes
- That the community has a large role to play both as potential urban farmers and as supporters of local rural farmers
- That designating land for food production and supporting urban agricultural practice is a key commitment needed from the local authority and other statutory agencies

How Did The Project Come About?

The Food MK project took place between May and October 2006, funded by The Countryside Agency and carried out by Food Train.

Food Train, a social enterprise established to run community food projects in and around Milton Keynes, operates the twice-monthly farmers market in Wolverton. The Wolverton farmers market, which is the only community operated market in Milton Keynes, was established in 2004, and draws producers who operate within 30 miles of city.

The Food MK project arose as a direct result of the difficulties encountered in finding producers to attend the farmers market. All but two of the eleven producers who currently sell at the market are drawn from outside of the Milton Keynes Borough. The exceptions are G. Adderson Dairy, based in North Crawley near Newport Pagnell and Harvest Bakery based in Astwood.

Food Train is seeking to develop Wolverton farmers market in such a way that

local food enterprises are supported, but having carried out some rudimentary research quickly established what appeared to be an absence of local producers in the Milton Keynes Borough.

This led to a number of important questions being raised, which formed the basis of the Food MK project:

- What is being farmed in and around the new city?
- What is the food sector in MK like?
- What are the needs of local food producers in the area?
- Is a farming renaissance in and around Milton Keynes desirable or even possible?
- Could a new sort of 'farming', such as community supported agriculture, happen within the urban area of Milton Keynes?

This report forms the third section of a suite of five reports which together make up the Food MK Project. It begins by considering what this 'new sort of farming' might be, why it is important and what the benefits and opportunities are. It then considers the current support systems available, before moving on to look at UK case study examples that might be relevant to the Milton Keynes situation. Methods of organisation and management are then investigated, prior to looking at systems that can be used for the growing of food. The report concludes with recommendations for practical actions that will help support growing food in our 'new city'.

What Is Urban Agriculture?

Growing food crops in an urban setting is distinguished from rural agriculture by its intimate connection with urban social and economic systems; it connects people as both the producers and consumers of food and links the use of 'waste' urban resources such as organic waste and greywater.¹

It is estimated that 800 million people worldwide are engaged in growing food in cities.²

Until relatively recently, growing food for human consumption in and around settlements was commonplace in the UK. Indeed, much of Bedfordshire was once a patchwork of extensive market gardens growing a huge diversity of vegetables and flowers. During the Second World War, the Dig for Victory campaign saw more allotments being created in towns and cities and by the end of the war, allotments in the UK totalled 1.4 million (they are currently around 300,000). Whilst this shows what was possible in a crisis situation, other examples from around the world show what is possible on a day to day basis.

What Does It Look Like?

The production of food crops may take place inside the city or on its outskirts (peri-urban) on private land owned or leased by an individual such as back gardens or allotments or on semi-public land such as schools or business premises or on public land such as parks, roadsides or alongside railways. Its scale ranges from micro-enterprises of half an acre to larger family or co-operatively run farms.

The type of produce grown includes food crops such as grains, vegetables and fruit. It often includes livestock such as poultry, rabbits, goats, sheep, pigs, cattle, fish, bees and non-food crops such as medicinal herbs and tree products. Often Urban Agriculture (UA) focuses on highly perishable, high value produce because one of its benefits is its geographic proximity to consumers. It also includes food related processing and marketing activities, as well as the distribution of inputs such as compost and services delivered by specialised micro-enterprises.

The supply chain in urban agriculture is often shorter than that of rural agriculture, as a result of the "tighter urban layout and quicker resource flow." It is also suggested that productivity is greater than rural agriculture, sometimes up to 15 times greater.³

Why Is Growing Food In Cities Important?

As the rate of urbanization accelerates, cities around the world are being faced with unprecedented ecological and social challenges, not least of which is how to feed their growing populations. Next year, more people will live in cities than in the countryside for the first time in the history of the human race.⁴ Clearly, our survival and quality of life depends on our ability to feed ourselves in a sustainable way.

Urban development has eaten away at thousands of acres of arable farmland,

1 FAO, 1999

2 RUIAF, 2006

3 FAO, 1999

4 UN, 2006

replacing fields with roads, homes and industrial development. As the soil disappears and degrades so does the viability of local food production.

Urban agriculture is a salve to this. It's also a survival mechanism. In developing countries, it often involves the urban poor, many of them women.

Growing food has become almost entirely remote to the average person and the farmers who are overburdened with this responsibility are struggling to make work the simple task of producing food. More and more people are realising this and are willing to share some of that responsibility as evidenced in the large numbers supporting Community Supported Agriculture schemes.

Urban Agriculture can significantly improve the quality of urban living and be of positive benefit to the environment. Sustain, the Alliance for Better Food & Farming, has identified the following advantages:

Environmental

- Increased biological diversity of plants and animals
- Reduction of waste resulting from more composting and less food packaging
- Reduced transportation of food through greater availability of local produce
- Less pollution and related costs from reduction in transport and processing

Economic

- Creates commercially viable jobs in food growing, processing, marketing, composting and related activities
- Boosts the leisure industry through sale of gardening inputs
- Strengthens sustainable food and agriculture industry
- Businesses benefit through greener, more attractive local environments and more skilled and motivated workers
- Contributes to an alternative economy through LETS and community enterprises

Health

- Health and social benefits, reducing the burden on statutory services
- Increased consumption of fruit and vegetables through greater availability of affordable fresh produce
- Opportunities for physical activity
- Stress relief for everyone and mental health gains for those with specific difficulties

Community Development

- More active participation in community life with a practical focus
- Opportunity to work across a variety of social divisions
- Opportunities for delivering many of Government's area based regeneration initiatives

Educational

- Opportunities for school curriculum teaching, vocational training and life long learning
- Educational, training and employment opportunities, particularly for disadvantaged people

How Does Urban Agriculture Fit With Rural Farming?

Though conventional and large scale farming has almost replaced small mixed farming and urban agriculture, this trend could begin to be reversed and the benefits of a diverse food production system could be felt by everyone. Enabling city dwellers to conceive that they might become producers of food could do much to boost the numbers of new entrants to farming.

One of the key factors in developing the retailing of local food is getting a critical mass of produce that reflects the local area. Rural producers can 'subsidise' smaller, urban enterprises by providing a backbone from which seasonal supply can be accommodated. This flexibility is particularly well suited to retailing local food in urban situations and demonstrates the co-operative opportunity for rural and urban agriculture.

Urban Agriculture should be seen as a key part of a portfolio of food production systems and in this sense it should be a clearly defined element within local, national and regional food and farming strategies.

The UK Strategy for Sustainable Farming and Food has at its heart the idea that the food chain needs to reconnect with its customers, the world economy, the countryside and the environment. Urban agriculture could be one of the key ways in which this 'reconnection' takes place.

Urban Agriculture in the UK

Today in the UK, an increasing amount of food production is carried out on a domestic scale by people in their back gardens and on allotments.

The surge in interest in allotments over recent years has led to what might be termed an 'allotment renaissance' with regeneration of sites taking place and waiting lists up to seven years long in some cases.⁵ In some areas there seems to have been an attitude shift which no longer sees allotments as a shabby embarrassment but as a green space the community can be proud of. This is not the case throughout though and local strategies must keep pace with public demand.

A number of national organisations support growers with information and inspiration.

Garden Organic, Europe's largest organic charity, based in Warwickshire has seen their membership grow from just 6,000 in 1986 to 32,000 in 2005. 170 of those members live in Milton Keynes.⁶

5 NSALG, 2006

6 Garden Organic, 2006

The internet is widely used by people who 'grow their own' with a huge number of sites offering 'home grown' solutions to feeding the family. These urban homesteaders have created vibrant online communities that share wisdom and transfer collected information to a new generation of gardeners.

Urban agriculture isn't just about growing vegetables. Backyard poultry keeping is alive and well. A recent report from DEFRA estimates tens and even hundreds of thousands of homes keep between 20-30 birds in back gardens. The Poultry Club of Britain has 1500 members and there are over 60 breed clubs.⁷

Beekeeping is also thriving; more than 350 new members have joined the British Bee Keeping Association in the past two years – the first increase in members since 1980. Many of these new members are young urban dwellers, keeping their hives on city rooftops. According to the BBKA, there is growing recognition that bees living in cities tend to produce more and better honey than those kept in the countryside.⁸

There is no official data on how many people use their back gardens for growing food but it is clear that gardens as a land base for small scale food production are under threat. The London Assembly's Environment Committee have estimated that London has lost garden space equivalent to twenty two Hyde Parks as a result of people paving over their front gardens.⁹

Similarly, as development pressures mount, Allotment land is vulnerable. 200,000 plots have been lost since the late 1970's, leaving only 300,000 throughout the UK. The National Society of Allotment and Leisure Gardeners have warned that derelict sites and untended plots are particularly vulnerable.¹⁰

All over the UK, there are successful food growing enterprises on allotment gardens. Ru Litherland, grower at the Organic Lea allotments in Waltham Forest sums up bottom line for preserving allotments: "*No one wants to see McAllotments, but surely there is sense, particularly in the case of derelict plots, in allowing not for profit enterprises to keep allotments worked, provide employment and, of course, bring local food out to the wider population*".¹¹

Throughout the UK there are numerous school, city and community farms and other community growing spaces. Many run successful sustainability education programmes and the value of teaching people where food comes from is undoubtedly worthwhile.

Enabling people to be involved in growing and eating the results is a key part of the effort to re-localise the food system, however, the extent to which these organisations contribute (in terms of volume and availability of foodstuffs) to the wider food system is unclear.

Growing for self-consumption is a vital part of the food system – it gives people control over their food, links people of different generations and cultures and promotes biodiversity and sustainability. However, the opportunity for urban

7 DEFRA, 2006

8 BBKA, 2006

9 The Ecologist, 2006

10 NSALG, 2006

11 Organic Lea, 2003

agriculture to be community controlled *and* market orientated should not be underestimated.

Selling Local Food, Locally

One of the key factors of the sustainability of any production method is its distribution method. Creating a shortened supply chain by selling at a local market, a community supported agriculture scheme or supplying a local community café rather than attempting to make local produce 'fit' the sourcing requirements of traditional retail and supermarkets creates a stronger, more versatile, rooted local food economy.

There are a number of ways in which local authorities can support the development of the food retail and distribution sector to ensure that people are able to access local food.

This begins with supporting the production of more food locally and ends with ensuring communities have access to outlets which stock local food within walking distance.

UK Case Studies

The following case studies demonstrate the opportunity urban agriculture brings to link all stages of the food chain and build strong local capacity for involvement.

Salop Drive Market Garden, Sandwell, West Bromwich

The Salop Drive market garden is a successful Primary Care Trust-led practical food growing project which serves the community of Sandwell in West Bromwich.

Developed over the past six years, the garden is a reclaimed derelict allotment site which the local authority leases to Ideal for All (a disability employment organisation) who manages it on behalf of the PCT.

A vegetable box scheme is run from the site, serving 35 households in the surrounding streets. Each box costs £4 and is set at the same rate as the greengrocer in the area. Any surplus is bought by community cafés in the area. The PCT contribute around £100,000 per year to subsidise this cost and fund the operation. Initially, the site required £10,000 soil testing and restoration work as it was contaminated from the old glass works industry nearby.

The site is run by two full time gardeners and a part time co-ordinator. Volunteers help with seasonal tasks alongside clients from Ideal for All.

The project is underpinned by a programme of work on food access and health inequalities. For seven years a multi-disciplinary food policy group made up of local authority members, the PCT and local schools has explored creating a 'sustainable food system' in Sandwell.

This has resulted in a comprehensive Food Policy for the area which sets out targets for improving food access via joint working between housing, transport and economic planners.

Key Points

- The support of the Chief Executive of the PCT was seen as vital in driving the project forward and securing funding.
- Early work on creating a baseline for the food system enabled a logical process of developing targets to be carried out.
- Joint working with a range of Council departments and other agencies resulted in identification of areas for policy intervention such as within transport policies and Local Area Agreements.
- Creative solutions such as rent relief for shops stocking local produce required support from the Local Authority.
- The project suspects it may experience issues relating to public money being used to finance social enterprise which potentially has an impact on competition rules. Tackling this issue on a national level will be required in order to prevent barriers to development of a re-localised food system
- Diversity of where production is located and the communities it serves is needed to ensure a truly equitable system.

Growing Communities, Hackney, London

Walking down a busy, traffic filled street in Hackney, the last thing you expect to come across is a productive market garden, but tucked away behind the houses are Allens Gardens – a green, secret place in the heart of the city. The gardens are a Victorian treasure that two years ago, Growing Communities began restoring using single regeneration budget (SRB) funding. A corner of the site now comprises a thriving walled garden with organic fruit trees, several raised beds full of vegetables, a pond, wildlife area, greenhouse, shed and a site building with a compost toilet and sedum roof.

Along with two other sites (each around half an acre) Growing Communities produce enough organic salad bags to supply 10% of their popular box scheme which has a membership of 275. In terms of yield this equates to one salad bag per week from each square metre of annual cropping land for seven months of the year. This is extended using covered cropping and is supplemented by fruit and perennial crops. Their target for 2007 is to increase this to around 40% using improved planting and cropping plans. All produce is transported to three pick up sites around the area (rather than the conventional delivery model of box schemes) using a bike and trailer.

Growing food in the city is an integral part of the organisation's aim to create real, practical alternatives to the industrial food system. Julie Brown and a group of friends started Growing Communities back in 1994 as a community supported agriculture scheme. In 2000 they made a successful lottery application to fund a grower, outreach worker and box scheme manager and in 2003 secured a further three years funding to set up a farmers market. Along with their weekly organic-only farmers market and vegetable box scheme, they have in 2006, become self financing. They have an annual turnover of around £180,000.

Key Points

- Growing more food in the city underpins the organisation's ethos of creating grass roots solutions to re-localising the food system.
- The box scheme and market are the key income generators that allow the growing projects to be developed.
- The growing project relies heavily on volunteer time – as much as the full time equivalent of one person per month.
- The project had experienced difficulties from 'mixing' its aims. Managing clients from educational or employment programmes created additional work for the grower which took him away from practical tasks.
- The organisation has a strong management committee made up of local people with skills in business, finance and marketing.
- Costs are kept down by sharing a building with other community groups and not having to pay rent for the growing sites. This is facilitated by good relationships with the community and local authority.

Organic Lea, Waltham Forest, London

Organic Lea is a food growing co-operative situated on the edge of London in the Lea Valley. They grow on an acre of once derelict allotments and produce is shared amongst volunteers and sold locally at an affordable price. They also run a kitchen waste composting scheme and training in organic food growing.

Waltham Forest has apple and pear trees in abundance and fed up of seeing the fruit rotting on the ground, members of Organic Lea created an organised 'scrumping' service.

Small teams of volunteer fruit pickers help local residents who find it difficult to harvest their fruit. The residents get a share of the harvest and the rest is sold at low cost through community centres.

The project received funding to pilot the project for two years and then ran an extensive advertising campaign to get people signed up: *"We found that the people we picked from would tell their friends or neighbours about the scheme, and the community market stalls where we sold the apples or pressed them into juice also made good publicity for the picking side of the project."*¹

The group picked from trees in all manner of situations: pubs, streets, back gardens. They discovered little known varieties, swapped recipes and forged friendships – a yield far greater than the metric ton of fruit they picked from the trees. They have started to help residents create a map of their fruit trees and identifying varieties that were nameless for years.

Key Points

- Fruit picking is a low input way of connecting the community with the food resources it already has. Milton Keynes has lots of wild plums in its parks and landscapes. It also has a number of fruit trees that were planted when people first moved into new houses. It would be interesting to map these trees as a connection to MK's 'new' history
- An affordable supply could be exploited and distributed via organisations like Sure Start Children's Centres and school breakfast clubs
- Ingenuity is required for dealing with trees in difficult situations!
- The yield can be huge – storage and distribution need to be well planned to ensure minimum wastage
- Links in well with edible landscaping projects to give value to them

Models of Urban Agricultural Enterprises

The report has so far considered what urban agriculture is and why it is important. A number of UK based case studies were outlined, and their relevance to Milton Keynes highlighted.

We will now turn our attention to ways of organising food production within a city; what kind of organisational structures are used, how they work financially and who offers practical support and guidance.

These models range in type from multi-site micro-farming enterprises that grow food for people using their own back gardens, to networks of urban growing projects and community management of traditional farms.

Community Supported Agriculture (CSA)

A CSA farm is a combined effort between a farm and a community of supporters (shareholders or members) that creates a direct relationship between the production and consumption of food. Each season the shareholders provide the money (and sometimes other resources) needed for the farm to operate by purchasing a 'share' of the season's harvest. This share covers operating costs include seeds, labour and growing supplies.

By making this commitment a shareholder shares with the farmer the risks and the rewards of growing the food they will eat. In return, the farm distributes to the shareholders the entire production of the farm – a wide variety of seasonally harvested fresh produce, usually on a weekly basis, throughout the growing season(s).

The CSA concept originated in the 1960s in Switzerland and Japan, where consumers interested in safe food and farmers seeking stable markets for their crops joined together in mutual support and economic partnerships.¹

Today, in North America CSAs currently number more than 1,400. In the UK they have grown in popularity in recent years. The Soil Association estimates there are around 100 initiatives where consumers and producers have entered into CSA type partnerships.

Key Points

- Shared risks and community involvement in planning the crop
- Direct sales relieve the marketing burden
- The farmer gets better prices
- Members get fresh, seasonal produce
- Re-connects people with the realities of farming and the land
- Supports sustainable land use and family farming

Every CSA is different but in the UK, three types of operation have emerged:

1 Soil Association, 2005

Vegetable CSAs

- Average size 2.5ha
- Intensively cultivated
- Average of 70 members living within 10-15 miles of the CSA
- Mostly smallholdings run exclusively to produce for the CSA
- Most use organic methods and many are certified by the Soil Association

Meat CSAs

- Average over 100 ha, extensively managed for grazing livestock
- Over 400 supporter families living within 20-30 miles of the CSA
- Meat CSAs usually involve an entire livestock farm producing a range of chicken, lamb, pork and beef for their members
- Requires a butchery facility on or near the farm
- Most meat CSAs are certified as organic, and have to meet all the hygiene regulations for supplying fresh meat

Fruit CSAs

- Average only 1 ha, usually forming one small part of an existing specialist fruit farm
- Average 30 members drawn mostly from within 50 miles of the farm
- Most specialise in either top fruit (mostly apples), or vines and wines
- Soft fruit does not form a regular part of either Veg or Fruit CSAs, due mostly to the high cost of fruit picking

According to the Soil Association, there are currently no CSAs in the UK that offer a veg, meat and fruit share all produced on the same farm. Several schemes do offer their members access to organic meat from local producers, but not as a 'share option'.

What Makes A CSA Different To A Conventional Box Scheme?

The product of most CSAs looks very similar to that of a box scheme, but the way it is organised is very different. CSA members pay in advance and commit for a whole year's supply, whereas box schemes are mostly bought weekly with no future commitment.

CSA farms produce over 90% of the food they supply, whereas many box schemes rely on purchasing wholesale supplies. Additionally, CSAs provide regular newsletters, on-farm events and have a committee of members who help organise and run the business with the farmer.

The smallest successful CSAs require only around 1ha of good vegetable producing ground, and 20-30 committed members: this is enough to support a part time CSA farmer.

In order to support a full-time grower, the CSA needs at least 3ha of good ground and 70-80 year-round members.

In order to support a typical mixed farm of 120ha, run entirely as a CSA it would require approximately 300-400 members committed to shares of both vegetables

and meat, and the storage and processing facilities to supply both year-round. Such a CSA will have a turnover of over £300,000 and a staff of 5 or 6 full-time.²

Key Points

- Involves members of the community in managing the scheme thereby developing social capital
- Guarantees working capital
- Usually situated in rural or peri-urban areas
- Lack of evidence that small scale schemes that have to find land to grow on are economically viable on their own
- The financial return on produce is likely to be lower than if sold by weight via retail outlets
- The strength of CSA depends on its collective membership
- **CSAs work well as part of a range of activities such as farmers markets and horticultural training and therapy in order to spread risk further and create an accessible local food offer**
- **Usually developed as a rescue or marketing package for a traditional farm but in Milton Keynes could be set up from scratch or developed as a multi-site CSA with other growing partners such as The Parks Trust**

CSA Networks

In New York City, an organisation called Just Food promotes community supported agriculture and has helped to start over 40 programs in the city.

The programme co-ordinates a network of 30 city farms and community gardens and gives them support in growing, marketing and distributing more garden-grown food. This number continues to grow as they work with new groups and new farmers to start additional sites every year.

As well as practical food growing projects, Just Food works with groups to advance dialogue and action on farming, hunger and nutrition. They have also supported the establishment of four urban 'farm stands' – small farmers markets run by the community in deprived areas.

The New Farmer/New Markets Initiative is a partnership between Cornell University and community food organisations in New York City.

It promotes community-based entrepreneurship projects in food production, processing, and marketing. It also strengthens urban markets for regional and local growers, and builds public support for the preservation of open space for food production.

The scheme has helped a number of community-based organisations in New York City to expand their food production in a strategic manner, growing specialty crops to meet an increasing demand for niche produce markets such as local cafés and restaurants.

Organisations, who take part in the initiative, create small 'incubator farms' on patches of under utilised green space. There, local people are trained in production techniques and marketing and are supported to develop their own food enterprises.

Key Points

- A successful model of using food as a community development tool
- Key focus on the marketing and selling of produce
- Creates a flexible distribution model somewhere between farmers market and retail outlet
- Engages in policy and develops markets for local food
- Gives communities the skills to develop their own sustainable food system
- **A Milton Keynes based network could work at both ends of the chain to promote local food and develop enterprise opportunities**
- **A network could support education, employment and care organisations to use food growing as a tool for empowering individuals and creating income streams**

Enterprising Individuals

In Portland, Oregon, two enterprising horticulturalists have developed a thriving business that provides householders with fresh organic vegetables delivered to their door.

Uniquely they are all grown in the householders back garden by the 'backyard farmers'. These farmers are a local couple who saw an opportunity to bring farming right up to the back door.

The scheme requires a commitment on the behalf of the household to share the weather-related risks of growing food but in return they receive a healthy supply of seasonal fresh produce throughout the growing season from a farmer they know.

The planting and cropping scheme is designed in response to the space available and the needs of the family. The only requirement is six hours or more of sunlight to the garden, access to water and an area for composting.³

Key Points

- Creative use of land
- Shared risks
- Responds to needs of individual and space available
- Innovative model of local enterprise
- **Good way of engaging people who experience difficulty in accessing fresh fruit and vegetables**
- **Opportunity for enterprise as part of urban food growing portfolio**

Urban Agriculture Systems

Having looked at how urban agriculture can be organised and supported, we will now consider a number of different systems of growing food that can be adopted with any of the models previously described. It is by no means an exhaustive list. The beauty of urban agriculture is its flexibility and local interpretation.

SPIN – Small Plot Intensive

According to its creators, SPIN makes agriculture accessible to anyone, anywhere.¹ Wally Satzewich, Gail Vandersteen and Roxanne Christensen have developed a ‘small plot intensive’ system which they demonstrate in Saskatoon in Canada and Philadelphia in the US.

It owes much to biodynamic and French intensive systems which themselves borrow techniques from Chinese, Greek and Mayan agriculture. These systems are based on a range of techniques such as close planting, use of companion plants, raised beds and active composting.

Satzewich and Vandersteen first started farming in a rural situation on the outskirts of Saskatoon over 20 years ago, but they gradually started to realise that the wind, pests – particularly deer, were too much to contend with. They believed that farming within the city was possible and maybe even preferable. They believe the city offers better wind protection, a longer growing season and fewer pests. They are also able to manage without use of heavy, time and money consuming machinery and cultivate mainly by hand.

What is unique about the way they operate is the multi-locational aspect. Their ‘farm’ is dispersed over 25 residential back gardens within the city, some plots rented from home owners but many given for free or for a produce share. The growing area totals half an acre. Another benefit of being located in an urban situation is that they are extremely close to their markets.

The SPIN system is commercially focused and in its first year of operation, Somerton Tanks Farm, the U.S based SPIN demonstration farm, produced \$26,100 (£13,749) in gross sales from a half-acre of growing space during a 9 month growing season. In 2005 gross sales increased to \$52,200 (£27,496).

Key Points

- Creative solution for lack of land, money and workers
- Proves the benefits of growing in the City
- Requires knowledge about markets and vegetable varieties for optimum cropping
- Requires skill to crop growing areas three times each growing season
- Restricts opportunity to grow perennial crops and fruit
- Need to clarify health of soil if previous use not known
- May be difficult to set up a variety of water conservation and irrigation methods if domestic water supply is not an option

1 SPIN Farming, 2006

Permaculture

The word permaculture is derived from the term '*permanent agriculture*'.²

The use of edible perennials and tree crops is an integral part of a permaculture approach to planting which introduces design into agriculture in order to create permanent high-yielding ecosystems that produce food whilst increasing bio-diversity. By following nature's patterns, it uses the diversity, stability and resilience of natural ecosystems to provide a framework and guidance for people to develop their own sustainable solutions.

A key feature of the design process in permaculture is 'zoning'. This means placing things appropriately in relation to each other, and works on the principle that those things which require frequent attention are placed closest to the home. It is about using time, energy and resources wisely, which can be as simple as planting your most used herbs nearest to your kitchen, or as complex as planning a community.

Permaculture "fosters the skills, confidence and imagination of people to enable them to find local solutions." While the individual has a part to play, in most places it is not realistic for an individual household to provide for all of their own needs in terms of food, clothing, work, so the emphasis is more on self-reliance and increased sufficiency within the community, rather than individual self-sufficiency. *In this sense it is an ideal design system for sustainable cities.*

In practice, this does not mean each person growing enough food to feed themselves in their back garden; it means that as many as possible of the inputs for a community (food, skills etc) come from within that community – perhaps in the form of community food growing schemes and local systems of currency and exchange.

There are around thirty active permaculture sites in the UK and many more all over the world. It is being used with great success to restore the environment and the livelihoods of indigenous peoples in places which have been destroyed by intensive agriculture such as in El Salvador where 75% of the soil, water and vegetation is effectively 'dead' due to deforestation, erosion and overuse of chemical fertilisers.

Edible Landscaping

Urban landscapes are human-dominated ecosystems that require considerable investment of time, space, money, and natural resources.³ Edible landscaping produces a valuable, multi-functional landscape. This provides a greater return on investment of resources while promoting sustainability.

Edible landscapes can be beautiful, equalling or surpassing ornamental landscapes in aesthetic value. Writing this, in early September, the hedgerows are dripping with crab apples, wild plums, blackberries, rosehips, hawthorn, sloes, hazelnuts and many more delicious treats.

Nutrient content and flavour in most plants is highest immediately after harvest. The edible landscape affords the ability to eat a food only minutes, rather than

2 Permaculture Association Britain, 2005

3 City of Vancouver, 2006

days or weeks, after harvest. In addition, many varieties that have been bred for exceptional flavour can be used for edible landscaping, far beyond those typically found in most supermarkets.

Edible landscapes can increase urban sustainability by reducing a community's dependence on imported food. Imported food often involves unknown production systems and supports economic and political systems that funnel money away from the producers of that food.

It can be difficult to imagine producing enough food in an urban landscape to make a difference. However, urban areas all over the world are increasingly finding that edible urban landscapes can be highly productive and profitable. There is also a spin off for wildlife in the fruits and nuts that human's aren't quick enough or tall enough to reach.

Edible plants, like ornamental plants, do require maintenance. Some species require less maintenance than others, and planting the right plant in the right place can keep maintenance requirements low. Edible landscapes contain plants that are for human consumption; therefore organic management practises are most desirable.

Design approaches for edible landscaping schemes could include crop rotation for annual and short-lived perennial species, in order to optimize fertility and to prevent pests and diseases; sequential planting to ensure a constant harvest and integrating edible species with existing ornamental landscapes.

Increasing edible landscaping in the city supports the development of a multi-layered and more equitable approach to local food security. A number of practical actions related to creating such schemes in Milton Keynes are included in section 5, the **Food MK Action Plan**.

Rooftop Growing and Living Walls

Growing food on rooftops is not a new phenomenon; the gardens at Babylon would not have been so much 'hanging' as spilling over from a series of rooftops and balconies.

Today, in Switzerland and parts of Germany, greening rooftops has become federal law: developers must either improve the biodiversity of existing land, or transfer the green space that they displace to their rooftop or other building surface. Even old buildings are required to transfer one-fourth of the land they have displaced to their roofs.⁴

This could be an exciting direction for Milton Keynes to take in terms of construction of new buildings and retro-fitting of old ones, particularly with our high numbers of vast flat roofed distribution depots. There are many benefits of rooftop growing. The heat from the building can increase the growing season and rainwater can be utilised rather than wasted. Increasing vegetation in the city has a positive effect on improving air quality and being close to where people live, freshness of produce is optimised.

Here in the UK, Reading International Solidarity Centre has developed an edible roof garden just yards away from where Reading's inner ring road passes

4 Cornell, 2004

Europe's biggest new shopping mall.

The RISC roof garden is home to over 140 species of useful plants from around the world, uses composted waste and is made from many recycled and local materials. It is powered by solar, wind and rainwater.

The garden is designed as a mixed forest system with a wide variety of useful plants, with a strong focus on perennial herbs, shrubs and trees. There is also an organic vegetable garden and greenhouse where the focus is on producing fresh salads and herbs for the café within the centre.⁵

Living walls are a form of vertical gardening and are often integrated into sustainable building design as a passive cooling method or as a way of preventing sick building syndrome. Their planting can also be edible, using salad crops and herbs, enabling food production to take place in areas where other methods aren't feasible.

National Organisations That Support Urban Agriculture

A number of national organisations support urban agriculture and are currently working together under the heading of SPAN – Sustainable Production in Active Neighbourhoods which is helping communities to explore opportunities for local productivity and ways to reduce overall consumption levels.

National Society of Allotment and Leisure Gardeners

NSALG has its roots as far back as 1901, when the Agricultural Organisation Society was established with the aim of co-operation amongst agriculturists and the organisation of small holdings and allotments. Today, it supports the UK allotment movement by providing a united voice and action to protect and preserve allotment gardening. It runs an excellent legal advice scheme and has helped many communities mobilize to regenerate their allotments.

Federation of City Farms and Community Gardens

The Federation of City Farms and Community Gardens (FCFCG) is a charity that supports, promotes and represents city farms and community gardens throughout the UK. It houses the Allotment Regeneration Initiative which supports the increase in allotment uptake by individuals and community groups by running a mentor scheme, providing advice and publications and administering a small grant scheme. It also houses the School Farms network which supports 65 school farms throughout the country.

Women's Environmental Network

The Women's Environmental Network Local Food campaign offers training and support to groups of women growing food in urban areas. They work particularly with East London communities to give fund raising support, help with publicity, providing stalls at events, encouraging exchange visits among local groups, distributing compost, setting up gardens and setting up compost schemes and providing training. They also contribute to national food policy making by bringing experiences from women's growing groups in Tower Hamlets and lessons from network groups across the country.

Garden Organic and Organic Food for All

Garden Organic's OFfA programme provides training and support to local mentors who then go out and encourage people to grow their own fruit and vegetables using organic methods. The target audience is socially excluded communities and those not currently growing their own produce. Over a hundred mentors have been trained.

Community Composting Network

The Community Composting Network supports and promotes the community management and use of waste bio-degradable resources. They provide information and support to new and existing community composting projects. They administer a network over 230 members, provide 'The Growing Heap' website, and hold an annual conference and training events. The Network represents the needs of community composters to European, national, regional and local governments.

Urban Agriculture In Milton Keynes

Milton Keynes is a city of trees and green spaces. Its fertile landscape and mild climate makes it an ideal environment in which to grow a variety of vegetables and fruits.

With the right support from the local authority and other key stakeholders, Milton Keynes could be a city in which urban agriculture thrives. Two organisations are leading the way.

The Parks Trust

The Parks Trust is an independent charity that cares for many of the city's parks and green spaces. This adds up to 4,500 acres of river valleys, woodlands, lakesides, parks and landscaped areas alongside the main roads – about 20 percent of the new city area.

The Trust was set up when Milton Keynes Development Corporation completed its work in 1992 to ensure that the city's green spaces were managed and protected for the community in perpetuity. Along with a 999-year lease on the parks, the Trust was endowed with commercial properties and other assets which generate income to finance their work.

The Trust owns about 316 hectares of pasture land which it licences to local farmers who use it to graze 894 sheep and lambs and 148 head of cattle. Some of the meat is sold locally at a butchers shop in Bow Brickhill.

The Trust is committed to bringing more of its land into production not only to generate income but to give a clear focus to the stewardship of the land – making it more purposeful.

To this end, they are actively pursuing the development of a farming partnership which would see the creation of branded products that link local food with the conservation of MK's unique landscape. This is likely to be lamb and beef from their grazing land but also wildflower seed and compost.

Foundation Food

Milton Keynes Christian Foundation run a successful Grow, Cook and Eat programme which aims to encourage a greater understanding of the production of food, the development of sustainable lifestyles and the relationship to health.

For the past two years a team of young people have been transforming a derelict allotment site into a productive market garden. The site now boasts a productive polytunnel which is used to grow tomatoes, aubergines, peppers, cucumbers and winter salads. It also has a soft fruit area and chicken coop. The fruit, vegetables and eggs are supplied to the organisation's community café and any excess is sold at the Wolverton farmers market. This gives the trainees an opportunity to see how much the produce is valued by local customers and learn useful retail skills.

The highlight of their year was negotiating a deal to supply a local box scheme with their garlic though the huge number of compliments on the taste of their aubergines came a close second!

Eating Point, the Foundation's community café, has been running for over fifteen years on the Stantonbury School Campus. It provides vegetarian home cooked food at affordable prices. Produce is seasonal, locally grown and fair trade where possible.

An outside catering service called Mustard Seed is being developed with a focus on providing a service to community and voluntary sector organisations in the city using fresh local ingredients and catering for special dietary needs.

In order to develop links with the wider community, provide opportunities for more trainees and develop more enterprising activities, the project is currently looking for a larger, more accessible site on which to develop their food growing activities.

How Can We Use Urban Agriculture To Create Sustainable Communities?

This section of the work has demonstrated that there are a number of 'tested' opportunities to create physical and social infrastructure that supports a more sustainable food system in Milton Keynes.

The following principles should be embraced by local statutory authorities in order to 'plan in' the features of a sustainable urban food system:

- Designate urban food production as a land use and infrastructure that contributes to policies on clean air, water, waste, transport and health
- Promote edible landscaping as a cost-effective way to increase city food options, improve aesthetic quality and enable public amenity
- Designate access to fresh food as an essential service in every community and assist in developing community based production in areas of inadequate food access
- Ensure that new communities are planned to include high quality facilities for sale of fresh produce within walking distance
- Create permanent sites for farmers markets near to urban agriculture sites in order to link production and consumption and bring market life back to the centres of communities
- Encourage the development of small and medium sized fresh food shops and give rent relief for those stocking local produce
- Establish a city wide kitchen waste collection programme with producer and end user links to urban agriculture sites
- Encourage community farms and gardens operated and sustained by communities as focal points for community cohesion

These principles are taken forward in section 5, the **Food MK Action Plan** which sets out a multi-agency approach to delivering a sustainable food system.

The 'city that thinks differently' has a real opportunity to be leading the way in creating sustainable communities by embracing the potential of urban agriculture.
Let's Grow MK!

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