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Stacking Land Uses for Business and Environmental Sustainability

How multi-output farm design can build the resilient, profitable and environmentally productive farming system the UK now needs

Written by:

David Oates NSch

July 2026

A NUFFIELD FARMING SCHOLARSHIPS REPORT

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"Leading positive change in agriculture. Inspiring passion and potential in people."

Date of report: July 2026

Title	Stacking Land Uses for Business and Environmental Sustainability
Scholar	David Oates NSch
Sponsor	CHK Foundation
Objectives of Study Tour	How can farmers design multi-output farm systems that are commercially resilient, environmentally productive, and suited to fulfil the needs of the modern world?
Countries Visited	United Kingdom, New Zealand, Netherlands, Denmark, Germany, Austria, Poland, Brazil, Chile, USA
Messages	Stacking land uses (designing for multiple outputs simultaneously) is not a niche strategy. It is the foundational principle of UK farming's next generation.

EXECUTIVE SUMMARY

UK farming has a structural problem: most farms are designed around a single principal output, leaving them financially exposed and environmentally underused. This report asks how farmers can design land and business systems that produce multiple outputs, food, energy, environmental goods, and community value, deliberately and simultaneously, rather than by accident. I call this stacking.

I deliberately avoided the well-trodden path of celebrated exemplars and tested my own assumptions rather than simply confirming them. I visited as wide a range of businesses as possible: intensive single output operations, highly diversified enterprises, cooperatives, research farms, processing businesses, and policy institutions. Across 10 countries I had over 200 conversations with farmers, agronomists, food businesses, bankers, advisors, conservationists, and policymakers.

What I found was not a single model but a consistent principle: the farms building long term resilience were those that had stopped treating single output farming as the default.

> *"Using land for a single crop or function is a luxury the UK can no longer afford."*
> David Oates, Nuffield Scholar 2025

Key Findings

1. Single output farming is a structural vulnerability. A farm that depends on one crop, one market, or one income stream is one bad harvest or policy change away from crisis. Every hectare can produce multiple outputs - carbon, water, biodiversity, community, energy - whether the farmer accounts for them or not. Stacking means designing deliberately for all of them.

2. Producing food that supports human health is farming's greatest contribution, and public procurement is the most powerful lever for making it viable. The long-term cost of poor nutrition extends far beyond the NHS. Denmark's model, 60 per cent organic in public kitchens and 90 per cent in Copenhagen, without increasing meal costs, shows what is possible when government uses its buying power deliberately.

3. Agrivoltaics works, but design standards are the difference between genuine dual use and agricultural displacement. Sheep grazing beneath panels is legitimate land use stacking, but it is not agrivoltaics, which requires farming to

remain the primary activity, with the solar system designed around it. Italy's legislative model, minimum panel height, 70 per cent land in active production, 60 per cent electricity output, continuous monitoring, is the clearest template for UK planning.

4. Planning designations made for a different era are preventing the best use of land today. The planning system must be reoriented around outcomes - what does this land produce, for whom, and at what environmental cost - rather than inherited categories.

Taken together, these findings carry the same message for three audiences. For farmers, stacking is a resilience strategy available today, not a future technology. For policymakers, the way land is currently classified, financed, and regulated penalises businesses that try to do more than one thing with it. For industry, the infrastructure and market signals needed to support stacked farms are mostly missing. The report explores this through three practical focus areas - rotation and soil health, agrivoltaics, and the commercial case for nutrient dense food - before setting out what each audience needs to do differently.

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CHAPTER 1: INTRODUCTION
WHY THIS MATTERS NOW

I am full time farmer at Rosuick Farm in Cornwall, where my family has worked the same land for seven generations. We're a certified organic, regenerative system (no synthetic chemistry), running beef and sheep alongside heritage grains, herbal leys, and diverse arable crops. Equal weight is given to profitability and the long-term health of the land for the generations that follow. I run on-farm trials and manage significant areas of habitat for nature. The business has diversified into public events, accommodation, weddings, direct sales, contracting, consultancy, educational access, and public engagement. A working example of the stacking approach this report sets out.

Figure 1: David Oates, the author

I'm 36, husband to Tara and dad to four kids. I did not go to university and, until this scholarship, I'd never worked away from the farm or been immersed in agriculture and industry beyond the UK. What people who know me tend to say is that I think differently, and this scholarship has been my chance to put that to proper use.

I act as a farming ambassador and champion for the Soil Association, the Nature Friendly Farming Network, Forest for Cornwall, and Forest Research, contributing to policy design and outreach through speaking at events and project delivery

One belief sits behind every recommendation in this report: there are no monocultures in nature, and nature always wins in the end. I farm by that principle, and stacking is my attempt to design a business that works with it rather than against it. This is closely related to, but not the same as, regenerative farming. Regenerative farming describes how I manage the soil; stacking describes how deliberately I design the whole business, across every output the land can produce, food, energy, water, nature, and community, at the same time. The two reinforce each other throughout this report, but stacking is the broader frame.

CHAPTER 2: BACKGROUND TO MY STUDY SUBJECT

The farming industry in the UK is at a crossroads. The European Basic Payment Scheme has been phased out. The Environmental Land Management schemes promoted to replace it are, in practice, out of reach for the vast majority of farmers, countryside stewardship has been available for decades, and the new schemes do not represent the step change in support that was promised. Farming now has the lowest level of publicly funded support in a generation.

The new schemes rightfully ask farmers to be rewarded for public goods: clean water, biodiversity, carbon storage, flood mitigation, and landscape access. At the same time, food price volatility, input cost inflation, and long-term pressure on commodity margins are making the traditional model of conventional farming increasingly fragile.

Yet many farmers are responding to this pressure by doubling down on what they already know, growing more of the same monoculture crops, cutting costs, waiting for the market to improve, or selling up entirely.

From my research notes: *"A key point to recognise is shifting baseline syndrome. A generation of farmers are so disconnected from what the land is naturally capable of, as well as what the modern demands are. The industry seems paralysed and wants to fight to stay the same, even when opportunities are in*

This report is my attempt to make those opportunities visible, grounded not in theory but in the experiences of farmers, businesses, and communities visited as part of my Nuffield scholarship. I travelled to New Zealand, the Netherlands, Denmark, Germany, Austria, Poland, the USA, Brazil, and Chile. In each place, I asked the same question: how are they using their land, and what can we learn?

The timely release of a UK Land Use Framework is beginning to give farmers the tools to rethink what they do and the alternatives. What is still missing is the ambition to use those tools as part of a sustainable farming system, and the realisation that multiple outputs could be delivered by an individual business simultaneously.

To test what that ambition could look like in practice, this report focuses on three areas where the opportunity is greatest and the barriers are clearest: diverse rotations and soil health, agrivoltaics, and the market case for nutrient dense food. Each is examined in turn, followed by what government, farmers, and industry need to do to remove the barriers standing in the way.

CHAPTER 3: MY STUDY TOUR

Date	Country/countries visited
2025 - 2026	UK farms
March 2025	New Zealand
August-September 2025	Netherlands, Denmark, Germany, Austria, Poland
February-March 2026	Brazil, Chile, United States

CHAPTER 4: THE CASE FOR STACKING - BEYOND SINGLE PURPOSE FARMING

Every landowner should be asking: what are the outputs of this land and this business, both positive and negative? Which of them are being used to their optimum or maximum? And which are being undervalued?

4.1 The Four Legs Principle

A strong illustration of this thinking came from Suzanne, whose 110-hectare farm in the Netherlands now includes dairy, pigs, a farm shop and restaurant, an agricultural show attended by 35,000 people annually, events, and a museum. She described her farm as a table with four legs: lose one and it wobbles; lose two and it falls. The farm financed the newer ventures during the years when a bank would not lend, each layer reinforcing the others. This made me think, how many legs there are on my farm table and how much strain can it hold?

Figure 2: Suzie's Farm, Netherlands, Farm Food Fun. The four legs principle made visible.

In Denmark, a well-intentioned policy requiring farmers to leave four per cent of their land untouched for nature appeared to backfire. The set-aside ground became weedy and unmanaged, generating resentment rather than engagement, and pushing some farmers toward intensifying the remaining land to compensate. This is not an argument against land sparing in every case, some habitats and some of our most productive soils are best left to do one thing well. But it is evidence that mandatory separation without farmer engagement rarely delivers the intended outcome. Integrating nature into the farming system, rather than fencing it off, tends to produce more durable results, and Denmark's own success in mainstreaming organic agriculture, returned to later in the report, is a better illustration of what genuine integration can achieve.

In Brazil, where scale makes a different kind of stacking possible, the sugar cane industry is the most complete example: cane is grown for sugar, the bagasse (the fibrous residue left after juice extraction) provides a significant share of Brazil's electricity, vinasse (a liquid by-product of distillation, rich in potassium and organic matter) returns nutrients to the soil and feeds cattle, and the system generates carbon credits. In the USA, similar logic applies to maize, treated as a matter of national security rather than simply a commodity.

Treating a commodity not as a crop but as national infrastructure is a profound shift in how land use is conceived. The question for the UK is which of our land uses deserves the same status.

In New Zealand, several hill country sheep and beef farmers retained native bush and planted more trees on their steepest ground not as a concession to environmentalism, but because it improved triplet lamb survival, provided shade for livestock and reduced erosion. The ecological output and the commercial output were the result of a single management decision.

Figure 3: Sugarcane, São Paulo state, Brazil, food, fuel, and energy from the same crop. A circular system rather than a stacked one, but evidence that land and what it produces can do more than one job.

A Note on the Food Security Objection

A recurring counter argument to stacking land uses is that we cannot afford to take land out of production. A regenerative farm managed with soil health, rotation diversity, and long-term thinking at its centre may produce less food today, but it is building the capacity to produce more food, and better food, when it is needed most. I believe that when my soils are needed, they will be ready,

because they have been looked after and cherished. The argument that farming land should always be pushed to its productive limit actually reduces our long-term resilience. A system producing at, say, 80 per cent of its biological potential sustainably, without degrading soil, water, or biodiversity retains the ability to surge to maximum output in response to a genuine national need. A system that has been mined to exhaustion does not. The most fragile components of the current UK food supply chain are not the land itself but the inputs on which it depends: fossil fuels, synthetic fertilisers, imported chemistry. A more diverse, regenerative farming system is a more genuinely food secure one.

Figure 4: The Pantanal, Brazil, one of the world's most biodiverse wetland ecosystems, bordering the agricultural frontier. What we choose to do with land, and how we choose to do it, determines what survives alongside us.

A farm that grows wheat is also experiencing topsoil retention or topsoil loss, water infiltration or runoff, carbon storage or emissions, whether the farmer accounts for them or not. If you are producing something of value to society, society should know about it.

From my research notes: *"Whether managing proactively, passively, or somewhere in between, every farmer should know all the outputs of their land and business. Positive and negative."*

CHAPTER 3: THE ROTATION REVOLUTION - DIVERSE CROPPING FOR SOIL HEALTH AND BUSINESS RESILIENCE

Figure 5: Soil examination across the study: Netherlands, New Zealand, Austria, Germany, Poland, Chile and the UK. Every visit included getting hands in the soil. The evidence for what a farming system is doing lies beneath the surface.

This is the first of the report's three focus areas: rotation and soil health. If stacking is the overarching principle, the rotation is where it begins on the ground. The soil is the foundation of farming, and in the UK as in much of the intensive farming world it has been mined rather than built for generations.

Figure 6: Visiting Korin, São Paulo state, Brazil, examining bokashi samples with Bento, Korin's laboratory technician of 32 years. Bokashi is a fermented microbial inoculant used as a biological alternative to fungicides and synthetic fertilisers. Korin pioneered antibiotic free poultry production in Brazil in 1994.

The agronomic case for diverse rotations is well established: they break pest and disease cycles, reduce input dependency, improve soil structure, and spread business risk. The soil is alive; its microbiome requires diversity to thrive. A well-managed organic or regenerative system delivers most of this by default, and if that approach became widespread, many of the wider benefits this report describes would follow without needing to be separately engineered. What is new is the urgency. The loss of direct payments has removed the financial cushion that allowed farms to persist with simple three or four species rotations. For the first time, the commercial and environmental cases are genuinely aligned.

> *"Nutritional density and soil biological diversity are directly linked, farming for health is farming for soil." My research notes from Blue Dasher farm*

Figure 7: North Island, New Zealand, holding a clod from an intensively farmed vegetable field. The soil was so compacted and biologically depleted that when thrown at the ground it did not break. Soil structure is the most visible indicator of what a farming system is doing beneath the surface.

In the Netherlands, Edwin, farming 35 hectares of mixed horticulture and arable on an organic system, was growing beans and maize together in the same field, undersown with ryegrass. The beans went to a food processor, the maize for human consumption, and the ryegrass to a local dairy farmer's winter forage: three crops, three markets, one field, one growing season. The rotation also improved soil biology and eliminated the need for bought-in nitrogen. He grew barley purely for rotation diversity, accessing the malting barley market as a bonus. His philosophy: "Not looking to buy land, make the most of what we have."

In Brazil, farmers across the Cerrado region were growing three crops in a single year. But Brazil's over reliance on a small number of dominant commodity crops is also a vulnerability: global markets can predict the harvest and set the price accordingly. Adding crop diversity builds commercial control, not just agronomic resilience.

Chile offered a further dimension. One family business had supplied a global food company with commodity potatoes for 30 years. When corporate leadership changed, the personal relationship that underpinned the contract dissolved with it, 30 years of loyalty, gone overnight. Single customer dependency is a vulnerability, whatever the scale of the business.

3.1 The One Third Principle

Les, a mixed livestock farmer in New Zealand, described the discipline of keeping one third of his enterprise in tradeable, flexible stock at all times, animals that can be sold quickly if the market moves or the season turns. The arable equivalent is

keeping one third of the rotation responsive: not locked into a fixed plan, but available to capture opportunities as they arise through shorter cycle crops, spring oats, peas, or beans, without significant capital outlay.

Figure 8: Angus cattle on hill country pasture, New Zealand, virtual fencing collars visible on the herd. Precision livestock technology allows grazing management without physical fences, enabling more flexible rotational systems.

Les, a mixed livestock farmer in New Zealand, described the discipline of keeping one third of his enterprise in tradeable, flexible stock at all times, animals that can be sold quickly if the market moves or the season turns. The arable equivalent is keeping one third of the rotation responsive: not locked into a fixed plan, but available to capture opportunities as they arise through shorter cycle crops, spring oats, peas, or beans, without significant capital outlay.

3.2 Agroforestry and New Cultivars

Visited research farms are actively breeding fruit and nut cultivars for integration into mixed and agroforestry systems. One long term programme at the Savanna Institute was developing hazel and sweet chestnut varieties capable of commercial mechanical harvesting, removing the labour barrier that has historically kept nut crops out of mainstream rotations. Tree crops offer a pension-like income stream alongside carbon, habitat, and shelter from the same ground. The equivalent investment in combinable crop varieties bred for lower input, biologically active systems remain, in my view, one of the most underfunded areas of agricultural research.

Where woodland is being planted for environmental or carbon purposes, productive species should be the default choice where the site allows. The

environmental output and the commercial output need not be in conflict. A well-chosen mix of timber, nut, and fruit trees delivers both. Scheme-funded woodland establishment is an opportunity to build a long-term income stream, not just a nature outcome.

Figure 9: Silvopastoral grazing at Glynn's farm, southern Chile, native trees integrated throughout the grazing platform, providing shelter, biodiversity, timber, and carbon from the same hectares as the dairy enterprise.

> *"The best stacked farms are not the busiest*." David Oates, Nuffield Scholar 2025

The structural barrier to rotational change in the UK is consistently underestimated. Farmers cannot diversify without local infrastructure for processing, storage, and marketing, for grain, pulses, and vegetables alike. The Netherlands makes this look straightforward because its processing infrastructure is dense and locally accessible. The UK has hollowed much of this out through decades of commodity consolidation. Rebuilding it is a public infrastructure question as much as a private business decision.

Figure 10: Ferrero's nut processing facility, Chile. Open to producers bringing a single 10kg bag or a full artic load. This flexibility of access is what allows farmers at any scale to participate in a supply chain, enabling natural business growth and prosperity without unnecessary investment in processing infrastructure. It is the model the UK processing sector has largely lost.

CHAPTER 4: SUN AND SOIL - THE CASE FOR AGRIVOLTAICS

This is the second of the report's three focus areas: agrivoltaics. The most contentious land use debate in British farming today is solar. Thousands of acres of productive agricultural land are being committed to ground mounted solar arrays, and the farming community is understandably alarmed. Fields that were growing crops are now covered in panels for 35 years, often with minimal agricultural activity underneath.

Figure 11: Vertical bifacial agrivoltaic panels on a working farm, southern Germany, energy generation and active crop production from the same land. Full machinery access maintained beneath.

Rooftops and existing structures should be prioritised before land-based panels, while grid bottlenecks ease as battery storage technology develops rapidly; see Stuart Oates' Nuffield report on fossil-free farming for further discussion.

This debate of solar farms, however, is framed incorrectly. The choice is not between solar and farming, it is between poorly designed solar which takes land out of agricultural production and well-designed solar which can increase the range of crops and sustain yield of the existing ones. Agrivoltaics, the co-location of solar energy generation and agricultural production on the same land, is one of the most powerful examples of stacking land uses in practice, and it is already working at scale across the world.

> *"People want electricity to lead the lives they want to live, and farmers are in a position to supply it."* David Oates, Nuffield Scholar 2025

Solar farms can offer a range of opportunities to farmers and the wider industry. In Germany, research plots show that shade tolerant crops including potatoes, clover, and certain cereals perform comparably to unshaded equivalents while the panels above generate income, significantly exceeding typical solar developer rental rates. The critical variables are not just panel height, spacing, and orientation, but the physical design of the mounting systems and appropriate crop selection for each site's conditions. (See Key Sources for agrivoltaic crop research references.).

Figure 12: Southern Germany agrivoltaics demonstration site. Left: transparent PV panels allowing light through to crops beneath. Right: tilting panels that track the sun, outperforming fixed arrays by up to 15 per cent while folding clear for machinery.

PV panels offer a big opportunity for high-value fruit and vegetable markets protecting crops from hail, frost, and direct sun.

Figure 13: Elevated agrivoltaic panels on a working farm, southern Germany. Panels raised high enough for cattle to graze beneath and small machinery to pass. Simple design, genuine dual use.

4.1 The UK Opportunity and Its Risks

The clearest stacking opportunity for agrivoltaics is land already marginal on soil, exposure, or market access, where energy and grazing can sit alongside farming rather than replace it. The higher the land's agricultural potential, the greater the

investment needed in the structural design of the panels themselves. That principle should be the starting point for any planning framework.

Figure 14: Between the rows of a vertical agrivoltaic system, Germany. Tillage running right to the base of the panels. No wasted ground, no buffer zone. Farming and energy generation sharing the same soil.

Appropriate scale and context are also critical factors in locating agrivoltaic development. A farm-scale or community-scale installation designed around the needs of the farming enterprise it sits within is a fundamentally different proposition from a utility scale solar park that happens to have a few sheep grazing between the panels. Scale determines whether the agricultural system can genuinely dominate the land use or is merely tolerated within it. Context, the soil type, the farming enterprise, the local grid connection, the processing infrastructure available, and the farm's long term business plan, must shape the design and location of any agrivoltaic system. The best agrivoltaic projects are those where the farmer initiated the design; the worst are those where a developer brought a template and asked the farmer to fit around it.

A more challenging view is also warranted: with the right design, agrivoltaics has a role to play even on higher grade land. Vertical, transparent, and tilting panel systems that allow full machinery access, combined with shade tolerant crops or protected horticulture beneath, could expand the range of fruit and vegetables grown in the UK by moderating temperature and moisture stress.

4.2 The Green Veneer Problem

The absence of design standards that protect agricultural value is the central problem in the current UK debate. The planning system needs to establish minimum requirements for genuine co production: minimum panel height, minimum active agricultural footprint, and mandatory monitoring of soil health and food output, favouring applications that improve rather than merely preserve agricultural productivity.

Government data and independent satellite analysis confirm that between 17,000 and 21,000 hectares of UK land is now covered by ground mounted solar panels, the vast majority of it formerly agricultural. Sheep grazing beneath panels is legitimate land use stacking, animals benefit from shade, grass is managed, food is still produced. But it is not agrivoltaics. Agrivoltaics requires a more symbiotic relationship where farming remains the primary activity and the solar system is

designed around it. The Italy model, discussed below, shows what genuine minimum standards look like.

> From my research notes: *"It's not what you do, it's the way that you do it. Applies for all land uses."*

A Note on the Italian Model

Italy has enacted the clearest legislative distinction currently in force between genuine agrivoltaics and solar displacement of farmland, banning conventional ground mounted solar PV on agriculturally classified land outright. The only exemption is for "advanced agrivoltaics", a precisely specified dual use category. To qualify: panels must be elevated a minimum of 2.1 metres; at least 70 per cent of land must remain in active agricultural production; electricity output must be no less than 60 per cent of a standard array of equivalent size; and continuous monitoring of crop yields, water savings, soil fertility, and farm continuity must operate for the lifetime of the installation. The Italian government backed this with €1.1 billion of public funding. The country's first agrivoltaic auction was oversubscribed, attracting bids totalling 1.7 GW. The principle is clear: the panel is a guest on agricultural land, not its replacement. Sources: DL Agricoltura Law 101/12 Jul 2024; Ministerial Decree No. 436/22 Dec 2023; CMS Law Expert Guide to Agrivoltaics Italy 2025; Green Dealflow Ultimate Guide Agrivoltaics Italy 2024; Green Crowd Energy Dec 2024.

Agrivoltaics are not inherently good or bad. It depends entirely on how it is designed, who benefits, and what the agricultural system beneath the panels looks like. Done badly, it is an agricultural land grab in green clothing.

Energy is not the only output the same land can be designed to produce more of. Food, itself, can carry more value, too, which is where this report turns next.

CHAPTER 5: FEEDING BETTER - THE COMMERCIAL AND ENVIRONMENTAL CASE FOR NUTRIENT DENSE FOOD

This is the third and final of the report's three focus areas: nutrient dense food. As with rotation and agrivoltaics before it, the goal here is optimum stacked outputs, not maximum single output. One of the most common responses encountered when raising the case for change with farmers, particularly those most resistant to it, was: 'But who is going to feed the world?' or 'We produce food; you can't eat nature.' These are valid concerns that deserve context.

The UK has a total croppable area of around 6.2 million hectares. Brazil alone crops approximately 56 million hectares, with another 45 million hectares capable of arable production that has yet to be planted, much of it producing two or three crops per year. Globally, we are not facing a production problem. We are facing a distribution, incentive, and quality problem.

5.1 How Denmark Did It

Denmark gave the most instructive case study on shifting public food procurement toward quality and sustainability. Denmark set a national goal of 60 per cent organic in all public kitchens and supported it with levy funded marketing. Funds were spent on promoting oversupplied organic products, which increased market share, which in turn increased levy income, which funded more marketing. Copenhagen went further, achieving 90 per cent organic in its public procurement, without increasing meal costs.

The key insight is that sustainable, healthy food can be normalised the same way seat belts in cars were normalised; not as a luxury add-on, but as a standard expectation. Organic and nutrient dense food would not cost significantly more if it became the norm and the supply chain had the scale to support it. The realistic obstacle is that retailers make less margin on raw natural ingredients, and that is where policy intervention matters. Public procurement is the simplest way to change our commodity food standards.

5.2 The Commercial Case

Figure 15: Wilderland, Netherlands, a food and drink brand sourcing ingredients from farms managed for nature, including heritage grains, wild herbs, and diverse plants. No claim is made about nutritional density, but the diversity of ingredients likely delivers it. A direct market route that exists before the measurement framework does.

In Poland, the finance manager of one of Europe's largest farming operations was exploring new crops after a major change in land availability. When alternatives were suggested, several were dismissed on the grounds that the business only wanted to produce food. I pointed out that nearly all the produce leaving the farm was being turned into oven chips or crisps. The gap between what farmers believe they are producing and what the food system does with it is wider than most realise. Selling calories destined for snacks, alcohol, and ultra processing is not selling food in any nutritional sense. It sells a commodity service. Large commodity producers in Brazil and Chile made the same point from a different angle: if their produce could be valued on nutritional density rather than weight, they would be shipping less for greater return. As pressure on land use increases, the question of what UK land is actually growing and how it is processed becomes more urgent.

Producing food is the most fundamentally important thing that farmers do. It is easy to lose sight of that in a debate dominated by carbon credits, biodiversity units, and energy generation, all of which have genuine value, but none of which directly satisfies a basic human need. What elevates it further is quality. A farmer growing food that genuinely contributes to human health is doing something more valuable than another growing calories destined for ultra processing. The long-term cost of a population fed on poor nutrition falls on the National Health Service, on productivity, and on quality of life. Conventional food production also carries widespread negative impacts on nature: soil degradation, water pollution,

biodiversity loss, and chemical dependency. Producing more food is not automatically a good thing. Producing better food, in better ways, is. The growing mainstream use of appetite reducing drugs will accelerate demand for food that genuinely nourishes and expose the emptiness of food that simply fills.

What does a market in nutrient dense food actually look like? In most of the UK, it barely exists. Premium is captured by retailers, not returned to producers, and there is no standardised measurement framework that allows buyers to specify or verify nutritional density. The clearest signal came not from supermarkets, but from research farms. Blue Dasher Farm in South Dakota, a regenerative operation benchmarking diverse systems across the USA, was the most striking example: what it had attracted was young scientists from across the country, drawn to a remote farm because of the richness and complexity of what it was doing. Nutritional density is not just a food quality story. It is a farm design story, a talent attraction story, and a signal of what farming can become when it stops optimising only for volume.

Figure 16: Aequilibrium, Brazil. Left: the on-farm fungal biobank, bags of fungi cultured on sterilised rice substrate, isolates collected from naturally colonised dead insects. Over 3,500 isolates identified across 600,000 hectares, around 100 in active production. Right: the liquid fermentation room producing bacterial biostimulants for nitrogen fixation and root growth, synchronised precisely with the crop season. Bacteria has a 72-hour shelf life. The system is self-financing. Yield improvement data is emerging but not yet confirmed. The first step is replacing chemistry.

A Note on Terminology: Nutrient Density

Throughout this report, nutrient density refers to the concentration of vitamins, minerals, and phytonutrients within a food, and specifically to how farming system design affects that concentration. This is distinct from nutritional density as used in clinical nutrition, which describes the relative health value of different food categories.

In discussion with doctors and health professionals during this study, it became clear that terminology differs significantly between industries. This distinction matters for three reasons: to avoid greenwashing by retailers making vague nutritional claims; to protect genuine farmers who invest in the systems that deliver real nutrient density from being undercut by misleading marketing; and to acknowledge that robust measurement frameworks do not yet exist, meaning the opportunity, while real, remains difficult for many producers to access and verify.

From my research notes: *"We need to change our perspective of yield, beyond the quantity of crop. Each output should be valued, either financially, or personally. Ideally both."*

CHAPTER 6: THE MINDSET SHIFT - FROM SINGLE OUTPUT FARMER TO SYSTEMS THINKER

Every practical recommendation in this report rests on one thing that cannot be mandated, subsidised, or regulated into existence: systems thinking. Stacking is what systems thinking looks like in practice on a farm, treating every output as connected to every other, rather than managing food, energy, and nature as separate problems. The shift from producer of a single output to manager of a system is the foundation everything else in this report is built on.

6.1 The Identity Question

The hardest barrier to stacking is not financial or regulatory: it is identity. Visiting the United States, one of the most striking divides I encountered was between arable farmers and livestock producers, between the “farmer” and the “rancher”, which remains a defining feature of rural life and a significant cultural barrier to stacking across enterprises. Both feel like complete identities. Expanding into a second, third, or fourth enterprise changes a person’s relationship with their professional community and their sense of self. What will the neighbours think? What does my industry see me as? At what point does a dairy farmer with solar panels and a nature scheme stop feeling like a dairy farmer? These are not trivial questions. A farm that has expanded from three enterprises to six - dairy, potatoes, and holiday lets, then energy, nature markets, and sheep - is a fundamentally different kind of business, and that difference has implications for identity, community standing, and the skills required to manage it. The most resilient farmers encountered in this study were those who had resolved this question on their own terms: they did not feel they had to choose between being a food producer and being a steward of land. They understood themselves as both.

It begins not with a new scheme or technology, but with a question too few farmers ask themselves: ‘What is this farm needed for?’ Answered honestly, across food, energy, nature, and people, that question is what turns systems thinking from an idea into a working plan, and the most overlooked answer is usually people.

Getting people onto the farm is the layer of stacking most often overlooked. With people come challenges, ideas, and opportunities no isolated farming system can generate for itself, whether customers, workers, students, community members, or researchers, their presence changes what the farm is capable of imagining.

CHAPTER 7: WHAT GOVERNMENT MUST DO - POLICY, INFRASTRUCTURE, AND THE LAND USE FRAMEWORK

None of the stacking opportunities described in this report - diverse rotation, agrivoltaics, or nutrient-dense food -can scale on their own. Stacking land uses does not happen by accident. It happens when policy, infrastructure, market design, and cultural support all point in the same direction at the same time. The UK is beginning to move in this direction, but the pace is too slow, and the gaps are too large.

7.1 Infrastructure

The barrier to diversification for most UK farmers is not ambition, it is the absence of local processing, cleaning, drying, and marketing infrastructure for diverse crops. When Ferrero committed to hazelnut growers in Chile, they provided a long-term price commitment, local processing infrastructure, and technical knowledge exchange. That combination is what enabled farmers to change what they grow. The UK needs the equivalent: public investment in local farm processing hubs that can handle a wide range of products at appropriate scales. Energy infrastructure requires the same thinking; a rethinking of grid connection for on-farm renewable generation is equally overdue.

7.2 Procurement

The Danish government mandated 90 percent organic public sector food purchasing and supported it with marketing budgets to build the consumer demand needed to make the supply viable. The UK has made steps towards sustainable procurement requirements, but they remain voluntary, fragmented, and poorly enforced. A mandatory public procurement standard specifying nutritional density, environmental method, and provenance would create the anchor demand that farmers need to change their rotations.

7.3 Agri Environment Scheme Design

The Environmental Land Management schemes have not yet delivered what was promised. They are oversimplified in design, riddled with barriers to entry, and risk repeating the Danish land sparing mistake; separating environmental outputs from the farming system rather than integrating them into it. The schemes need to reward integration, farming methods that deliver food production and environmental outcomes through the same decision. Every public good action should be stackable as a payment. The agricultural budget should be maintained and better targeted: the goal is not to spend less but to achieve more.

High prices almost always lead to intensification, not because farmers are short sighted, but because the incentive structure makes intensification the rational response. That is why reward must follow method and outcome, not just volume.

Cultural change in farming cannot be mandated, but it can be funded and facilitated. Nuffield scholarships, farmer clusters, demonstration farms, and on farm trials should be embedded in scheme delivery rather than treated as optional extras. Farmers need dedicated funding to trial new approaches in their own context: what works in the Netherlands or New Zealand needs to be tested and adapted for UK conditions, soils, and markets.

7.4 Planning Policy

The central principle that planning policy for agricultural land must establish is this: what is built, and how it is built, matters as much as, and in many cases more than, where it is built. Visual impact is the most common public objection to solar development on agricultural land, and it is addressed most effectively not through refusal but through genuine agrivoltaic design standards that make active farming beneath the panels visible. The same solar installation on the same field could avoid removing agriculture completely and deliver significant energy and nature benefits or displace a thriving enterprise with no benefit to nature either. The difference is not in the map reference. It is in the design, the context, and the standards applied.

Planning categories designed for a different era are constraining not just what farmers grow, but what businesses, communities, and landscapes can become. No crop, panel, or tree is truly permanent, yet planning categories behave as if they are. Drawing lines on a map and holding them for generations is an oversimplified approach to managing something as dynamic as land. Designation and mapping are legitimate decision support tools, but when they become the constraint rather than the framework, they entrench the status quo and punish innovation. The planning system must be reoriented around outcomes; what does this land produce, for whom, and at what environmental cost, rather than around inherited categories.

> *"Permanent land use designation is not just a farming problem. It is a rural economy problem." David Oates*

Current planning policy is in many respects structurally anti stacking. It separates land uses into rigid categories, agricultural, residential, commercial, industrial, and environmental, and treats mixing them as an exception requiring justification rather than the norm worth encouraging. The most resilient rural communities are those where these uses overlap and reinforce each other. A farm with a business unit, a holiday let, a processing shed, and a local market on site is not an anomaly, it is a model. Planning policy should make that model easier, not harder.

The same logic extends to rural housing. New housing in the countryside is typically built to urban templates, with no connection to the land or food systems around it. The agrihood developments I visited in the United States, residential communities deliberately designed around working farms, demonstrated what is possible when planning enables rather than prevents integration. Alfred, a farmer in Austria, framed it clearly: he is not trying to build a community supported agriculture scheme, he is trying to build an agriculture supported community, where farming anchors the local economy. More flexible planning for rural enterprises, live work units, and local industry creates the human ecosystem that farming businesses need to evolve.

The minimum design standards required for genuine agrivoltaics, panel height, active agricultural footprint, monitored output, are addressed in the Sun and Soil section, along with the Italian legislative model that currently offers the clearest available template.

A significant proportion of large solar farms on UK agricultural land are owned by international investors, with financial returns flowing predominantly offshore. The farmer receives a land rental that, while competitive with agricultural returns, represents a small fraction of the total revenue generated over the installation's lifetime. Genuine, shared ownership, not just a land rental, is what turns a solar tenancy into a stacking opportunity. Planning decisions on agricultural land should ultimately be evaluated against a simple test: does this proposal make this land more productive, more diverse, and more valuable?

CHAPTER 8: CONCLUSIONS AND RECOMMENDATIONS

This report has argued that stacking land uses is not a niche strategy for experimental farmers. It is the foundational principle of a sustainable and profitable UK farming system for the next generation. The three focus areas explored here, rotation and soil health, agrivoltaics, and nutrient dense food, are illustrative rather than exhaustive. The stacking principle applies wherever land produces more than one output, which is almost everywhere. The Beyond This Report section at the end of this document sets out 14 further areas where the study developed substantial knowledge and where the same stacking logic applies. None of the examples encountered required the abandonment of food production. All of them require a willingness to ask: what else is this land for?

For Farmers

- Map your outputs. Identify every output your farm currently produces, food, water infiltration, carbon, biodiversity, visual amenity, community access, skill development, and assess which are being valued, which are being given away, and which are actively harmful. The exercise itself usually reveals opportunities that were invisible.

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- Design your rotation for diversity, not just compliance. Treat one third of your cropping area as responsive and flexible. Work with your agronomist to identify crops that suit your soil and climate, both now and in the future.

- Get serious about agrivoltaics and energy markets. Demand systems designed for genuine co production, not ground mounted solar that removes agriculture from the land. A well designed agrivoltaics system can be the most financially stable long term land use decision as well as open up new agricultural opportunities.

- Plant trees for multiple purposes, not single ones. A well-chosen tree in the right place can deliver food, soil biology, water retention, carbon, aesthetics, windbreaks, livestock feed, shade, shelter, and timber from the same ground at the same time. That is stacking in its most literal form. Choosing the right cultivar, not just the right species, takes each of those outputs to the next level of productivity. Every woodland establishment decision is therefore both a farming decision and a design decision. Scheme-funded tree planting should not default to non-productive

amenity species when productive alternatives deliver the same or better environmental outcomes alongside a long-term income stream.

For Government and Industry

- Reform planning law around outcomes, not categories. The current designation system constrains what farmers can build or install while failing to reliably deliver better environmental outcomes. Planning decisions should be reoriented around what land produces, who benefits, and at what environmental cost. Designations are legitimate tools; operated as blanket constraints they penalise innovation. Planning policy must enable the multi-output farm of the future, not protect the single-output system of the past.

- Mandate public procurement for sustainability and nutritional quality. Schools, hospitals, and public sector catering are a guaranteed anchor market. Start with production method and provenance requirements that farms of all sizes can demonstrate today and build toward nutritional thresholds as measurement frameworks mature. Design it so small and medium farms qualify from the start.

- Invest in shared local processing infrastructure as a matter of public policy. The barrier is not production; it is access to market. Farmers growing diverse crops, heritage grains, novel species, and horticultural produce cannot capture value from what they grow if there is nowhere nearby to process, store, or grade it. This is a public infrastructure problem that requires public investment and a genuine commitment from large retailers to source from and support the local processing networks that make diverse farming commercially viable.

- Design agrivoltaic planning standards that protect agricultural value and retain economic benefit locally. Minimum panel heights, active agricultural footprint requirements, and mandatory soil health and food output monitoring should apply to any solar development on agricultural land. Community benefit agreements must be mandatory, planning consent must favour locally owned or farmer-led schemes, and genuine shared ownership, not just a land rental, is what turns a solar tenancy into a stacking opportunity.

- Reform the ELM scheme design to reward integration and flexibility, not just additionality. Environmental and food production outcomes should be rewarded together when they arise from the same farming decision. Stack the payments to match the stacked outputs.

- Fund peer to peer learning, innovation, and demonstration at scale. Nuffield scholarships, farmer clusters, demonstration farms, and on farm trials are among the most cost-effective change mechanisms available. These should be core to the delivery strategy for the next decade.

CHAPTER 9: A FINAL REFLECTION

Stacking is not a farming technique. It is a different way of seeing what land is for.

The phrase I keep returning to is 'It's not what you do, it's the way that you do it.' A stacking approach does not require farmers to stop being farmers. It requires them to be more deliberate: to understand their land's full capability, to design their businesses around multiple outputs, and to see every decision as a system decision. The farmers who will build that future are already out there. They are not waiting for the right scheme or the right signal. They are stacking.

Farmers are one of the biggest opportunities our rural economy has to thrive, physically, socially, mentally, environmentally, and financially, yet that opportunity remains largely invisible to the people who most need to see it. This report is an attempt to change that.

How we produce food and manage our environment is not just a farming problem. It is one of the most important questions any society faces, and one that society as a whole has consistently failed to take seriously enough. The transformation ahead cannot be delivered by farmers alone, handed a new set of rules and told to figure it out. It requires consumers to value what they eat, government to design financial incentives that reward the full range of what land can deliver, the stacked outputs this report has argued for, food, nature, energy, water, community, and commit to those incentives for long enough that farmers can build businesses around them. It requires communities to reconnect with the land that feeds them, and it requires the political will to hold the line when the costs of transition become visible.

There is a question I keep coming back to. Is the ultimate goal of organic and regenerative farming to no longer be required as a label or a standard? Not because either has failed, but because their core principles have succeeded so completely that a financially sustainable, nature friendly farming system has become the baseline of British agriculture. If the mandate of the Land Use Framework succeeds, the ceiling of what the best farmers are doing today may become the floor of mandated practice tomorrow. That would represent a genuine transformation, not of farming alone, but of the relationship between land, food, and public health. And when that happens, it will not be because policy got there first. It will be because enough farmers decided to stack.

David Oates: *"Farming is easy. Farming sustainably, ethically and profitably is hard work. But it is the only kind of farming with a future."*

Figure 17: The 2025 Nuffield Farming Scholars global gathering, New Zealand, over 100 scholars from more than 20 countries. The network that made this report possible.

CHAPTER 10: ACKNOWLEDGEMENTS

This report would not have been possible without the generosity of the many farmers, businesses, researchers, policymakers, and individuals who gave their time and their honest reflections during my travels. Every conversation mattered, and every open gate, shared meal, and frank exchange made this study what it is.

I have chosen not to name every person I met along the way, not out of oversight, but out of fear of missing one of the hundreds of people who all matter. Months of travel across 10 countries brought me into contact with farmers, neighbours, strangers in the middle of nowhere, fellow travellers, and hosts who welcomed me into their farms and their lives. If you spoke with me during this study, you know who you are, and I am genuinely grateful for your time and your generosity.

Figure 18: With fellow Nuffield Scholar Peter Green in a mixed horticultural squash field, Chile, one of the final international visits of the study. Diverse horticulture, fruit trees, and the Andes behind. Two farmers, almost outstanding in their field.

I am particularly grateful to the Nuffield Farming Scholarships Trust for making the study possible, and to the CHK Foundation whose sponsorship gave me the freedom to pursue this research without compromise. My fellow scholars sharpened my thinking throughout, through their ideas, their challenges, and their company on the road.

A special thanks to my brother Stuart Oates and Peter Green, my fellow Cornish Nuffield Scholars and travelling companions.

Most of all, I want to thank my wife Tara, my children, and my parents Chris and Jan. Months away from home, research, meetings, and hosting back in Cornwall were all made possible by their support, their patience, and their belief in what this scholarship could become. None of it happens without them.

There is a lifetime of opportunities ahead. Even more of them are now possible thanks to this Nuffield Farming Scholarship.

CHAPTER: AFTER MY STUDY TOUR

This study focused on stacking land uses as a framework for farm business resilience and environmental sustainability. The research journey covered significantly more ground than this report can contain. The following areas represent fields where the author has developed substantial knowledge through the study, and where future research partnerships, advisory roles, or collaboration would be welcomed:

- Agricultural technology
- Novel crop trials
- Agroforestry
- Planning policy
- Public access and community land use
- Continuous cover and animal integrated forestry
- Seaweed
- Bio-stimulants and biological inputs
- Symbiotic plant relationships and integrated pest management
- Nutrient density measurement
- Water management
- Rural energy systems
- Succession and farm finance
- Educational access and farm as classroom
- Events and rural hospitality
- Enterprise stacking and farm diversification

Visit Photography

Figure 19: With James Richards at a feedlot in Nebraska, USA, winter 2025. Two Cornish farmers on the road, a long way from home.

Figure 20: A milking parlour in southern Chile, one of three dairies on a New Zealand style pasture-based operation milking over 1,100 cows and producing 4.5 million litres annually. Built by a family that moved from New Zealand in 2001 and expanded entirely through rented land, reinvested profit, and relentless hard work.

Figure 21: Angus cattle mob grazing a frozen arable field, South Dakota, USA, dung returned directly across the whole field as the herd introduces livestock into a previously arable landscape. Integrating cattle into crop rotations rebuilds the soil biology that monoculture cropping depletes.

Figure 22: Inspecting freshly dug seed potatoes, Chile, a thriving potato enterprise exploring what else the rotation and the land could produce.

Figure 23: Alfred Grant examining a soil pit at his farm in Austria, one of the deepest soil profiles visited during the study. Distinct horizon layers visible from topsoil through to subsoil. Understanding what lies beneath the surface is the foundation of every stacking decision.

Figure 24: Fazenda Modello 2, Mato Grosso do Sul, Brazil. Attempting a soil pit with the only available tool. Eucalyptus timber plantation visible on the farm boundary behind: productive

trees integrated into the farming system, delivering timber income, shelter, and carbon from the same land.

Figure 25: A farm road through the Cerrado, Brazil, soy fields stretching to the horizon on both sides of the red laterite soil. The scale of commodity production in Mato Grosso do Sul makes the UK agricultural debate feel small in comparison.

Figure 26: Inside a broiler shed, Brazil, tens of thousands of birds at one seventh of their final weight. A high output system replicated across the world, including the UK, optimised entirely for volume and speed.

Figure 27: Standing in a monoculture soy field, Mato Grosso do Sul, Brazil, the crop stretches to the horizon in every direction. High yielding, globally traded, and doing exactly one thing.

Figure 28: Monoculture soy stubble, Brazil, high output, low diversity, entirely dependent on one market. The true scale is difficult to do justice to in a single photograph.

Figure 29: Monoculture soy alongside a block of native Cerrado woodland, Brazil, land sparing in practice. The farming system and the natural system operate in parallel, each unaware of the other.

Figure 30: State woodland near Copenhagen, public access, carbon, biodiversity, and a harvestable nut crop from the same hectares. Stacking does not have to be complicated.

Figure 31: The Double Dyke, north Netherlands, a 30-hectare experimental farm built within a coastal flood defence system, researching regenerative cropping, salinity management, and seaweed cultivation.

Figure 32: Seed potato harvest, Chile, bags filled by hand across rows stretching to the horizon, loaded onto articulated lorries for market. Two full loads dispatched daily, all done by hand.

Figure 33: Aequilibrium's on farm biological laboratory, Brazil, rice substrate being colonised by fungal isolates from naturally occurring dead insects. Applied as a biological alternative to synthetic fungicides.

Figure 34: With Glynn Byles at his on farm sawmill, southern Chile, timber milled from his own trees used for fence posts and farm infrastructure.

Figure 35: Soya variety trials, Poland, one of many research farm visits during the study. Wind turbines on the horizon generating energy from the same agricultural landscape.

GLOSSARY OF KEY TERMS

The following terms are used throughout this report. Definitions reflect their meaning in the context of land use stacking and farm business resilience.

Stacking land uses Designing a farm system in which land produces multiple outputs simultaneously, food, energy, nature, community services, and financial diversification, where each layer reinforces rather than conflicts with the others. Distinct from simple diversification in that outputs are chosen deliberately for compatibility and mutual reinforcement.

Agrivoltaics The co-location of solar photovoltaic energy generation and active agricultural production on the same land. Genuine agrivoltaics maintains meaningful farming beneath or alongside panels; it is distinguished from conventional solar by design standards including minimum panel height, minimum agricultural footprint, and monitored crop output.

ELM / Environmental Land Management The suite of UK government agri environment schemes replacing the Basic Payment Scheme, including the Sustainable Farming Incentive (SFI), Countryside Stewardship (CS), and Landscape Recovery. Designed to pay farmers for delivering public goods: biodiversity, soil health, water quality, flood mitigation, and carbon storage.

Land Use Framework The UK government's 2024 document setting out a national vision for how land should be used to meet food, nature, climate, and community objectives simultaneously. The first attempt in a generation to articulate an integrated national land use strategy.

Nutrient dense food Food whose caloric content is accompanied by meaningful levels of vitamins, minerals, fibre, and other compounds beneficial to human health. Contrasted with calorie dense but nutritionally poor food, typically produced through intensive monoculture systems and destined for ultra processing.

Biodiversity Net Gain (BNG) A planning requirement in England (from 2024) that development projects deliver a measurable improvement in biodiversity compared to the pre development baseline. Creates a market for habitat units that farmers can supply through habitat creation and management on their land.

Green veneer Used in this report to describe solar developments that maintain token agricultural activity, typically low-density sheep grazing, beneath panels as a means of retaining agricultural land designation, without genuine agricultural co production. Contrasted with genuine agrivoltaics.

Shifting baseline syndrome The tendency for each generation to regard the environmental conditions of their own childhood as 'normal', failing to perceive the long-term degradation of ecosystems and soil health that has occurred over

decades. Applied in this report to the farming industry's perception of what land is naturally capable of.

Passive land use outputs Outputs from land that require minimal active management or investment to generate: flood mitigation, carbon sequestration, landscape amenity, groundwater recharge. These frequently go unrecognised and unvalued despite delivering measurable public benefits.

KEY SOURCES AND VISITS

Savanna Institute (USA): agroforestry research nonprofit visited during the study; referenced for its long-term breeding programme developing hazel and sweet chestnut cultivars suited to commercial mechanical harvesting. savannainstitute.org.

APPENDIX: MAP YOUR OUTPUTS AND LAND USE REFERENCE

Use this appendix in two ways: first, work through the audit questions to identify the outputs your farm is already producing, and which could be developed; second, use the reference table as a prompt to ensure nothing has been overlooked.

Step 1: List Your Outputs

For each category, list every output your farm currently produces, intended or unintended, valued or not.

- Food outputs: dairy, meat, cereals, vegetables, fruit, eggs, processed products
- Energy outputs: solar, wind, anaerobic digestion, biofuel, excess heat
- Environmental outputs: carbon sequestration, biodiversity, water quality, flood mitigation
- Social outputs: public access, education, social prescribing, events, community
- Financial diversification: agri tourism, rental, contracting, consultancy, research
- Negative outputs: runoff, compaction, methane, pesticide drift, visual intrusion

Step 2: Assess Each Output

For each output: (1) Is it currently being valued, financially, through a scheme, or as a premium? (2) Is it being used to its full potential, or given away for free? (3) Is it a risk or negative that needs managing?

Step 3: Identify Gaps and Opportunities

Identify quick wins, medium term investment opportunities, and the one action to prioritise in the next 12 months. This works best as a structured conversation with an advisor, peer group, or trusted neighbour.

Land Use Reference

Not every option suits every farm. Context, scale, and personal goals determine what is relevant.

Category	Output	Notes
FOOD		
	Dairy	Milk, cheese, butter, yoghurt

	Beef and sheep	Grass based, provenance premium
	Pigs and poultry	Commodity or high welfare niche
	Cereals, pulses, oilseeds	Diverse rotation, heritage grains
	Horticulture	Market garden, CSA, box schemes
	Fruit and nuts	Long term income, mechanical harvest
	Mushrooms	Shaded or underused structures
ENERGY		
	Solar, roof/structure	Priority; no land displacement
	Agrivoltaics	In field, farming primary activity
	Wind	Farm scale or micro
	Anaerobic digestion	Biogas, digestate fertiliser
	Hydro	Where watercourse allows
	Biomass and energy crops	Lower grade land preferred
	Excess heat	AD, biomass, glasshouse networks
	Battery and private wire	On farm trading, grid flexibility
NATURE AND ENVIRONMENT		
	Agri environment payments	SFI, Countryside Stewardship

	Biodiversity Net Gain	Habitat units for developers
	Carbon credits	Woodland, hedgerows, soil
	Nutrient and water credits	Catchment level schemes
	Flood management	Leaky dams, wetland restoration
	Woodland and agroforestry	Timber, carbon, shelter, habitat
SOCIAL AND COMMUNITY		
	Public access	Rights of way, nature experience
	Education and farm visits	Schools, training, open days
	Social prescribing	Green care, NHS partnerships
	Events and hospitality	Weddings, festivals, markets
	Local food networks	Food hubs, farm box schemes
BUSINESS DIVERSIFICATION		
	Accommodation	Holiday lets, glamping, campsite
	Farm shop and direct sales	Value chain, direct retail
	Contracting	Machinery and labour off farm

	Storage and rental	Buildings, yard, residential
	Consultancy	Agronomic, business, media
	Research and trials	Variety trials, monitoring
	Telecoms	Phone mast, broadband rental
BIOLOGICAL INPUTS		
	Composting	Soil amendments, reduce bought inputs
	Biologicals	Compost teas, effective microorganisms, bokashi
	Seed production	Certified seed, plant propagation
	Insect farming	Feed protein, waste processing

Being opportunistic, seeing and seizing the opportunity, runs through all of the above. The most successful farm businesses are those that understand their context well enough to recognise an opportunity when it appears.

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