

Why We Need Small Farms



Small to medium scale farms play an important but under recognised role in UK farming. In this booklet the Landworkers' Alliance outlines the case for supporting small to medium scale farming in post-Brexit policy. We propose a values based approach that emphasises the social and ecological contributions of this kind of farming.

What is a small farm?

Small to medium scale farms play a central role in UK farming but have long been misrecognised and under supported in agricultural policy. There are 98,000 holdings under 20ha in the UK, comprising 45.7% of total holdings. However, these farms receive less than 5% of Pillar One subsidy payments, which constitute the bulk of agricultural support ⁽¹⁾. Furthermore, research, innovation, trade policy and supply chains all prioritise a farming system geared for the production and export of commodities, and tend to ignore the needs of small and medium scale producers.

Differences in soils and farming systems make defining farms by acreage problematic. To overcome this the Landworkers' Alliance has drawn up a values based approach to defining small and medium scale farms, allowing us

to distinguish between farms that are run primarily for profit at the expense of social, ecological and community outcomes, and those that are truly embedded in their local ecology and community. **This approach allows us move beyond the acreage farmed, to develop a more complex analysis of a farm beyond the scale of its operation.**

Within this framework, small to medium scale farming is based on diversifying farms and farming landscapes, replacing chemical inputs and optimising biodiversity. These farms tend to use holistic strategies to build long-term fertility, healthy ecosystems, secure livelihoods and vibrant rural communities. This kind of farming values the food being produced, the land and ecosystem producing it and the people it is produced for.

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We use the term ‘small farm’ to describe a values based approach to agriculture that emphasises the social and ecological outputs of a farm, alongside financial viability and yield.

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(1) Cap Payments Data (2015) DEFRA. Available at <http://cap-payments.defra.gov.uk>, accessed April 8, 2017. Calculated assuming farms over 20ha received more than £2500 in Single Farm Payment.

6 key values in small to medium scale farming



Ecology

Nature is the primary resource of all production. Small farms put ecology at the centre of farming because a healthy soil and a diverse ecology is the foundation for producing nutritious food.



Autonomy

Autonomy is an essential part of a farm's resilience and viability. Small farms work to reduce reliance on bought-in inputs, limit dependency on borrowed capital and keep decision making in the farmers hands.



Cooperation

Cooperation is at the heart of our farming culture. Small farms work together to share ideas and resources, and maintain access to the industry for new entrants and successors.



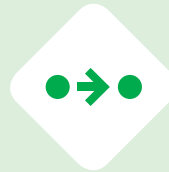
Community

Farms are a central pillar of rural communities and rural culture. Small farms play an essential role in maintaining the fabric of rural life by creating jobs, providing services and maintaining culture.



Livelihood

Small farms value the local distribution of healthy food above the production of commodities for export. The small farm works to create markets that ensure both fair prices for farmers and good food for customers.



Accountability

Small farms take pride in producing high quality products that are healthy, nutritious and made with integrity. Supply chain traceability is important and creates public confidence in quality farming.



Small farms are **Ecological**

- **Current farming practices are depleting UK topsoil.** Methods employed at different scales are key to this depletion, evidenced by comparison between allotment soils and conventional farm soils. Allotment soils hold 32% more organic carbon, 36% higher carbon to nitrogen ratios, 25% higher nitrogen and are significantly less compacted. Many small-scale farms operate with similar soil management strategies to the allotments in this survey.⁽¹⁾
- **Small farming values are best for wildlife.** A wider variety of crop and livestock diversity on a single farm can increase on-farm natural biodiversity compared to monocultures⁽²⁾. Using organic principles farms can have approximately 30% higher species richness and 50% higher abundance of organisms than conventional farms⁽³⁾.
- **Practices such as using green manures and composted woodchip** to build soil organic matter, permanent grass strips around fields and allowing hedgerows to grow tall and wide **increase the soil carbon sequestration of farming.** Tolhurst Organics sequester 21t of CO₂ per year in this way, making them carbon positive by 4t of CO₂ per year⁽⁴⁾.

(1) Edmondson, J. L., Davies, Z. G., Gaston, K. J. and Leake, J. R. (2014) Urban cultivation in allotments maintains soil qualities adversely affected by conventional agriculture. *Journal of Applied Ecology*, 51: 880–889. doi:10.1111/1365-2664.12254

(2) Prieto, I., Violle, C., Barre, P., Durand, J.-L., Ghesquiere, M., Litrico, I. (2015) Complementary effects of species and genetic diversity on productivity and stability of sown grasslands. *Nature Plants* 1, 15033. doi:10.1038/nplants.2015.33

(3) Bergtsson, J., Ahnström, J., Weibull, A.-C. (2005) The effects of organic agriculture on biodiversity and abundance: a meta-analysis. *Journal of Applied Ecology* 42, 261–269. doi:10.1111/j.1365-2664.2005.01005.x

(4) Farm Carbon Cutting Toolkit (2012) Case Study: Tolhurst Organic Produce, Berkshire. Available at <http://www.farmcarbontoolkit.org.uk/resources/downloads/case-studies>, accessed April 12, 2017.

Small farms are **Resilient**

- **Farms with a variety of species and production types are more resource efficient and produce less waste** ⁽¹⁾. Small farms are up to 2-4 times more energy efficient than large conventional farms, requiring less input energy to produce the same outputs ⁽²⁾.
- **Small farms using ecological production methods increase soil capacity for water retention and reduce run-off** ⁽³⁾ resulting in cleaner water and reduced flood risk. Purifying water and infrastructure damage due to flooding currently costs the UK £2.37billion a year. Farming practice is key to reducing this cost ⁽⁴⁾.

Farming systems aligned with small farm values have been shown to produce higher yields through increased resilience, particularly to pests and to droughts. ⁽⁵⁾

- **Small farms are more resilient to disease. Swine flu** ⁽⁶⁾, **Irish potato famine** ⁽⁷⁾ and **American stripe rust** ⁽⁸⁾ have all been linked to scale and/or lack of diversity on farms. Disease outbreaks cost farmers and taxpayers billions. Much of the cost is aimed at protecting our export market, which is a fraction of the total agricultural sector ⁽⁹⁾.

(1) Altieri, M.A., Funes-Monzote, F.R., Petersen, P. (2012) Agroecologically efficient agricultural systems for smallholder farmers: contributions to food sovereignty. *Agron. Sustain. Dev.* 32, 1–13. doi:10.1007/s13593-011-0065-6 (2) Chappell, M.J., Lavalle, L.A. (2011) Food security and biodiversity: can we have both? An agroecological analysis. *Agric Hum Values* 28, 3–26. doi:10.1007/s10460-009-9251-4 (3) Gomez, J.A., Sobrinho, T.A., Giráldez, J.V., Fereres, E., 2009. Soil management effects on runoff, erosion and soil properties in an olive grove of Southern Spain. *Soil and Tillage Research* 102, 5–13. doi:10.1016/j.still.2008.05.005 (4) Angela Francis, Sue Armstrong Brown, William Andrews Tipper, Nicola Wheeler (2016) New markets for land and nature: how Natural Infrastructure Schemes could pay for a better environment. Green Alliance. (5) Frison, E.A.; IPES-Food. (2016) From uniformity to diversity: a paradigm shift from industrial agriculture to diversified agroecological systems. Louvain-la-Neuve (Belgium): IPES, 96 p (6) FAO (2009) *The State of Food and Agriculture - Livestock in the Balance*. (7) O'Neill, J.R., 2010. Irish potato famine. *ABDO*. (8) Ullstrup, A.J., 1972. The impacts of the southern corn leaf blight epidemics of 1970-1971. *Annual Review of Phytopathology* 10, 37–50. doi:10.1146/annurev.py.10.090172.000345 (9) DEFRA (2016) *Food Statistics Pocketbook*.



Small farms **Inspire,** **Innovate and Cooperate**



- The Landworkers' Alliance, as union for small to medium scale producers and family farmers, has a membership with an average age of 37. The average age of a farmer in the UK is 59 years ⁽¹⁾. **Small scale, agroecological farming is inspiring the next generation of farmers.**
- **Appropriate technology for small farms can be built and maintained on the farm itself.** Networks of small farms around the world work together to develop appropriate technologies ⁽²⁾. Small farmers cooperate to achieve economies of scale, share farm equipment, processing facilities, distribution routes, marketing and pool resources ⁽³⁾
- **Many small farms cooperate and innovate to spread economic risk.** Bi-products from one enterprise are used in another (for example composted animal manure used to fertilise crops, crop bi-products such as whey or vegetable waste used as pig feed). This happens on farm and between farms and helps to improve the viability across enterprises. ⁽⁴⁾

(1) DEFRA (2015) Agriculture in the United Kingdom. (2) For example: FarmHack - <http://farmhack.org> and L'Atelier Paysan - <http://www.latelierpaysan.org> (3) COGECA (2010) Agricultural Cooperatives in Europe - Main Issues and Trends

(4) Loughton, R 2017 A Matter of Scale: The productivity, financial viability and multifunctional benefits of small scale (20ha and less), agroecological farms

Small farms engage Communities

- **Small farms are central to their communities**, hosting open days and events, volunteering opportunities, apprenticeships and sharing their stories with everyone who eats their produce⁽¹⁾. This contrasts with the increasing loneliness that is becoming ever more prevalent in rural areas as modern farms shed labour⁽²⁾
- Large scale farmers (over 500 ha) receive significantly higher proportion of complaints than farmers with less than 50ha. In particular large farms receive more complaints about about smells, health risks from pesticides use and destruction of wildlife and landscape than their smaller scaled counterparts⁽³⁾
- Care farming and social and therapeutic horticulture have been shown to **significantly improve mental well-being and give increased level of social contact and inclusion**, as well as a sense of belonging and personal achievement. With 1 in 4 people in the UK suffering significant mental health struggles each year, this kind of farming has a significant role to play in the health of our communities.⁽⁴⁾



1) Laughton, R (2017) A Matter of Scale: The productivity, financial viability and multifunctional benefits of small scale (20ha and less), agroecological farms
2) Winter, 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 p45-47
3) Winter, 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 p4
4) Bragg, R., Atkins, G. (2016) A review of nature-based interventions for mental health care. Natural England Commissioned Reports, Number204

Small farms create meaningful **Livelihoods**

- **Small farms create meaningful livelihoods for more people per hectare, than conventional farms.** Farms between 1 and 20ha are found to employ an average of 0.68 full time workers per hectare ⁽¹⁾. This is 26 times more employment per hectare than the UK average of 0.026 ⁽²⁾
- **Small farms provide better quality of work life, as jobs are more varied, require more skill and occur in a more pleasant environment.** While some may see more labour intensive agriculture as regressive, increasingly people seek meaningful outdoor work that brings environmental and social benefits ⁽³⁾
- In the 2016 SW Farm Survey 47.1% of famers with 200 to 250 ha and 35.9% of farmers with over 250 ha who reported “feeling less satisfied” compared to just 17.9% of farmers with 50 ha or less ⁽⁴⁾



1) Laughton, R (2017) A Matter of Scale: The productivity, financial viability and multifunctional benefits of small scale (20ha and less), agroecological farms

2) Eurostat (2011) Large farms in Europe. Issue no. 18/2011

3) Timmermann, Cristian and Georges F. Félix. 2015. Agroecology as a vehicle for contributive justice. Agriculture and Human Values doi: 10.1007/s10460-014-9581-8

4) Winter, 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

Small farms provide Nutrition

- Small farms often sell direct, via box schemes or farmers' markets. This results in a shorter time between harvest and your kitchen, often within the same day ⁽¹⁾. This means produce is fresher and more nutritious than vegetables which are harvested many days before arriving at the supermarket. ⁽²⁾
- Food produced using organic production methods is more likely to contain higher levels of antioxidants ⁽³⁾ and essential fatty acids ^(4, 5). They are less likely to contain known heavy metals, carcinogens, pesticides and other harmful chemicals ⁽⁶⁾.

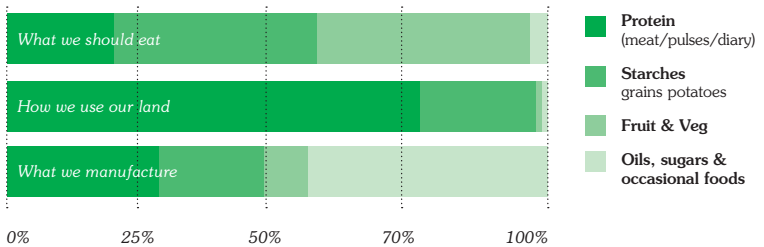


(1) Loughton, R (2017) A Matter of Scale: The productivity, financial viability and multifunctional benefits of small scale (20ha and less), agroecological farms
(2) Barrett, D.M. (2007) Maximizing the nutritional value of fruits and vegetables. Food Technology 61(4):40-44.
(3) Leifert, C. et al. (2014) Higher antioxidant and lower cadmium concentrations and lower incidence of pesticide residues in organically grown crops: a systematic literature review and meta-analysis. British Journal of Nutrition, Volume 112, Issue 5, p794-811.
(4) rednicka-Tober, D., Bara ski, M., Seal, C.J., Sanderson, R., Benbrook, C., Steinshamm, H., Gromadzka-Ostrowska, J., Rembialkowska, E., Skwarlo-So ta, K., Eyre, M., Cozzi, G., Larsen, M.K., Jordon, T., Niggli, U., Sakowski, T., Calder, P.C., Burdge, G.C., Sotiraki, S., Stefanakis, A., Stergiadis, S., Yölcü, H., Chatzidimitriou, E., Butler, G., Stewart, G., Leifert, C., (2016). Higher PUFA and n-3 PUFA, conjugated linoleic acid, -tocopherol and iron, but lower iodine and selenium concentrations in organic milk: a systematic literature review and meta and redundancy analyses. British Journal of Nutrition 115, 1043-1060. doi:10.1017/S0007114516000349
(5) rednicka-Tober, D., Bara ski, M., Seal, C., Sanderson, R., Benbrook, C., Steinshamm, H., Gromadzka-Ostrowska, J., Rembialkowska, E., Skwarlo-So ta, K., Eyre, M., Cozzi, G., Krogh Larsen, M., Jordon, T., Niggli, U., Sakowski, T., Calder, P.C., Burdge, G.C., Sotiraki, S., Stefanakis, A., Yölcü, H., Stergiadis, S., Chatzidimitriou, E., Butler, G., Stewart, G., Leifert, C., (2016) Composition differences between organic and conventional meat: a systematic literature review and meta-analysis. British Journal of Nutrition 115, 994-1011. doi:10.1017/S0007114515005073
(6) Reganold, J.P., Wachter, J.M., 2016. Organic agriculture in the twenty-first century. Nature Plants 2, 15221. doi:10.1038/nplants.2015.221

Small farms produce Food for People



Our current farming system does not produce the food we need ⁽¹⁾



- The UK produces about half of its vegetables and a sixth of its fruit ⁽²⁾. UK horticulture requires massive reinvestment and policy support to reverse the decline in production and narrow the gap between demand and supply ⁽³⁾
- **Small farms are especially well suited vegetable and fruit production**, and often produce higher than average yields per unit area compared with non-organic farms (see table below) ⁽⁴⁾. The crops that perform best are those which benefit from a higher labour input.:

	Small-scale Agroecological Farms (<20ha) kg/sq m	Non-Organic Farms (kg/sq m)
Salad leaves	2.61	0.6
Broad beans	1.48	0.4
French beans	1.79	0.86
Kale	1.72	0.85

(1) Davis, L. (2017) Craving Better Food, Reclaiming Peasant. Available at <http://www.reclaimingpeasant.net/1/post/2017/02/craving-better-food.html>, accessed April 10, 2017.
 (2) DEFRA (2015) Agriculture in the United Kingdom
 (3) Lang, T. & Schoen, V. (2016). Horticulture in the UK: potential for meeting dietary guideline demands. UK: Food Research Collaboration. p2
 (4) Laughton, R (2017) A Matter of Scale: The productivity, financial viability and multifunctional benefits of small scale (20ha and less), agroecological farms

Policy recommendations to support **small farms**



- Scrap area-based direct payments. A new support system should target environmental, social and economic public goods. Payments should be capped so that more land does not mean more subsidy.
- Environmental payments should support agroecological farming methods prioritising soil health, biodiversity and water management.
- Small to medium scale food and farming infrastructure scheme to provide capital support for mixed farms, new entrants, farm improvements, short-supply chains and Community Supported Agriculture.
- Implement “Polluter pays” mechanisms such that those using harmful farming practices pay. Currently farmers that don’t use harmful practices have to pay for certification.
- Training and apprenticeships schemes and research investment should be actively directed at increasing the productivity of agroecological farms.

What **YOU** can do to support small farming?

1

Buy from small farms that stand by these values whenever you can. Ask your retailers to supply food from small farms.

2

Show your support for policies that promote small farming. Sign petitions, talk about it, email your MP and share on social media.

3

Oppose any trade deals that will undermine small and medium scale and family farming in the UK

4

Join LWA as a member or a supporter and join the voice of small farmers in the UK



To become a member or supporter of the LWA visit
www.landworkersalliance.org.uk/membership

Images by **Walter Lewis** are from his project Feeding Body and Soul which set out to document a year in the small scale, sustainable farming world. The project is being published at the website www.feedingbodyandsoul.com and in the book, *Unlikely Heroes*, available through the website.



www.landworkersalliance.org.uk