The Whole Farm Agroecology Scheme





Published by The Landworkers Alliance. Central image courtesy of Michael Trolove

Agroecological Objectives

Environmental

An agroecological support scheme means that farmers will be supported in changing their farms over to and maintaining whole farm systems that deliver environmental benefits as a part of the whole farm system. Public goods, such as soil health, clean water fresh air, and a biodiverse ecosystem, will be default outputs of diverse farms.

The UN Food and Agrculture Organisation (FAO) describes agroecology as "the basis for evolving food systems that are equally strong in environmental, economic, social and agronomic dimensions...Agroecology is based on applying ecological concepts and principles to optimize interactions between plants, animals, humans and the environment while taking into consideration the social aspects that that need to be addressed for a sustainable and fair food system. By building synergies, agroecology can support food production and food security and nutrition while retoring the ecosystem services and biodiversity that are essential for sustainable agiculture."

- Encouraging Biodiversity 
- Decreasing Agrochemical Use 
- Adapting to and Mitigating Climate Change 
- Building Soil Health 
- Promoting Sutainable Waste Management 

Social

Social benefits will be a part of the farm system. Farms will be supported to provide public access to nature and wildlife, public access to fresh nutritious food at an affordable price, and public understanding about where their food comes from, including how to cook it, which can improve public health.

- Increasing Accessibility and Affordability of Food 
- Integrating the Community 

Economic

Agroecological farms contribute to a vibrant and resilient economy in both rural and urban areas, through creating local food systems which employ more people in higher-quality jobs, and return a higher proportion of income to the local economy.

- Increasing the Quantity and Quality of Jobs 
- Enhancing Economic Resilience 

Practices to be incentivised

Diversifying production systems by adopting mixed cropping systems, such as rotations or intercropping.	Incorporating wildlife margins and set aside zones, bird feed crop rotations, beetle banks and hedgerows into farm design.	Saving and breeding on-farm resilient seed and livestock varieties, including traditional varieties of crops and animals.
Reductions in use of nitrate fertilisers, replaced with use of organic fertilizers produced from livestock, compost, or green manure on site.	Reductions in use of pesticides, replaced with use of integrated pest management schemes, such as encouragement of biological pest control.	Reductions in use of herbicides, replaced by alternative weed controls such as cover cropping and manual weeding.
Reduction in use of imported animal feeds, especially soya. Use of alternative domestic feed for animals, such as pasture, forage, and UK based grains.	Reducing fossil fuel dependency through system design and appropriate equipment.	Increasing the carbon sequestration capacity of land through installation of permanent pasture, orchards, and woodlands; and growth of perennial crops.
Use of crop rotations to avoid soil depletion; including leguminous crops to build fertility, and green manures to build organic matter.	Development of soil structure by reducing compaction, growth of deep-rooting plants, and encouragement of soil fauna.	Use of cover crops during winter to reduce erosion, and at time of peak nutrient application to reduce leaching.
Minimising loss of resources through careful design to ensure optimum use of sunlight, space, water, and nutrients.	Use of cover crops, composting, and manure spreading to maximise on-farm nutrient use.	Minimising food waste through adding value to primary products that are unsuitable for market, and using waste for animal feed.

Selling affordable food to low income households, such as selling at a subsidized rate to households in receipt of benefits.	Developing short supply chains to increase public access to conveniently located, fresh and nutritious local food.	Enabling affordable prices for consumers while securing a fair price for farmers by cutting out middle-men through direct sales.
Hosting farm visits, cooking lessons, etc. for schools and communities to increase public awareness about food production.	Promoting Community Supported Agriculture which enhances public access to healthy food.	Provision of mental health services and other health benefits through providing opportunities to reconnect with nature.

Enhancing labour conditions and wage levels on farms to improve quality of jobs in farming.	Adding value to primary products for creating employment, which contributes to economic resilience and reduction of food waste.	Encouraging more jobs on farms to increase secure land-based employment opportunities in rural areas.
Enhancing local economies by creating links with local food shops and restaurants, tourism, schools and hospitals.	Improving farm viability by reducing bought-in farm inputs, like feed, seed, fertilizers, herbicides and pesticides.	Improving farm income through direct sales, because farmers retain a larger share of the final price of food.

The Whole Farm Agroecology Scheme

Supporting the Transition to Sustainable Farming

Agroecology is a set of guiding principles to encourage whole farm systems that produce food, fuel and fibre while delivering environmental, social, and economic benefits. In an agroecological system, natural resources are cared for to allow long-term sustainability, with practices designed to improve soil health and create favourable conditions for plant growth and animal health. Integrated production, on mixed farms, recycles biomass and reduces waste, using by-products from one process as inputs in others and acts to optimise nutrient availability over time through using fertility generated on farm instead of using artificial fertilizers. Loss of resources is minimised through careful design to ensure optimum use of sunlight, space, water, and nutrients, and synergistic interactions between biological components, through creating habitats for beneficial insects, and providing valuable ecological services such as pollination and pest control. These practices act to both conserve and encourage biodiversity, both within agricultural species, and in the wider environment, creating diverse ecosystems which are more resilient to climate change. Agroecological farms are also more economically resilient, by reducing reliance on expensive farm inputs. In the many areas across the world where these techniques have been developed and refined, they create resilient, low input and low waste, yet highly productive agricultural systems.

An agroecological transition is vital to ensure that the UK can continue to produce healthy, local, and affordable food for generations to come. 18.5m ha of land under agroecological cultivation has the capacity to produce enough to exceed the UK's demand, with a population of 70 million, for cereals, dairy, potatoes, fruit and vegetables- and about 85% of meat at current consumption levels.[1,2] To realise this, conversion from industrial to agroecological agriculture needs to be promoted through a dedicated a Whole Farm Agroecology Scheme (WFAS). Though the principles of agroecology are straightforward, application of these principles is in practice much harder, requiring careful design of agricultural systems and knowledge of agroecological techniques. Farmers will need substantial support to make the investment necessary to change.

Similar to the way the Countryside Stewardship Scheme works, the Whole Farm Agroecology Scheme would employ advisors to work with farmers to co-design a farm management plan integrating environmental, social and economic agroecological principles according to the farmer's situation. The WFAS would be flexible, allowing farmers, of all scales, to co-design suitable techniques. There would be 3 tiers of support, with farms incorporating a minimum number of practices in each tier; the highest incorporating organic certification. The support would consist of training, financial incentives and capital grants. At the top, the scheme would fully cover the costs of organic certification. Organic certification bodies could regulate environmental aspects of the scheme, while incorporating elements of support for social and economic benefits. There would be maintenance payments for those reaching the highest agroecological farming levels.

In October 2018, the highest governing body of the UN Food and Agriculture Organisation, consisting of 192 members, adopted a resolution to endorse the '10 elements of agroecology' and to request partners to scale up agroecology around the world. The French government is the first European country to make agroecology the central plank of their agriculture policy, setting ambitious targets for converting farms through policy incentives, training, research and new entrants programmmes. To implement this enormous change both the FAO and France have developed sophisticated diagnostic tools that we can draw inspiration from in developing a UK specific Agroecology scheme.

Diversity in cropland: Agroecological farms are usually mixed, with both crops and livestock. However, diversity is also encouraged within these subsets, with multiple crops grown on the same land- either in rotation, or as a polyculture. These techniques enable maximum resource use efficiency, increasing productivity on both small and large farms.

The Landworkers' Alliance (LWA) is a grassroots union of small-scale, ecological and family farmers across the UK. We campaign for the rights of producers and lobby the UK government for policies that support the infrastructure and economic climate central to our livelihoods. Contact: jyoti@landworkersalliance.org.uk for more information

References: 1) Fairlie, Simon. Can Britain Feed Itself? (2009) 2) Griggs, J. Market Garden Britain 2030 (2012)