

Influencing healthier and more sustainable dietary behaviours through planting and harvesting food-producing trees and hedges in the UK

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Executive Summary

This paper provides information and makes recommendations for the public health community to influence and support dietary behaviours through planting and harvesting food-producing trees and hedges.

The UK is facing health, climate, and biodiversity crises. Shifting how we produce and access food in the UK is an integral part of addressing these crises. Poor diet is a leading risk factor for ill health (1) and people on lower incomes are less likely to eat well and are more likely to have below average fruit and vegetable consumption (2).

The connections between food-producing trees and hedges and improving dietary behaviours and dietary equality in the UK are not always explicitly identified in policies and plans. There are opportunities for supporting health through food-producing trees and hedges at small and large scale, such as through active tree-planting programmes and through reviving existing food-producing trees and hedges.

In addition to food-producing trees and hedges supporting diets, there are a range of wider benefits. Accessing green space can improve both our mental and physical health (3,4). Food-producing trees and hedges can play a key role in supporting biodiversity in the UK, and trees play an important role in the mitigation and adaptation of climate breakdown by sequestering carbon, protecting against flooding, and by cooling urban areas (5).

There are several factors that need to be considered for successful and sustainable food-producing tree and hedge planting and harvesting. This paper highlights key points and refers the reader to the many sources of guidance and support available.

The public health community can influence food-producing trees and hedges to support healthier and more sustainable diets. Action taken should aim to reduce dietary inequalities, mitigate against risks of widening dietary inequalities, and should be part of a whole system approach.

Recommendations include:

- Situational analysis, understanding local contexts, and knowledge building. For example, through reviewing local strategies and plans, and connecting with local organisations, national networks, and local farmers.
- 2. **Building partnerships and the foundations for action.** For example, through joining and supporting local groups such as a local food partnership; raising awareness of and making the case for food-producing trees and hedges for dietary health and wider benefits; and including fruit, nuts, and orchards as a contribution to building food resilience.
- Bringing public health expertise and support to food distribution from existing foodproducing trees and hedges. For example, through working with local food partnerships and experts on solutions to harvesting and distributing food safely and equitably.
- 4. Planning and planting for future local food-producing trees and hedges to support dietary behaviours and equitable food access. For example, through influencing local, regional, and national strategies and plans, and building long-term management and risk strategies for food-producing tree and hedge planting programmes.

Introduction

This paper provides information and makes recommendations for the public health community to influence and support dietary behaviours through planting and harvesting food-producing trees and hedges. The paper identifies the intersections between tree and hedge planting, and healthy and sustainable diets for all. It makes the case for the role of food-producing trees and hedges in communities in helping to tackle dietary inequalities and support healthier and more sustainable diets in the UK. The paper provides the public health community with the tools to take action, navigate barriers and risks, and contribute to positive actions for better food for people, health, climate, biodiversity and landscapes, in ways that help reduce dietary inequalities.

The scope of this paper is limited to organised and managed food-producing trees and hedges. This includes every scale of food-producing trees and hedges from small community growing plots to farms and agroforestry. The paper does not address foraging and wild food, or production of other foods such as vegetables, herbs, and fungi.

Planting and harvesting food-producing trees and hedges inter-connects with the wider food system and strategies supporting health, climate, and biodiversity. Therefore, the recommendations provided should be considered within whole systems approaches to public health.

Why the Faculty of Public Health (FPH) is publishing this paper

The Faculty of Public Health Food Special Interest Group (SIG) brings together public health colleagues with an interest in healthy and sustainable diets. Its members are part of networks which connect into food-related programmes and projects. The FPH is well-placed to mobilise the public health community in relation to these key priorities through discussion, advocacy, support, and action.

Why this paper is important

The UK is facing health, climate, and biodiversity crises. Shifting how we produce and access food in the UK is an integral part of addressing these crises. Poor diet is a leading risk factor for ill health (1) and people on lower incomes are less likely to eat well and are more likely to have below average fruit and vegetable consumption (6). A UK survey commissioned by The Food Foundation found that 17.7% of households experienced food insecurity in January 2023 (7). After fixed household costs such as rent or mortgage payments, food (and fuel) have more flexibility and therefore spending on food may be cut back in lower income households.

The presence of well-used green space is known to be an effective way to improve mental health and wellbeing within communities (8). However, the Fields in Trust Green Space Index research found that 'Over 6.1 million people in Great Britain do not have a park or green space within an accessible ten-minute walk from home, with the total provision of green spaces expected to decline substantially by 2033' (9). Fresh, seasonal fruit from UK

trees is at risk of being wasted if it is not harvested and distributed, while fruit consumption in the UK is not at the level it should be for a healthy diet (10).

Context

Planting and harvesting food-producing trees and hedges can support policies and strategies relating to food, public health, inequality, environment, climate, biodiversity, farming, and the economy. However, connections between planting and harvesting food-producing trees and hedges and improving diets are not always explicitly identified.

There are active tree planting programmes and associated funding in the UK, presenting opportunities for action. The government has committed to tree-planting rates of 30,000 hectares a year across the UK by March 2025 (11). Although there are concerns that tree planting rates are not on track to meet targets (12), as part of this drive for tree-planting, food-producing trees can be part of climate mitigation and support biodiversity when appropriate. The British apple and pear industry is facing uncertainty at present due to rising costs, and supermarket returns which are not meeting these costs (13). However, it is possible that the cancellation of orders of new trees by growers means trees are available for community orchard planting. A new initiative launched in June 2023, Coronation Gardens for Food and Nature, has a goal for individuals and communities to grow fruit and vegetables sustainably (14) and organisations such as the Woodland Trust and International Tree Foundation support community tree planting including fruit trees (15,16).

Food-producing trees and hedges are part of a food system in need of transformation. The recommendations in this paper should not distract from or compete with urgent needs across the food system, such as emergency food support and tackling food poverty. The recommendations should be considered within a wider whole system approach to food, tackling inequalities, health, climate, and nature.

Benefits which can be realised through food-producing trees and hedges may take time and resource. However, with careful planning there could be a significant impact for people most at risk of a poor diet.

The fruit and nuts consumed in the UK are mainly imported but there is potential for greater domestic production. As identified by Lang (17) there is a wide gap between the food needed to meet health requirements and production of these foods in the UK, which is problematic. The importance of increasing nuts and fruits (along with vegetables and legumes) in diets was recognised by the EAT-Lancet Commission, a global scientific review of healthy diets within a sustainable food system (18) As recent food shortages in British supermarkets demonstrated (19), UK food security is reliant on the importation of fresh fruit and vegetables from the EU and other parts of the world. The UK only produces 16% of its own fruit for domestic consumption (20). The large percentage of fruit imported into the UK from abroad is leaving the UK vulnerable to the consequences of climate change and the UK food system exposed to shortages.

A 2022 study has demonstrated that Great Britain has the potential capacity to support production that is eight times greater than current domestic fruit and vegetable production

(21) and studies in cities in the UK have also demonstrated this potential, such as in Sheffield (22). Authors of a study estimating food production in urban landscapes in the UK (23) discuss the considerable potential of fruit trees for food production, and a case study looking at fruit production potential from trees in public spaces found that the study's most ambitious planting scenario could produce 108% of the daily recommended minimum intake of fruit for a specific US city population (24). Golf courses currently occupy five times as much of the land in the UK as orchards (25).

The public health community can influence both community-led and commercial food-producing trees and hedges to support healthier and more sustainable diets. Partnerships across Government and other sectors are crucial to improving diets through food-producing trees and hedges. The public health community and local authorities are well-placed to collaborate with local food partnerships and those involved in planting and managing trees to address dietary inequalities. These activities are happening in some places but there is a case for further strengthening partnerships.

What can I take from this paper?

- Information to demonstrate the potential of food-producing trees and hedges to support healthier, more sustainable diets.
- A summary of the benefits of planting food-producing trees and hedges, making the case for influencing planting programmes for healthy and sustainable diets, and also for biodiversity, climate, and wellbeing.
- Brief guidance on steps to influence or action planting, harvesting, and distributing fairly produce of food-producing trees and hedges.
- Signposting to organisations for expert support and information (FPH does not hold expertise in planting food-producing trees and hedges).
- Recommendations for actions that the public health community can use to promote food-producing trees and hedges to facilitate an increase in access to local tree/hedge food for people most at risk of a poor diet.

Benefits of food-producing trees and hedges

This section provides a brief literature review to make the case for food-producing trees and hedges being planted as part of strategies for public health, climate mitigation and biodiversity.

Most of the literature found in the review for this paper identified the benefits of trees and greenspaces, not specific benefits from food-producing and trees and hedges. We have assumed the growing mechanism and visible impacts of trees (trunks, leaves, canopy) are sufficiently similar between food-producing trees and non-food- producing trees to enable the benefits from both to be similar. As trees are frequently found in greenspaces, the wider literature on greenspace has been included in this section.

Benefits to human health

Trees are essential for green space which benefits people and nature. Accessing green space can improve both our mental and physical health (3,4). Studies investigating the associations between physical health and accessing greenspace found numerous benefits. These included positive associations between greener living environments and higher self-assessed general health (26,27), a positive relationship (i.e. reduced BMI) between greenspace and maintaining a healthy weight (28) and a positive relationship between exposure to natural environments and the maintenance of a healthy immune system (29,30).

Some studies have looked at the links between living in greener environments and the association between mortality rates from all causes and from cardiovascular diseases. The studies have shown that living in a greener environment reduces all cause and cardiovascular mortality and people living in deprived areas had the greatest reduction in all-cause and cardiovascular mortality (4,31,32). Large differences in morbidity, including reduced rates of cardiovascular and respiratory diseases and musculoskeletal conditions, are reported when comparing residents of very green and less green settings, even after controlling for socioeconomic status (33,34).

As well as physical health, trees and green spaces are beneficial for mental health. Poor mental health is estimated to incur an economic and social cost of £105 billion a year in England, with treatment costs expected to double in the next 20 years (4,35). Access to green space has been shown to reduce stress and anxiety, lower cortisol levels (26), enhance quality of life (36–38), and improve self-rated mental health (32,33,39,40). The density of urban street trees has been shown to have an association with the rates of antidepressants being prescribed in primary care in one study in London (41).

Green spaces that are incorporated into workplaces have reported benefits to staff by reducing stress, and staff reporting higher levels of wellbeing (42).

Literature investigating the benefits of growing plants, including gardening, horticulture and food growing could apply to food-producing trees and hedgerows. People who grow their own food have shown benefits to their levels of physical activity, fruit and vegetable consumption, recovery from surgery and ability to cope with long-term medical conditions (43).

Other studies have focused on how community orchards can address health inequalities, (44) how participation in community food growing activities can lead to an increased intake of fruit and vegetables (45,46), and how public urban fruit trees can increase place attachment and food knowledge (47).

There is evidence that in an urban context, greenspace is associated with heat reduction (39). Research indicates there is a 'park cool island' effect of between 1.5-3.5°C, with a stronger cooling effect for larger urban greenspace, and that shade-giving street trees also provide an important means of heat relief (48).

Benefits for biodiversity

The UK has lost almost half (41%) of its biodiversity since the 1970s. Of the 8,431 species in the UK, 15% are threatened with extinction and 2% are already extinct (49). Biodiversity and well-functioning ecosystems are critical for human existence, economic prosperity, and a good quality of life. They play an important role in providing food, energy, shelter, and medicines; sustaining water and soil quality; regulating the earth's climate; and providing opportunities for recreation, recuperation, and inspiration (50).

Food-producing trees and hedgerows can play a key role in supporting biodiversity in the UK. Hedgerows provide a wide range of services that support the healthy functioning of ecosystems, and biodiversity. Hedgerows are important habitats for wildlife and are the most widespread semi-natural habitat for wildlife in the UK (51).

Trees play a key role in terrestrial ecosystems, they provide food and habitat for birds, invertebrates, mammals, and plants (52,53). Trees and hedgerows can support wildlife and, crucially, insects that pollinate crops. Approximately three quarters of all crops needs insects to pollinate them (54). Many fruits and vegetables rely on animal pollinators that depend heavily on trees to provide their habitat and food (55,56). The ongoing decline of these pollinators globally, due in part to insecticide use, make maintaining the role of trees and hedgerows in habitat provision even more crucial (57).

The Government has commitment to halting biodiversity loss through legislation. Section 40 of the Natural Environment and Rural Communities Act (NERC) (2006), places a legal duty for all public authorities (including Councils) to further the "general biodiversity objective" (58).

Climate change mitigation and adaptation

Trees play an important role in the mitigation of, and adaptation to, climate breakdown by sequestering carbon, reducing flooding, and cooling urban areas (5). Trees sequester significant amounts of carbon and comprise nearly three-quarters of the mitigation potential of natural climate solutions (55). Mature fruit tree eco-systems have been shown to have a positive net effect of sequestering carbon (59). Like other tree habitats, community orchards can store carbon on a small portion of land (44,60). As with other trees species, fruit-producing trees and hedges can prevent flooding (55,61), reduce city temperatures (62,63), reduce air pollution (64) and keep soil nutrient rich (65).

Despite the many benefits to the UK's climate, just 13% of the UK's land area is covered by trees (compared with an EU average of 37%) (5). Hedgerows, which can also play a role in sequestering carbon and enriching soil, have declined since the late 1950s (66,67). Britain has lost about 41% of its net stock of managed hedgerows which were traditional markers between farms, according to Dover (2019) cited by Tilzey in 2021 (66,68). They have been replaced with electric fences in some cases, or become neglected and unmanaged (66).

Since 2019, 310 local authorities have declared climate emergencies with many local authorities setting dates to become carbon neutral. Many local authorities have pledged to increase tree planting as part of these commitments. Examples include Birmingham Council, which has developed an Urban Planting Masterplan 2021-2025 (69) and Sheffield City Council which has pledged to plant 100,000 new trees by 2028 (70). The Sheffield Food Partnership, ShefFood, launched a local food action plan in 2023 which includes two actions on planting fruit producing trees and harvesting produce (71).

Influencing and supporting planting and harvesting of food-producing trees and hedges

Having decided that planting food-producing trees would be a useful part of your work to address inequalities in access to healthy foods, support local plans for sustainable diets and contribute to mitigating climate change, there are a number of factors that need to be considered.

Firstly, check what orchards already exist in your area. It may be possible to bring back existing orchards in to use. Try looking here <u>Orchard maps - People's Trust for Endangered Species (ptes.org)</u> and here <u>UK Orchard Network Home</u>.

It is also important to consider how the food produced by the trees will be managed, harvested, and distributed. Working with local landowners and local food partnerships Home | Sustainable Food Places can help with this.

The infographic on the next page gives some key points to think about when planting food-producing trees. It signposts you to organisations who can fund, or have specialist knowledge about, tree planting as well as listing some useful tree planting guides.

The practicalities of planting

Food-producing trees need to be planted correctly and have the right on-going maintenance. They will then produce fruit and provide the benefits to people and the planet, as described above, for decades. This section identifies some of the key aspects of planting and maintenance so you can ensure you get the right support for planting your food-producing trees.

We recommend you access expert advice for choice and location of the trees. You can find experts in your area through your organisation, one of the organisations listed in this paper*, an internet search (via Ecosia**) or via an organisation like this one
The Arboricultural Association">https://example.com/html/>
Arboricultural Association.

It's important that the tree is suitable for your area

Why this matters

- For tree/s to grow to their full potential, the chosen tree/s need to be right for the location. This involves knowing about;
 - soil type; is it heavy clay or sandy?
 - aspect; is it sunny or shady?
 - eventual tree size
 - does it self-pollinate or need a similar tree type to pollinate?
 - potential hazards in the site such as overhead cables or buried pipes.
- The initial outlay for foodproducing trees can be more than for non-food producing trees so this can be a significant up-front investment for future food security and habitat improvement.
- Tree choice is influenced by the shape of your planting area. If it's a strip then damsons as part of a hedgerow can be a good choice.

Potential sources of help*

- People's Trust for Endangered Species Fruit Finder
- Plants for a Future Database search
- Royal Horticultural Society RHS plant finder
- The Woodland Trust A-Z of British Trees https://www.woodlandtrust.org.uk/planttrees/advice/care/
- Abundance Network has a very useful handbook on fruit tree growing and maintenance A guide to urban fruit harvesting
- Garden Organic has a guide to planting fruit trees and bushes here
- For information about hedges, look here About Us | Hedgelink
- The Orchard Network has a set of resources showing ways to protect, support and get involved with orchard and fruit heritage and production, and help conserve the wildlife that orchards support. There is a grants scheme available.
- The Tree Council has a useful guide about how to plant trees National-Tree-Weekplanting-guide.pdf (treecouncil.org.uk)
- International Tree Foundation has a UK Community Tree Planting Programme supporting grassroots community engagement in tree planting, awarding grants of up to £6000 to local community projects.
- The Woodland Trust give trees free to schools and communities, twice a year.
- The Local Authority Treescapes Fund is the key government offer for local authorities to restore tree cover in non-woodland areas. It is open all year for bids from £50,000 to £300,000.

https://www.gov.uk/guidance/local-

Consider initial care and maintenance

Why this matters

- The chosen tree/s need to free from disease and pests so getting trees from reputable sources is very important^{1,2}.
- Most trees will need annual pruning with the timing dependant on the type of tree.
- In the early years trees will need watering and kept weed free while they establish themselves.

Potential sources of help
See list above

Embedding the tree/s in your community

Why this matters

- Small saplings are easy to not see when walking through an area so label them with large signs explaining what type of tree they are, who has planted them and how people can get involved in the harvesting.
- Food-producing trees need to be established and fairly mature before they will bear fruit. Fruit trees can take two to five years to bear fruit^{3,4}, walnut trees take four years⁵ and hazelnut trees take three to four years⁶. Therefore, you will need an on-going engagement plan to maintain community interest and engagement from planting to harvesting, or a plan to reawaken community involvement when the trees are first ready for harvesting.
- You could plant under the trees with faster producing edible plants in the short term such as wild garlic. Look at foraging books or websites like this one https://www.woodlandtrust.org.uk/visiting-woods/things-to-do/foraging/ for ideas for underplanting.

Potential sources of help*

- The Incredible Edible Network believes in creating kind, confident and connected communities through the power of food.
- NHS Forest's Tree Planting Guidance Pack explains how to organise a community planting project.
- The orchard project The Orchard Project have resources on how to plant and look after orchards and can help groups to set up or restore community orchards and food forests.
- <u>Trees for cities</u> is a charity working to improve lives by planting trees in cities that can help people grow, forage and eat healthy food.
- Useful resources for commissioning wider food growing projects <u>Growing health |</u> <u>Sustain (sustainweb.org)</u> and a toolkit.
- *We include a selection of organisations we found whilst writing this paper. We apologise for any omissions; please let us know if there are additional organisations for inclusion on this list.
- **An internet search engine that plants trees https://www.ecosia.org/
- 1 https://www.gov.uk/guidance/prevent-the-introduction-and-spread-of-tree-pests-and-diseases
- 2 https://www.gov.uk/guidance/plant-health-controls
- 3 https://www.rhs.org.uk/fruit/fruit-trees/unproductive
- 4 https://treecouncil.org.uk/wp-content/uploads/2020/05/Guidelines-for-orchard-planning-and-planting.pdf
- 5 https://www.rhs.org.uk/nuts/walnuts
- 6 https://www.rhs.org.uk/nuts/cobnuts-filberts

Recommendations for the public health community

Situational analysis, understanding local contexts and knowledge building

- Find out about food-producing trees and hedges in the area through local authority departments/teams, for example, planning, parks and trees, climate teams. Some orchards will be mapped, or a local food partnership may be able to provide local knowledge.
- Review strategies and plans for opportunities to connect green space and dietary health, for example, climate or net zero strategies, local food strategies and plans.
- Develop knowledge and understanding of who is most at risk of dietary inequality and disadvantage locally.
- 4. Connect with local organisations taking action on green space and food, for example, incredible edible groups, local food partnerships, schools, 'friends of..' groups, allotment groups, master gardeners, community food organisations, food banks. Find out if and where support is needed. Find out if food from trees and hedges is distributed, for example, through apple day events or through an abundance or gleaning group.
- Connect into national networks for ideas and to share learning. For example, Sustainable Food Places, Trees for Cities
- 6. Connect with local farmers and land-owners. Are there local commercial orchards? Are farmers involved in agroforestry? Is there interest in new commercial food production through trees and hedges?
- Find out what support and funding is available for treeplanting locally and regionally.

Building partnerships and the foundations for action

- Join and support local groups taking action, for example, a local food partnership. Find your local food partnership at:
 www.sustainablefoodplaces.org/members
- Ensure open, inclusive, and community-led approaches from the very start of planning for food-producing trees and hedges to support dietary health.
- 3. Involve groups of people who are at greatest risk of health inequalities and disadvantage.
- Build a deep understanding of community needs in relation to green space and food. Ensure that any concerns can be raised, and solutions can be agreed.
- Connect people and organisations.
- 6. Support communications, strengthening the connection between food-producing trees and dietary health.
- Build partnerships with anchor institutions with land which could be used for food-producing trees and hedges, for example, schools, NHS Trusts.
- Build awareness around the many benefits of food-producing trees.
- 9. Build the case for food-producing trees and hedges, demonstrating the connections to public health.
- Connect with existing partnerships or build new partnerships with a specific focus on food-producing trees and hedges which bring together the community including residents, public sector caterers, community food providers, environmental groups, planners.
- 11. Include fruit, nuts and orchards as a contribution to building food resilience through working with Local Resilience Forums.

How the public health community can influence food-producing trees and hedges for healthy, more sustainable diets

Bringing public health expertise and support to food distribution from existing food-producing trees and hedges

- If food from trees and hedges is going to waste, work with local food partnerships and community food groups to find solutions to harvesting and distributing food safely and equitably.
- Be aware of risks of widening dietary inequalities when supporting approaches to distribution of food from local trees and hedges.
- Connect with expert organisations for health and safety advice regarding the harvesting, distribution, preservation, and consumption of food from trees and hedges.
- If there are landowners/farmers with existing orchards and/or food producing trees and hedges, make contact, and connect farmers and community food groups where appropriate.
- Make detailed plans for managing harvests such as stewing and freezing fruit.
- Find out why food-producing trees and hedges have fallen into disrepair and use this knowledge to future-proof new programmes.
- Seek out funding to revive community orchards or foodproducing trees planted in community spaces such as schools.
- Work with local partners to develop sustainable management approaches for the future of the trees and hedges.

Planning for and planting for future local food-producing tree and hedges to support dietary behaviours and equitable food

access

- Influence local, regional and national policies, strategies and plans to include food-producing trees and hedges to support healthy, sustainable and equitable diets.
- Seek out funding opportunities for tree-planting which could include food-producing trees and hedges for healthy, sustainable and equitable diets.
- Grow understanding of the local food economy and support farmers to engage commercially in food-producing trees and hedges, for example, through agroforestry and nut production.
- 4. Identify land for planting food-producing trees and hedges.
- 5. Build long-term strategies for managing food-producing trees and hedges locally with risk management strategies. For example, responsibilities for pruning, minimum number of people needed to harvest and distribute food, food safety plans for consumption and preservation, strategies to ensure food reaches people most in need.
- Plan for seasonal annual events such as Apple Day and build in approaches to preserving fresh produce safely.
- 7. Develop approaches which build local skills and knowledge.

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Sources of further information

Please note that the authors are not responsible for external links shared.

Agroforestry

The Soil Association, What is Agroforestry?

The Agroforestry Research Trust

Benefits of greenspace

Public Health England, Improving access to greenspace: a new review for 2020

Centre for Sustainable Healthcare, Workplace wellbeing and green space

The cooling effects of trees and greenspaces in cities

Community food-producing trees

Cyfoeth Y Coed

Jesmond Community Orchard

Local authority Treescapes case study: Pennine Lancashire

https://www.cityfruit.org/

Community Orchards - People's Trust for Endangered Species

Food growing networks

Incredible Edible

Capital Growth - London network

Good to Grow

Food systems in cities

Chapter 6 of ABC&D: Creating a regenerative circular economy for all (72)

Forest gardening

Agroforest Research Trust - Forest gardening

National forest gardening scheme

Gleaning

The Toolkit - Gleaning Network (feedbackglobal.org)

Gleanweb (management software for gleaning)

Health and greenspace

<u>Greenspace and Health - NHS Lothian Charity</u>

Green space social prescribing project

Earth Trust

Tree Equity Score UK

Local Food Partnerships

Sustainable Food Places

Tree-planting

The Tree Council | Working together for the love of trees

Branching Out Fund | Grants towards trees and hedgerows (treecouncil.org.uk)

Meeting tree planting targets on the UK's path to net-zero

Community Forest Trust

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Glossary

Agroforestry – Agriculture incorporating the cultivation of trees – Oxford language dictionary

Community food growing – Locally based groups of people that cultivate land together.

<u>Sustainability | Free Full-Text | Community Food Growing in Parks? Assessing the Acceptability and Feasibility in Sheffield, UK (mdpi.com)</u>

Community orchards - Community orchards are plantings of fruit and/or nut trees that are managed by a group of individuals who consider themselves a community. Forests | Free Full-Text | Community Orchards for Food Sovereignty, Human Health, and Climate Resilience: Indigenous Roots and Contemporary Applications (mdpi.com)

Food forest/forest garden - a diverse planting of edible plants that attempts to mimic the ecosystems and patterns found in nature. Food forests are three dimensional designs, with life extending in all directions – up, down, and out. What is a Food Forest? – Project Food Forest

Orchards – an area of land where fruit trees (not orange trees or other citrus fruits) are grown ORCHARD | English meaning - Cambridge Dictionary

Urban and peri-urban agriculture - practices that yield food and other outputs through agricultural production and related processes (transformation, distribution, marketing, recycling...), taking place on land and other spaces within cities and surrounding regions.

<u>Home</u> | <u>Urban and peri-urban agriculture</u> | <u>Food and Agriculture Organization of the United Nations (fao.org)</u>

Sustainable diets - dietary patterns that promote all dimensions of individuals' health and wellbeing; have low environmental pressure and impact; are accessible, affordable, safe and equitable; and are culturally acceptable. <u>Sustainable healthy diets (fao.org)</u>

Declaration of interest

Amanda Donnelly has received funding for delivery of work for the Nature Friendly Farming Network.

Situational analysis, understanding local contexts and knowledge building

- Find out about food-producing trees and hedges in the area through local authority departments/teams, for example, planning, parks and trees, climate teams. Some orchards will be mapped, or a local food partnership may be able to provide local knowledge.
- 2. Review strategies and plans for opportunities to connect green space and dietary health, for example, climate or net zero strategies, local food strategies and plans.
- 3. Develop knowledge and understanding of who is most at risk of dietary inequality and disadvantage locally.
- 4. Connect with local organisations taking action on green space and food, for example, incredible edible groups, local food partnerships, schools, 'friends of..' groups, allotment groups, master gardeners, community food organisations, food banks. Find out if and where support is needed. Find out if food from trees and hedges is distributed, for example, through apple day events or through an abundance or gleaning group.
- Connect into national networks for ideas and to share learning. For example, Sustainable Food Places, Trees for Cities.
- 6. Connect with local farmers and land-owners. Are there local commercial orchards? Are farmers involved in agroforestry? Is there interest in new commercial food production through trees and hedges?
- 7. Find out what support and funding is available for treeplanting locally and regionally.

Building partnerships and the foundations for action

- 1. Join and support local groupstaking action, for example, a local food partnership. Find your local food partnership at: www.sustainablefoodplaces.org/members
- 2. Ensure open, inclusive, and communityled approaches from the very start of planning for food-producing trees and hedges to support dietary health.
- 3. Involve groups of people who are at greatest risk of health inequalities and disadvantage.
- 4. Build a deep understanding of community needs in relation to green space and food. Ensure that any concerns can be raised, and solutions can be agreed.
- 5. Connect people and organisations.
- 6. Support communications, strengthening the connection between food-producing trees and dietary health.
- 7. Build partnerships with anchor institutions with land which could be used for food-producing trees and hedges, for example, schools, NHS Trusts.
- 8. Build awareness around the many benefits of food-producing trees.
- 9. Build the case for food-producing trees and hedges, demonstrating the connections to public health.
- 10. Connect with existing partnerships or build new partnerships with a specific focus on food-producing trees and hedges which bring together the community including residents, public sector caterers, community food providers, environmental groups, planners.
- 11. Include fruit, nuts and orchards as a contribution to building food resilience through working with Local Resilience Forums.

Bringing public health expertise and support to food distribution from existing food-producing trees and hedges

- If food from trees and hedges is going to waste, work with local food partnerships and community food groups to find solutions to harvesting and distributing food safely and equitably.
- 2. Be aware of risks of widening dietary inequalities when supporting approaches to distribution of food from local trees and hedges.
- Connect with expert organisations for health and safety advice regarding the harvesting, distribution, preservation, and consumption of food from trees and hedges.
- 4. If there are landowners/farmers with existing orchards and/or food producing trees and hedges, make contact, and connect farmers and community food groups where appropriate.
- 5. Make detailed plans for managing harvests such as stewing and freezing fruit.
- Find out why food-producing trees and hedges have fallen into disrepair and use this knowledge to future-proof new programmes.
- 7. Seek out funding to revive community orchards or foodproducing trees planted in community spaces such as schools.
- 8. Work with local partners to develop sustainable management approaches for the future of the trees and hedges.

Planning for and planting for future local food-producing tree and hedges to support dietary behaviours and equitable food access

- 1. Influence local, regional and national policies, strategies and plans to include food-producing trees and hedges to support healthy, sustainable and equitable diets.
- 2. Seek out funding opportunities for tree -planting which could include food-producing trees and hedges for healthy, sustainable and equitable diets.
- 3. Grow understanding of the local food economy and support farmers to engage commercially in food -producing trees and hedges, for example, through agroforestry and nut production.
- 4. Identify land for planting food-producing trees and hedges.
- 5. Build long-term strategies for managing food-producing trees and hedges locally with risk management strategies. For example, responsibilities for pruning, minimum number of people needed to harvest and distribute food, food safety plans for consumption and preservation, strategies to ensure food reaches people most in need.
- 6. Plan for seasonal annual events such as Apple Day and build in approaches to preserving fresh produce safely.
- 7. Develop approaches which build local skills and knowledge.