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A Matter of Scale Film Fact Sheet 1: Productivity

Small farms are often seen as “hobby” farms or only able to produce small amounts of high value goods for “niche” markets. Yet many are producing high yields of vegetables or a diversity of products, and feeding significant numbers of people from a small area of land. The “A Matter of Scale” survey showed that small-scale, agroecological farms were producing higher than average yields compared to standard non-organic farms for vegetables that require hand picking or other labour intensive processes, while an average of 3.3 enterprises were operated per farm. The farms in this film demonstrate how integrated enterprises, wise combination of machinery and hand labour, and good system design lead to high productivity.

Horticultural Highlights

Better yields can be obtained for crops such as beans and peas at small farms, where hand picking enables a longer cropping season. Standard non-organic yields for French beans are 0.86kg/m² and broad beans 0.4kg/m². At **Fresh and Green** (4.98 ha/12.45 acres), French beans yielded 4kg/m² and broad beans yielded 7.2 kg/m².

By growing on a small area, using no-dig gardening in combination with high inputs of compost, Charles Dowding of **Homeacres** (0.1 ha/0.25 acres) succeeds in achieving good yields of high value leaf vegetables. For example, salad leaves 9.36kg/m² (non-organic 0.6kg/m²), kale 6.88kg (non-organic 0.85kg/m²), leaf beet and chard 5kg/m² (non-organic 0.8kg/m²).

Total Output

Fivepenny Farm (10 ha/25 acres) layers different production systems to integrate multiple enterprises producing in single year: Lamb (30 x 25kg), beef (2 x 320kg), pork (8 x 70kg), 3 Jersey cows producing 7300 litres of milk (95% of which is processed into 700 kg cheese farmhouse cheese), 50 hens (280 eggs per hen), 450kg soft fruit, as well as plums and pears processed into 1500 x 282ml jars of preserves, and apples processed into 1500 x 75cl bottles juice and cider.

Feeding People Directly

North Aston Organics (5ha/13 acres) supplies 260 vegetable boxes per week to local households, of which two thirds of the contents are produced on the farm. They focus on growing the higher value produce that benefits from being freshly picked.

Stroud Community Agriculture (18ha/45 acres) is a community supported agriculture scheme (CSA) supplying year round weekly vegetable “shares” to its 230 members from 1.8ha, as well as cut flowers. Meat is supplied as an optional addition to the vegetable boxes, and 5-6 beef animals (335kg each), 12-15 lambs (20kg each) and 18-23 pigs (60kg) are sold direct each year. All fertility is generated on the farm, by integration of the enterprises, although 90% of pig feed is currently bought in.

¹Enterprises refer to the number of different types of crop/livestock business in operation – for example pigs, laying hens and vegetables would count as three different enterprises. 50% of the sample were mixed farms.



Watch the film here:

<https://vimeo.com/222364577>





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A Matter of Scale Film Fact Sheet 2: Financial Viability

Small-scale agroecological farms operate in a harsh financial environment. They compete against low food prices determined by supermarket competition and global markets, usually without the benefit of farm subsidies. 78% of the AMOS samples receive no subsidies at all. 38 (59%) of the respondents have **off-farm employment**, but for over half of these it represented less than 40% of income. For comparison, for average farms in England subsidies make up 65% of farm income. It is possible, however, to generate a decent livelihood from a small acreage and the seven farms featured in “Financial Viability” film demonstrate how direct marketing, processing and diversifying income streams can create viable and economically resilient businesses.

North Aston Organics (5 ha.) sell 260 boxes per week, enabling the employment of 3.4 full time equivalents. This marketing method enables them sell more of their different sized produce, and waste less.

Members of a community supported agriculture (CSA) scheme share the financial and practical risks with the farmer, by guaranteeing a monthly income by standing order, accepting the seasonal variations in yield and maybe helping with labour when required. At **Stroud Community Agriculture** this makes financial planning easier. Meat is sold on a more ad hoc basis, when customers want it or it is available. For more information see <https://communitysupportedagriculture.org.uk/>

A livelihood is made possible at the **Apricot Centre** (1.55ha) by selling fresh and processed organic fruit direct at a weekly farmers’ market in London and adding shelf life by processing fruit into jams, chutneys, cordials and juices. Extra income comes from educational visits.

Trill Farm Market Garden (1 ha/2.5 acres) specialises in salad leaves, herbs and other high value vegetables, which are sold wholesale to local restaurants and cafes for the summer tourists in a coastal area. It thereby generates 3.3 full time livelihoods from one hectare of heavy clay.

A combination of specialising in salads, and other high value leafy crops; a highly labour efficient no-dig growing system, and running training courses/writing books, enable Charles Dowding to generate a livelihood from 0.1ha (0.25acres) at **Homeacres**.

The economic co-existence of the **Castle Climbing Centre** (0.49 ha/1.2 acre), its café and the community garden enable the production of diverse fresh fruits, such as berries and kiwi fruit, and vegetables, which the café might not otherwise be able to afford, yet might not be economic to produce. Income from the climbing centre pays three part-time gardeners, who maintain the small, but highly diverse and productive garden with volunteer help. Additional income comes from harvesting, processing and retailing herbal tea blends, herb salts.

At **Fivepenny Farm** (10 ha/25 acres) multiple enterprise strands, that adapt to changes in the market and the weather, combined with a double layer of adding value, create a resilient business. Pig meat is made into Parma ham, bacon and sausages; milk is made into cheese; soft fruit into cordials, jams and chutneys, and apples into juice and cider, all of which are sold direct either via a producers’ co-op or used in the farm’s own catering business.

²Defra (2014) Farm business income by type of farm in England 2013/14, p7



Watch the film here:

<https://vimeo.com/221393133>





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A Matter of Scale Film Fact Sheet 3: Employment

The farms in the “A Matter of Scale” (AMOS) sample were generating more and better quality farm jobs on average than UK farms as a whole. In contrast to the drive for labour efficiency that defines modern agriculture, the generation of a livelihood from doing satisfying and skilled work is seen as a benefit. Furthermore, the creation of agricultural/horticultural jobs, whether full-time or part-time, contributes to the vitality of rural economies since wages are usually spent locally.

More Jobs

An average of 2.25 full time equivalents (FTE) was working on each holding in the AMOS sample. This includes the farmers themselves as well as their paid employees. Numbers of people working per farm ranged from 0.3-10.2 FTE.

Across the sample, the average number of FTE workers per hectare was 3.1. This reflects the fact that 18% of the sample was holdings of less than one hectare, where labour intensity is especially high. For comparison, the UK average for annual work units (AWU) per hectare is 0.026 (Eurostat 2012), and for UK Horticulture the figure is 0.23AWU/ha (Defra 2015).

On each farm an average of 0.7 FTE paid jobs (in addition to the farmer/grower) have been created. Most of these are part-time, but 17 holdings employ one or more FTE. Of the ten farms employing two or more FTE, seven were 5 hectares or less. An average of 0.4FTE/ha were employed on the farms in the sample (Range of 0.04-2.2).

Both horticulture and organic farming tend to be more labour intensive than other forms of agriculture, and both were well represented in the sample.

Quality of Work Life

The variety of tasks, the opportunity to learn new skills and the friendliness of the workplace all contribute to making small-scale, agroecological farms more appealing places to work than larger, industrial farms. Many people are even willing to work as volunteers on small farms, due to the pleasure they get from working in beautiful place and a sociable environment.

Many workers also value doing meaningful work that brings environmental and social benefits.

Training and Skills

Small farms offer a safe and interesting environment for training a new generation of farmers and growers, with many offering traineeships or student placements. A cultural bias against agricultural/horticultural careers means that bright students are often discouraged from farm work, despite the diverse skills and intelligence necessary to run a successful business.

Challenges

The imbalance between the cost of labour and low food prices mean many holdings struggle to be able to afford enough paid workers, hence they rely on the willingness of volunteers.

The focus on academic, rather than practical, education in the UK means many school leavers lack to basic skills necessary to be useful employees, while formalisation of employment law means that opportunities to learn agricultural skills through casual work are less common than they were.



Watch the film here:

<https://vimeo.com/221392869>





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A Matter of Scale Film Fact Sheet 4: Barriers to Productivity

Some small farms succeed despite competing with industrialised food prices, without subsidies and with few affordable opportunities for new entrants, but even the successful ones have had to struggle in this inhospitable environment. In the AMOS survey, responses to the question “What are the main barriers that prevent you from increasing productivity?” fell into three main categories – those relating to time and labour, those relating to capital and those relating to access to land – the main “factors of production”. Although it is hard to change macro-economic conditions, a number of interventions are identified by the farmers and growers in this film that could help “level the playing field” and release the full potential of creative and committed new entrants.

Labour

Time shortages and lack of money to employ more labour, due to low food prices, were the most commonly cited barriers to productivity. Government intervention is needed to create a food system which reflects the true costs of production.

Lack of Affordable Land and Accommodation

The area based subsidy schemes through which the bulk of CAP payments have been paid since 2003 have led to land price increases, and have made land unaffordable for many new entrants.

Current average rental values for pasture land are £96 per acre for Farm Business Tenancies and £60 for 1986 Act tenancies, whereas the average sale price for pasture land is £7040. It would take about a century to pay off the purchase cost of land through normal agricultural practice.

New entrants fortunate enough to be able to buy a “bare land holding” often have to go through a lengthy, stressful and expensive planning appeals process before they gain permission to build an agricultural workers dwelling. Living on-site dramatically increases efficiency, and the long term prospects of the enterprise.

Cash strapped local authorities have sold off 3,850 ha of publicly owned farmland since 2010. These county farms provide an affordable opportunity for new entrants to rent a farm, but such opportunities are now scarce.

Capital for Infrastructure and Equipment

Lack of capital can hamper the development of efficient farm businesses. A government scheme to help with core costs, such as farm buildings, fencing, water installations and equipment would increase productivity. Such grants are already available in Scotland through the Young Farmers’ and New Entrants Start Up Grant Schemes, and cover £25,000 - £155,000 capital costs.

<https://www.ruralpayments.org/publicsite/futures/topics/all-schemes/new-entrants/young-farmers-and-new-entrants-start-up-grant-schemes/>

The US has a bigger market for small-scale farm equipment, so it is often easier to find and import appropriate and affordable tools from there. Government investment in R&D could stimulate innovation and domestic production of equipment in the UK.

³RICS figures at the AHDB Dairy website <https://dairy.ahdb.org.uk>, posted 26 August 2016, retrieved 20 November 2016)

⁴P Clarke, Land Workers Protest in London at Council Farm Sell-offs, Farmers Weekly, 18 April 2016, <http://www.fwi.co.uk/news/land-workers-protest-in-london-at-council-farm-sell-offs.htm>



Watch the film here:

<https://vimeo.com/221392625>





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A Matter of Scale Film Fact Sheet 5: Multi-functional Benefits

It is hard to separate the environmental and social benefits that arise from the farms in the AMOS study being small, from those that result from the agroecological methods they employ. The systems illustrated by this film have been designed to make efficient use of natural resources, to encourage biodiversity, to care for the soil, and provide a community and informal educational focus, while delivering healthy and fresh food to local people. The multifunctional benefits showcased by this film are as integral to the farms as their productivity and financial viability, rather than being an optional “add on” incentivised by an agri-environmental grant.

Efficient use of resources – The holdings in the AMOS study operate low input systems, where inputs and outputs are passed between integrated enterprises to minimise waste and reduce reliance on inputs. Short supply chains reduce the need for packaging.

Soil care – Soil is cherished through practices including no-dig or minimum tillage, to reduce erosion and compaction, and encourage biological activity. Fertility is increased by additions of organic matter, in the form of composts, recycling of animal manure and green manures. Effective compost management is often easier at a small scale.

Biodiversity – Enterprise diversity combined with wildlife conservation contribute to the enhancement of biodiversity, and maintains intact ecological food webs. Healthier ecosystems can lead to greater productivity as there is a better balance of pests and predators. Seed saving, to encourage crop diversity can also encourage pollinator insects.

Reduction in greenhouse gas emissions – Emphasis is placed on storing carbon in the soil, as organic matter or biochar, or through planting trees/hedges to sequester CO². Avoiding artificial fertiliser reduces nitrous oxide emissions. Food is sold locally, thus reducing emissions from transport and refrigeration.

Suppliers of healthy, fresh and tasty food – The short food chains and organic production methods, mean small-scale agro-ecological farms typically supply nutrient dense food which will have been harvested within a day or two, if not hours, of being harvested. Meat is raised according to high animal welfare standards, with sheep and cows being pasture fed.

Community Building – Small-scale farms tend to become community focus points, whether or not they are formally community supported agriculture (CSA) schemes. Direct contact between farmers/growers and customers creates trust, reciprocity and friendship. Where farm size has increased, trust between farmers and the local community has diminished.

Education – As safe and pleasant places for visitors, compared to larger industrial farms, small farms build public understanding about the production of food. Many farms in the AMOS sample host school groups or training courses, but informal education also occurs when people stay on farms that have campsites or holiday cottages.

Mental health and wellbeing – Both workers and visitors seem to benefit from the diverse, natural and beautiful environments that small-scale, agroecological farms create.

¹Winter, M. and Lobley, M. (2016) *Is there a future for the small family farm in the UK?* Report to The Prince's Countryside Fund, London: Prince's Countryside Fund. ISBN 978-902746-36-7, p44



Watch the film here:

<https://vimeo.com/222364134>

