



UK AGRICULTURE AFTER BREXIT

Even if you are a staunch “remainer”, horrified at the zeal with which the UK is abandoning Europe, there are probably some features of membership which you will be happy to wave goodbye to. High on the list for many people is the Common Agricultural Policy and its system of disbursing agricultural subsidies through direct payments to landowners and farmers, calculated according to the area of land that they own or manage.

In the first issue of *The Land*, which appeared in 2006, we produced a “Guide to the Single Farm Payment Scheme”, which had just been introduced; we noted, with alarm, that 62 acres had sold for the unheard of sum of £3,500 per acre. “Are we seeing Single Farm Payments jacking up the price?” we asked. Eleven years later, with land selling at two-and-a-half times as much, the answer is an undisputed “yes”. EU subsidies have served, not so much to support farming as to enhance the value of landowners’ property, making it more attractive for struggling farms to sell up and cripplingly expensive for new entrants to buy in, while providing the collateral for large farms to expand and invest in ever more powerful machinery.

It will not do to place all the blame for this state of affairs on the EU, since the landed establishment in the UK has welcomed the payments, and the government declined to adopt voluntary measures introduced by the EU offering small farmers some protection from the more regressive aspects of the scheme. Nonetheless Brexit does offer a golden opportunity to get rid of this handout for landowners fairly quickly, and forge a replacement agricultural support programme, that will benefit smaller family farms and improve ecological land management.

We therefore present here a blueprint for a new agricultural support scheme for the UK, drawn up by *The Land* and the Land Workers’ Alliance. It is based on work carried out on behalf of the European Greens, and a longer exposition of these suggestions is available on the internet.¹

I. OBJECTIVES

Maintaining farm viability and improving ecological performance.

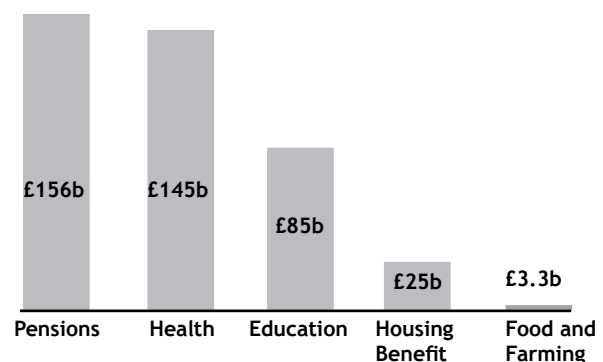
Ringfence the Budget

British taxpayers get their food and their environmental land management remarkably cheaply. Of the £17 billion which the UK contributes annually to the EU budget, £6.8 billion is attributable to the CAP. In return it receives £3.3 billion for agriculture — the remaining £3.5 billion being a contribution that the UK does not see returned, because its agricultural sector is small in relation to the size of its economy.²

This may sound a lot but it must be put into context. The £3.3 billion currently received by farmers is a tiny sum compared to the UK’s entire public spending budget of £748 billion. Whereas health (£142 billion), education (£85 billion), pensions (£156 billion), housing benefit (£25 billion) and so on are seen as necessities requiring public funding, food production and distribution, except for the funding provided by CAP, is almost entirely provided by the private sector.³

There are two main reasons for providing subsidies. One is to protect the viability of a national farming industry which provides a number of social benefits: food security, fresh local food, vibrant local economies, and outdoor manual employment. The other reason is to guide farmers towards more ecologically

Public Spending on Different Sectors of the UK Economy



Figures in units of £1 billion. from <http://www.ukpublicspending.co.uk/>



Suffolk sheep. What is the point of promoting exports of lamb when the UK imports exactly the same amount of lamb as it exports — £383 millions' worth?

sound practices. It is vital that the relatively paltry sum of £3.3 billion currently paid out in subsidies is ringfenced for farmers — and if necessary the extra £3.5 billion previously paid to Europe should be tapped to provide better quality land, soil and water management.

Subsidies Should Maintain Small and Family Farms

£3.3 billion is the equivalent of about £17,700 per farm, or £13,400 per full-time agricultural work unit, which is more or less equivalent to a living wage.⁴ It is hard to see why any farm should need more than this in grants unless it be for capital investment, or when farmgate prices are so low that the farm is operating at a loss (as has been the case with dairy farms recently).

Yet there are farm estates grossing huge sums in subsidies. According to Greenpeace, the hundred top recipients received a total of £87.9 million in agricultural subsidies last year (an average of £879,000 each) — more than was paid to all the bottom 55,119 recipients in the single payment scheme combined. Sixteen of these landowners are listed on the *Sunday Times* rich list.⁵

Any replacement for the CAP subsidies should be distributed more equitably, with a view to supporting small and family farms that are a mainstay of the rural economy. Payments should either be made to farms that need financial support to start up, reinvest, or remain viable; or to pay for the costs of providing environmental and social benefits.

Exempt Agriculture from Free Trade Agreements

The amount of farm support needed to maintain the viability of farms depends upon the price paid for food at the farm gate. This in turn hinges upon the global market price and the protection, if any, offered to farmers against low global prices through tariffs and trade barriers, as a result of whatever trading arrangements the UK makes with the EU and the rest of the world.

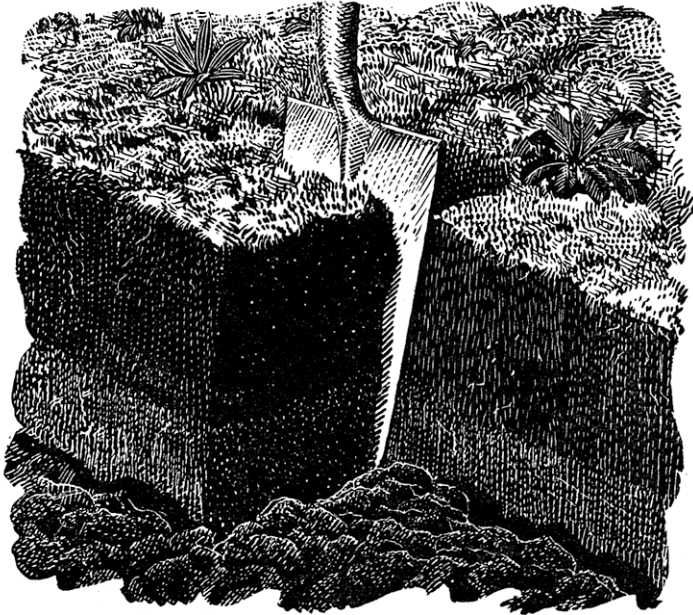
The UK's farming industry would be best served, either by avoiding free trade agreements altogether, or else by making agreements from which agriculture and fisheries products are exempted, allowing the UK to impose tariffs, quotas and trade barriers on imports of cheap food to the extent that is consistent with World Trade Organization rules. Trade agreements of this kind are by no means uncommon. For example Norway, Iceland and Liechtenstein (the European Economic Area) are members of the European Single Market, except in respect of farming, agriculture and fisheries goods.

Exemption from free trade agreements, especially with Europe, would help to maintain the price of globally traded commodities such as milk products, and give some price stability to domestic producers. On the other hand it would place exporters at a disadvantage.

However the UK's import bill is currently a good deal higher than the amount it earns in exports. The UK has a trade deficit in agricultural and forestry goods which is about 10 times the amount handed out in subsidies for farmers. In 2014 it imported goods worth €57 billion and exported goods worth €26 billion — the deficit of €31 billion is larger than the total value of exports.⁶ Roughly two thirds of this trade is with the EU: UK exports to the EU amounted to €16 billion, while imports from the EU were valued at €40 billion, a deficit of €24 billion (though some of these imports, such as soya and coffee, were originally sourced from developing countries).



The UK has a trade gap of £7.8 billion in fruit and vegetables (more than its total contribution to the EU). Since 80 per cent of vegetable imports and 39 per cent of fruit imports come from the EU, the horticultural sector stands to gain from Brexit.



Organic farming has been shown to maintain higher levels of organic matter in the soil, and therefore store carbon more effectively than agriculture reliant on chemical inputs.

The UK agricultural industry therefore stands to gain more from import substitution than it stands to lose in exports by maintaining a tariff regime on food products.

A tariff regime would also reduce the absurd amount of international cross haulage of food products. For instance, in 2013 the UK exported £408 million worth of mineral water and imported £794 million worth. In the same year the UK imported £383 million worth of lamb mostly from New Zealand and exported precisely the same amount, mostly to the EU.⁷ As a result of imports from the UK over the last 40 years, the French sheep industry has collapsed and now only produces 45 per cent of its domestic consumption. Large expanses of the French uplands have lost their traditional herds, necessary for maintaining the hills free of excess vegetation and dead scrub, with the result that forest fires have increased, and local economies have been undermined.⁸

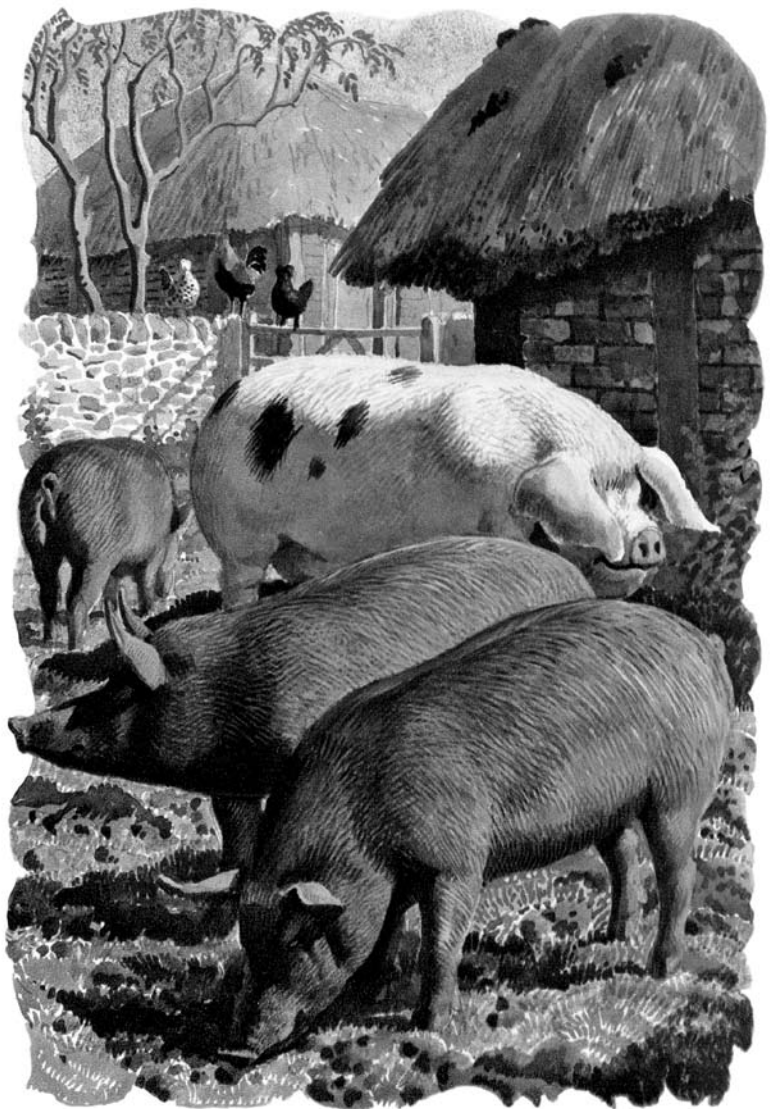
Unfortunately those responsible for negotiating free trade arrangements are unlikely to be greatly exercised by the fate of UK agriculture, which represents only a small fraction of the nation's GDP; and the representatives of the agricultural industry that they are likely to consult, notably the NFU, are more focussed on developing super-efficient mega-farms capable of competing in a cut-throat global market, than in producing the bulk of the UK's food supply through a network of secure family farms.

Subsidies to Provide Public Benefits

Under the CAP only one sixth of the subsidies paid out are designed to provide environmental or social benefits, the rest being area-based direct payments. Under a replacement scheme this proportion could be more or less reversed with the majority of payments designed to encourage ecologically sound farming practices that provided public benefits.

These might include:

- Measures to improve biodiversity, such as are already implemented through the Countryside Stewardship Schemes, using the National Character Areas.
- A move back to mixed arable/livestock farming, in lowland areas which are currently predominately arable or predominately livestock. The use of legume rich leys in particular would result in better use of nutrients, more biodiversity, lower pesticide and artificial fertilizer use, and more carbon storage.
- Support for grass-fed beef and dairy, reared with minimal use of concentrates.
- Measures to improve water retention and prevent flooding in catchment areas, particularly the uplands, in consultation with Water Catchment Partnerships and area Catchment Officers.
- Measures to diversify upland agriculture so that there is more than just sheep farming: cattle and other livestock, tree-planting, rewilding and in appropriate areas horticulture and arable.
- Measures to prevent soil erosion on arable land, through catch crops, adjustments to crop rotations, minimum tillage etc.



Brexit provides the UK with an opportunity to overturn the ban on feeding swill and kitchen food waste to pigs, which is subject to an EU directive. Ironically the swill ban was imposed on Europe by the UK after the 2001 foot and mouth epidemic.

- Grants for tree planting in appropriate places. Tree planting should be designed to meet a number of purposes, including timber and fuelwood production, local employment, amenity, shelter, biodiversity, water retention, and carbon sequestration.
- Grants to encourage peri-urban production of local food; these should be supported by planning policies facilitating the establishment of small farms for local food provision in green belts and adjoining smaller settlements.
- Support for organic farming, which has a number of ecological benefits including enhanced soil carbon sequestration.⁹



The rain that makes the UK so green and fertile, can ruin a farmer's crop and wreak havoc downstream. Water catchment management and prevention of erosion are becoming agricultural priorities.

A further objective would be to increase soil carbon sequestration, but this would be achieved by promoting many of the practices listed above. For the time being, there should be no attempt to directly reward farmers for storing carbon, since there remains considerable scientific uncertainty about how to assess and monitor the benefits

II. DELIVERING SUBSIDIES THROUGH A WHOLE FARM MANAGEMENT SCHEME

A one stop shop for farm support.

In order to minimize paperwork for farmers, all subsidies paid directly to individual farm holdings should be delivered through a single scheme. The Whole Farm Management Scheme WFMS — such is its working title — would comprise a number of components or options; but it would involve just one application, one monitoring procedure and one payment. Organic certification could be carried out by the same body of advisers, as part of the same scheme. And the collection of agricultural census data would be carried out simultaneously. Each farmer would be assigned one employed adviser to assist them with the process, much as people have a personal doctor or bank manager.

The WFMS would be loosely based on the framework of the various Stewardship schemes. These have been moderately successful in their aims, and although they are voluntary, they have been widely taken up, covering 70 per cent of the country in the case of ELS/HLS. There is an existing team of Natural England advisers, which could be built on. However since the objectives of the scheme would include rural development and agricultural productivity as well as environmental protection, either Natural England would have to broaden its remit, or a new administrative body might need to be established. There would also be input from local Water Catchment Partnerships, through the area catchment officers.

Affiliation to the scheme would be obligatory for all commercial holdings and all holdings of agricultural land over a certain size (possibly one acre). This would be to ensure and enforce compliance with statutory environmental conditions, such as prevention of nitrate flow into water courses; and also for the purpose of collecting agricultural census information. However all subsidized components would be voluntary, and only accessible to active farmers producing over a certain threshold. These subsidies would comprise:

(i) Environmental options, including many similar to those found in the Higher Level Stewardship and Countryside Stewardship option directories — different options being available for different classifications of land. Plus ongoing support for environmentally benign farming systems, and water catchment and flood prevention measures.

(ii) Start-up schemes for new holdings or enterprises, and for conversions to new farming systems; eg converting to a mixed farm, or to direct sales and processing.

(iii) Other capital grants for improvements to farm infrastructure.

(iv) Contributions towards organic certification.

(v) Forestry planting and management.

(vi) Special grants for establishing community supported agriculture schemes (CSAs), farm-based village shops, low impact farm hamlets, etc.



A lodged crop of wheat. Shorter modern varieties of wheat and barley are less prone to falling over, but this is still a risk for thatching wheat and heritage varieties.

YELLOW
RATTLE

Mind the Yield Gap

Any strategy for improving the environmental performance of UK farming must confront one major problem: the yield gap between ecological agriculture and “conventional” industrial agriculture. The yield for many organic crops is up to 35 per cent lower than for chemically grown crops. Environmental stewardship schemes frequently require measures to be taken which explicitly lower the yield, such as lower stocking rates, or which could easily lead to lower yields, such as buffer strips around fields, delaying haymaking to allow flowers to seed, sowing grain crops in spring, etc.

Reductions in yield resulting from a move towards more environmentally friendly farming are likely to trigger increased production elsewhere — in which case there may be no net environmental benefit, and even an increase in harmful impacts. For example, if such displaced production involved ploughing up permanent grassland for arable production elsewhere in the UK, then net environmental benefits in terms of biodiversity and carbon emissions would probably be negative.

A more serious form of displacement would occur if a reduction in agricultural yields through a shift towards ecological agriculture in the UK resulted in an increase of imported food. This would undermine the UK’s trade balance, its food security, its farming industry and its rural economy. And it would probably result in net environmental harm on a global scale since imports would (other things being equal) be most competitive from areas with low environmental regulation — notably South American soya and South East Asian palm oil.

In effect, outsourcing production to other countries through the application of high environmental standards in the UK is a form of ecological colonialism: protecting our rural environment at the expense of some other countries’.¹ For this reason, any strategy that might result in a reduction in agricultural yields has to be carefully thought through.

Land Sharing v Land Sparing

A number of influential academics and researchers argue that the best way to achieve ecological goals is to increase productivity on prime agricultural land so as to release or “Spare” other agricultural land for wildlife conservation, rewilding, tree-planting, biofuels etc. By contrast, Land Sharing involves farming in a more agro-ecological fashion which provides environmental improvements but is likely to give lower yields.

A recent paper published in *Nature* argues that Land Sparing in the UK could increase forest cover from 12 per cent to 30 per cent, restore 700,000 hectares of wetland peat and “meet government targets of 80 per cent greenhouse gas reduction by 2050 for the farming industry.”² Such dramatic improvements will require yields of crops such as wheat, barley and rape almost to double by 2050 — a highly optimistic scenario given that yields have only increased marginally over the last decade.

Nonetheless, more modest yield gains on the best agricultural land may still enable significant environmental improvements to be made elsewhere, and it is this argument that provides the ecological justification for the drive for the so-called “sustainable intensification” of agriculture.

The arguments against Land Sparing, and in favour of Land Sharing are more diffuse and include the following:

- (i) Boosting productivity will involve increased use of pesticides, fertilizers, genetic engineering and other questionable technologies on the land that is farmed.
- (ii) Land Sparing will reduce the number of farms and farm workers, and hasten the corporatization of the farming industry and the disappearance of family farms. Many parts of the country would be deprived of any agricultural activity. The shock to the rural economy and rural culture would be severe.
- (iii) Much of the UK’s wildlife biodiversity has evolved in symbiosis with traditional farming methods — for example the flora and fauna associated with traditional hay-meadows — which therefore need to be retained and/or revived.
- (iv) An increase in productivity with the aim of Land Sparing would result in cheaper food and animal feed, which might result in more food and feed being produced rather than a reduction in the area being farmed (the rebound or Jevons effect). Conversely, a move towards agro-ecological farming would tend to increase the price of farm produce (and hence wages for smaller and more ecological farmers). Since demand for animal feed is more elastic than demand for human food, this would tend to lower consumption of meat, especially grain-fed meat — resulting in reduced carbon emissions and probably increased health benefits in terms of obesity etc.³
- (v) A focus on agro-ecological farming would prompt an increase in research which might lead over time to yields increasing to levels approaching more closely to those of intensive industrial farming — resulting in a measure of land-sparing combined with more environmental farming methods.
- (vi) A sizable area of Britain’s farmland is used for activities that are neither agricultural nor designed to provide environmental benefits (notably horseculture and golf). Arguably this land should be “spared” for environmental purposes, in preference to productive farmland.

NOTES AND REFERENCES

1. According to a study published by the Royal Society in 2016, 70 per cent of the agricultural land area currently used for feeding the UK’s population is located abroad (up from 57 per cent in 1987). The figure is so high partly because land abroad is mostly lower yielding than land in the UK. Henri de Ruiter et al, “Global Cropland and Greenhouse Gas Impacts of UK Food Supply are Increasingly Located Overseas”, *Interface*, Journal of the Royal Society, 6 January 2016, <http://rsif.royalsocietypublishing.org/content/13/114/201510>

2. A Lamb et al, “The Potential for Land Sparing to Offset Greenhouse Gas Emissions from Agriculture”, *Nature Climate Change*, 6, May 2016.

3. This scenario is analysed in M Desquilbet, “Land Sharing vs Land Sparing for Biodiversity: How Agricultural Markets Make the Difference”, *EAAE 2014 Conference*, Ljubljana, 26-29 Aug 2014. http://ageconsearch.umn.edu/bitstream/182809/2/Desquilbet-Land_sharing_vs_land_sparing_for_biodiversity-143_a.pdf

RED
CLOVER



Friesian cows grazing in summer. Increasingly dairy cows are kept indoors all year round; but this is not what many members of the public want, according to Asda, who have started selling "Pasture Promise" milk from cows that spend at least six months of the year outdoors.

(vii) Grants for taking trainees and apprentices; or for the farmer to take a training course.

(viii) A safety net for struggling farm sectors or farms facing loss of income because of severe weather or disease.

Safeguarding Viability

In an ideal world the payments outlined above, for ecological benefits and capital investment, ought to be sufficient to maintain a healthy natural environment and a thriving farming industry. However, as long as the market fails to pay prices high enough for farmers to make a living, there is likely to be a need for supplementary payments.

Much of the problem is caused by the volatility of global prices. For example dairy farmers receiving around 30 pence per litre in 2014 were getting as little as 18 pence per litre, well under the cost of production, in the first half of 2016. Many farmers have given up dairy production, leading to greater concentration in the industry, and larger more mechanized farms. The price has since bounced back to around 28 pence per litre, but according to the NFU it will take 18 months to two years for many farms that have survived the shock to recover.¹⁰

Besides the chaos of the market, other factors that can reduce a farmer's income for the year to near zero include: severe weather conditions, notably flooding and severe snow; and disease outbreaks such as the 2001 Foot and Mouth epidemic.

A "public goods" approach to farm support, is neither designed to address such matters nor is it competent to do so. A UK government which wished to maintain the viability of the farming industry, and reverse the decline in the number of small and family farms, would have to provide payments or other measures which go beyond those designed to provide environmental benefits and capital investments as outlined above. From time to time farmers need income support.

Marketing Boards

One way of safeguarding against market volatility is through organizations such as the former Milk Marketing Board (MMB). which between 1933 and 1994 maintained relatively

stable and equitable prices for milk producers. Dairy farmers are particularly vulnerable to the market because milk is perishable, and there is a wide discrepancy between the value of fresh liquid milk and of surplus milk destined for lower value uses such as dried milk powder. Since the MMB had a monopoly on milk produced it could pool the price differences and pay each farmer the same price per litre.

However the socialist ethos of the Milk Marketing Board conflicted with late 20th century

neo-liberal ideologies. In 1982 it was sued successfully by the EU Commission and the Irish export organization An Bord Bainne and in 1994 it was disbanded by the Conservative Government.¹¹ Since then prices have fluctuated wildly, and some farmers are paid up to 40 per cent less per litre of milk than others.¹²

There is a good case for reviving the Milk Marketing Board, but such a project would probably be politically unfeasible in the current ideological climate; and to apply the same model to all sectors of the agricultural industry would be a very cumbersome way to safeguard farm viability.

Two other options present themselves — insurance schemes, and special direct payments, both of which could be applied for and allocated through the WFMS package.

Insurance Schemes

The first is a government operated insurance scheme on the lines of the Canadian "AgriStability" programme. Subscribing farmers receive compensation when receipts for a season fall below 70 per cent of an agreed threshold. The costs of the scheme are \$55 dollars administration costs plus an additional \$4.50 for every \$1,000 dollars of income insured, with a minimum payment of \$100.¹³

An insurance scheme on these lines is relatively easy to introduce and uncontroversial since it does not loudly champion any particular ideological approach, either neoliberal or state interventionist. One objection is that it might encourage farmers to take risks that they otherwise might not take — for example crowding onto one farm very large numbers of animals, which, if ever there were a serious disease outbreak, would all have to be slaughtered. It might also encourage monoculture, since it would diminish the incentive for farmers to spread risks through multi-cropping.

A further objection to subsidised insurance is that it provides no opportunity for the government (and hence in a democracy the electorate), to guide policy. Farmers choose what to grow in response to signals from a volatile global market-place, while

indemnity from risk is subsidised by a government that has no say in what is grown, or what risks are taken.

Special Payments

A government that wished to proactively influence the structure of the nation's farming industry — for example to prevent a haemorrhage of farmers from the dairy industry, or to promote the production of local fruit and vegetables — might seek the ability to target subsidies at chosen sectors, either nationally, or in a specified part of the country.

Thus, whilst there is no case for “direct payments” paid out to landowners willy-nilly according to the amount of land they own, there might be an exceptional need for funds to be directed towards specific agricultural sectors, if and when they are deemed to require support. Such payments might consist of emergency relief for a particular farming sector after a difficult period, or more prolonged support for a specified period of several years to allow farmers to plan ahead.

Since these “special payments” would be made directly to individual farmers, they could be allocated through the WFMS. There remains the question of how to calculate how much should be paid to each farmer. Clearly this should not be on the basis of the area of land owned. Instead, payments could be based according to the number of people employed on the holding (including farmer and family labour). The number of people employed is a better indicator of contribution to the rural economy, than the number of acres owned. And it would not result in capitalisation in the price of land.

The amount of annual payment received by each qualifying farm would thus consist of a base sum, representing the labour of the farmer, farming family, registered company or other body running the farm. This basic payment would be increased by a further sum allocated for each additional registered full-time worker, or equivalent, employed on the farm. A 1,000 hectare farm would thus only attract more subsidy than a 100 hectare farm to the extent that it employed more people. This element of the payment would favour labour intensive types of farming, such as dairy and horticulture, as opposed to less labour intensive enterprises, such as beef or corn.¹⁴

This special payments option can be seen as a way of preserving direct payments, but only for those sectors of the farming industry that genuinely need it; and structured so as to support employment rather than land-ownership. Even if the need for such payments occurred only rarely, it would be pointless for any government to relinquish the power to do this.

Summary of the WFMS

Farmers faced with a five year (say) WFMS contract would therefore have the following to consider:

- (i) “Cross compliance” measures that they are obliged to comply with.
- (ii) Options for subsidies based on the water catchment area they are in.
- (iii) Options for subsidies based on the National Character Area they are in.
- (iv) Options for capital grants, start-up grants etc that applied nation-wide.

- (v) Special Payments for sectors or regions that were struggling or needed support; and/or insurance against crop/income loss.

Farmers would be able to access free advice about all these options. In respect of (ii) the water catchment subsidies, advice would be supplied by the water catchment area officer; in respect of (iii) there would be an officer representing the National Character Area providing advice; in respect of the whole bundle there would be a local extension officer able to supply free advice (see below) — though farmers could if they preferred hire a private consultant or agent.

III. OTHER SUBSIDIES

Proposals for subsidies not paid directly to farmers.

There are a number of facilities connected to the farming industry that would benefit from subsidy which cannot be reached through the WFMS process, because they are not initiated, owned or managed by single farms. These relate to such matters as extension services, training, research, processing systems and facilities for direct marketing etc. They are particularly needed by smaller scale farms, since larger farms are served by private sector companies (ADAS, food processors such as Arla, supermarkets etc) which are not interested in or equipped for meeting the needs of smaller farms.

Marketing and Processing Initiatives

Start-up funding should be made available for local marketing and processing initiatives for agricultural produce for instance through farmers cooperatives, producer groups, CSAs, distribution hubs, street markets etc. Processors who operate on a national level cannot cope with small quantities; for local distribution small-and medium-scale production and processing is more efficient. Maplefield Milk, initially funded with a £45,000 award from the Prince's Countryside Trust, is an example of a processor paying nearby farmers well over the normal price for fresh, unhomogenized milk distributed locally.¹⁵

Procurement policies could be altered to actively encourage institutions such as universities, schools, hospitals and prisons to make contracts with nearby farmers to supply a complete package of agricultural produce. For instance Cliffe House Farm, the only dairy farm near Sheffield still bottling milk, in 2014 received a grant from DEFRA to supply milk to the University of Sheffield.¹⁶

Agricultural Advisory Services

Various studies have concluded that “small-scale farmers are under-served by formal advisory services” and that “advice for small-scale farmers needs to be publicly funded”.¹⁷

The UK lost its only agricultural extension service (the traditional name for agricultural advisory services) when ADAS was privatised in 1997. ADAS is now a consultancy service which is too expensive for most small scale farmers; it also runs a subsidiary business, Resolved Developments, which specializes in enabling landowners to sell off agricultural infrastructure for residential development, and thereby acts against the interests of the farming sector as a whole.¹⁸ There is thus no place that small farmers can turn to for affordable advice, beyond informal contacts, and commercial suppliers such as vets and seedsmen.

An extension service could be revived relatively cheaply through the government providing funding to agricultural colleges, most of which are county based, for that purpose. This would be modelled on the US Co-operative Extension Service, the brainchild of the Smith-Lever Act of 1914, which stated that the US Department of Agriculture should fund state agricultural universities to provide extension services (as well as county-based extension agencies, of which there are still 2,900 throughout the US).¹⁹

An extension service should also address the needs and concerns of non-commercial landowners, including hobby farmers, owners of amenity land, horse owners and people taking on the management of an acre or two of “wildflower meadow” or woodland. Such people buy smaller plots that larger farmers can’t be bothered with when a farm gets subdivided. Most have little experience in managing land and little interest in making it productive. Some have environmental concerns, but otherwise much of this land is lost in terms of the public good it can provide. The area of land so managed is now so extensive that a department of every county extension service should be devoted to informing and assisting such people.

Research

More funding should be made available for the development of seed varieties and agricultural techniques suitable for organic, low input and smaller-scale farming. The majority of agricultural research carried out in the UK, and globally, is orientated towards high input chemical agriculture. It is estimated that 95 per cent of organic crop production is based on varieties for non-organic agriculture, which lack the traits required for successful organic production.²⁰

Rothamsted, the UK’s leading agricultural research centre, is funded by the Biotechnology and Biological Sciences Research Council, which in turn is largely controlled by the Department for Business, Energy and Industrial Strategy, rather than the Department for the Environment, Food and Rural Affairs (DEFRA). It has a joint venture trialling GM wheat with the Swiss agribusiness giant Syngenta, which is currently under threat of a takeover from the China National Chemical Corporation.²¹

In regard to GM crops, the UK, being an island and largely GM free, is ideally positioned to pursue scientific research into non-GM agriculture, enabling comparisons to be made between the performance of non-GM agriculture in the UK and GM agriculture elsewhere. This would particularly be the case if the EU were to embrace GM crops. Regrettably the UK farming and scientific establishment has been one of the main advocates of GM crops in Europe.



“Keep going lass. Backache’s gone after three days”. Enjoying field work, and doing it efficiently, are acquired skills which are by no means redundant nowadays, but are underpaid in relation to the cost of rural accommodation.

IV. TAXES AND LICENSING

Proposals for penalties for causing negative environmental impacts.

Fuel Taxes

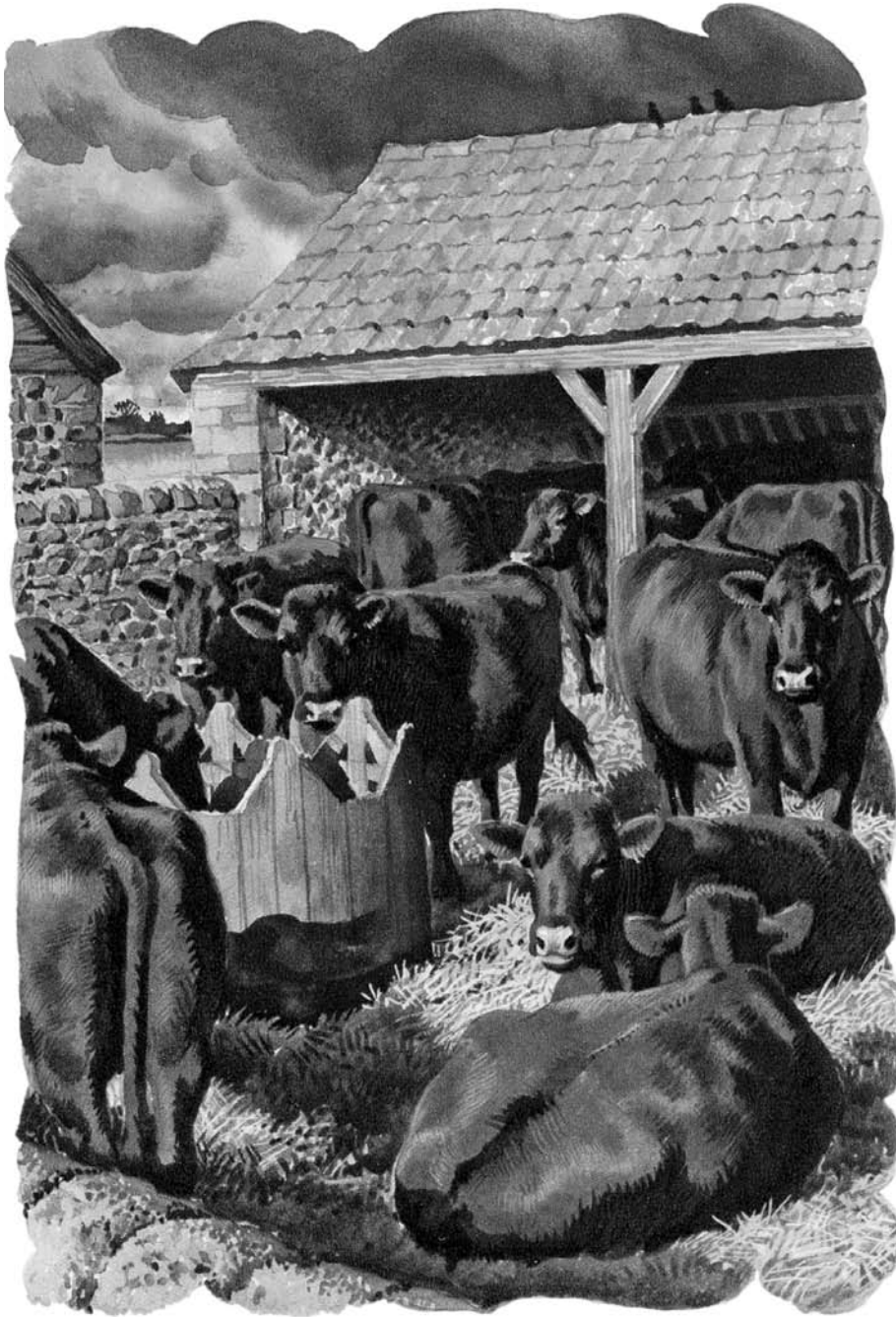
The taxing, or preferably rationing, of fossil fuels to limit their use so as to achieve climate targets, would be highly desirable. It would almost certainly lead to a reduction in meat consumption, through reduced availability of fertilizers for growing feed, and through increased demand for grazing land for biomass energy, and this would serve to reduce methane emissions.²²

Unfortunately we are a long way from electing any government with the political will to do this. A step in the right direction would be the scrapping of the fuel tax exemption for farmers (red diesel) which encourages excessive use of fossil fuels.

Meat Taxes

High levels of meat consumption, such as are enjoyed in the UK, are unsustainable for a number of reasons. Livestock are responsible for high levels of carbon emissions, they convert feed grains into meat inefficiently and even when not fed on concentrates they require large areas of land to produce a relatively small amount of human nutrition. On the other hand a certain “default” level of meat and dairy consumption has a comparatively low environmental impact since it derives from livestock that are a byproduct or co-product of agricultural systems designed primarily to produce cereals and other vegetable foods (for example they are fed on crop residues and food waste, or are a part of the fertility building cycle on a mixed farm).

There is a further reason for pressing ahead with measures to reduce meat consumption in the UK, under the post CAP regime that we are proposing. If ecological improvements in farming practice lead to widespread reductions in yield, which is quite likely, at least initially, then the result may be a net increase in harmful environmental impacts, as arable production is increased elsewhere in order to compensate — for example through increased imports of soya and palm oil. The most likely way that this scenario can be avoided is by a decline in



Beef cows which are the progeny of a dairy herd are more efficient to rear and have lower carbon emissions than cows from a herd reared solely for meat. Dual purpose cows, such as these Red Polls, were bred to provide a decent amount of milk, and quality beef.

the consumption by livestock of feed grains, and hence of meat production. (See box on page 23 for a detailed explanation)

The Land magazine has examined a number of different meat taxes.²³ Rationing is the most equitable way of limiting food consumption, but it would not be politically acceptable unless there were already an absolute shortage of meat (as during the Second World War).

None are entirely satisfactory, partly because a blanket tax on meat would penalize both sustainable and unsustainable forms of meat production. To try to distinguish between the two would be extremely difficult and it might even be counterproductive since industrial farmers will argue that grain fed factory farmed pork and chicken is more sustainable than pasture fed meat, and their view might hold sway. Many current proposals for meat tax propose a higher tax on ruminants than on monogastrics.

For this reason the most promising form of meat tax may be to put VAT of say 20 per cent onto all meat and meat products. This would be easy to apply, and would hopefully be accepted by the public with relatively little fuss, since there is already VAT on some luxury foods. The tax might be more readily accepted if the government explained that returns to the treasury enabled grants to be made to support smaller-scale and humane livestock farms.

The principal advantage of VAT as a meat tax is that it is progressive, in the sense that smaller scale farmers with a turnover under £82,000 can remain exempt. They would therefore be able to sell their meat directly to consumers, more cheaply than larger farmers and supermarkets. However there would be no advantage for them in selling their meat to supermarkets or large retailers registered for VAT, since VAT registered retailers could claim back the VAT on any meat they purchased. Since many of the environmental and welfare problems with livestock occur through overcrowding, VAT on meat would tend to favour better livestock husbandry, as well as smaller farms, farmers' markets and local economies. To provide maximum benefit to smaller farms, the slaughtering of livestock in abattoirs could remain VAT free, whereas subsequent butchering services would be subject to VAT.

The imposition of VAT should be accompanied by a review of regulations to ensure that large scale meat producers do not lower standards in order to hold down the price.

On the other hand VAT, like most meat taxes, would be regressive in respect of consumers, particularly urban consumers without access to a farmers' market.

A person consuming what is currently the average amount of meat, but paying 20 per cent extra, would see their weekly expenditure on meat rise by £1.20.²⁴ There are good arguments for exempting offal from VAT to encourage consumption of "the fifth quarter".

Current UK household expenditure on meat is £18.7 billion, more than on any other food category. If meat consumption were to decline by 10 per cent and 20 per cent of this remained exempt from VAT, the gross receipts for the exchequer would be £2.7 billion — which is about £13,500 for every holding in the country.²⁵ However increased consumer expenditure on meat might result in reduced expenditure on other products subject to VAT so the net return to the treasury would be less than this.

Polluter Pays for Labelling

A view increasingly being advanced by market-orientated environmentalists is that farming, like other industries, should pay the costs of its “externalities” ie the harm that it causes which otherwise is borne by society as a whole.²⁶ This is the “polluter pays” principle. The most obvious application of this principle would be to license and tax farmers for using poisonous chemicals, precautionary antibiotics, and artificial fertilizers. (There would be no need to tax organic fertilizers since it is because of the superabundance of chemical fertilizers that the use of manure is wasteful and problematic). Such a tax could be calibrated so that farmers only resorted to such measures when they felt it was necessary, resulting in reduced levels of pollution and antibiotic resistance. It would, of course have the advantage of bringing in funds that could then be used to subsidise environmental forms of farming.

There are two problems with such an approach. Firstly there would be great resistance to any such measure from the industrial farming lobby. Secondly industrial farmers would also argue, probably correctly, that there would be a reduction in yields, and that this might result either in expansion of arable farming in the UK, or reliance upon ghost acres elsewhere, for example through increased imports of soya or corn.

The surest and greenest way of preventing this happening is to reduce animal feed production (as discussed elsewhere in this paper). Probably taxation of these harmful inputs can only be feasibly carried out in conjunction with a decline in meat consumption — an ambitious project.

But there is one other cost incurred by the agrochemical industry which is borne by other members of society — namely the provision of consumer information. At the moment the cost of labelling food so that consumers can identify whether it has been produced with agro-chemicals is borne by those consumers who do not want to consume such food, who pay for the considerable costs of organic certification and labelling.

Organic food production has a pedigree of several thousand years, whereas the contentious chemicals in question were introduced over the last 100 years. It is perverse for the cost of informing the public about their presence in food to be borne by consumers who do not want to buy such food. If a paint, for example, contains a noxious chemical, we force its manufacturer to advertise the fact on the label. We do not demand manufacturers of paint which does not contain such chemicals to apply for a special certificate. The same principle should apply to food labelling.

As well as being inequitable, the current organic labelling system is also inefficient since there are large areas of land which are not subject to chemical management and yet are not certified organic.

The alternative would be to establish a licensing and labelling regime whereby supermarket goods so produced were obligatorily labelled “produced with pesticides/ artificial fertilizers/ antibiotics/ GM”. Most food produced organically would then not need to undergo certification since it would be regarded as “conventional” and the price differential between organic and non-organic would be radically altered — leading to much greater public uptake of organic food.

The cost of a licence to use agrochemicals could simply be calibrated to compensate the government (or a delegated body such as the Soil Association) for operating the scheme; or it could be set at a rate that made a profit for the exchequer, in which case licensing would also function as a tax.

REFERENCES

1. *Ploughing a Lone Furrow*, <http://mollymep.org.uk/2017/02/20/agri-reports/>
2. S van Berkum et al, *Implications of a UK Exit from the EU for British Agriculture*, LEI Wageningen, 2016, p 23; <http://www.nfuonline.com/assets/61142>. These sums are calculated using an exchange rate of 1.16 euros to the pound.
3. C Chantrill, *Public Spending*, <http://www.ukpublicspending.co.uk/>
4. Eurostat figures, Farm Structure Key Indicators, 2010. 186,000 holdings and 246,000 agricultural work units http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Table_Farm_Structure_key_indicators_UK_2000_2010.PNG. The living wage is currently £13,650 per year for a 35 hour week.
5. C Dowler and L Carter, *Common Agricultural Policy: Rich List Receive Millions in EU Subsidies*, Greenpeace, September 29, 2016, <http://energydesk.greenpeace.org>
6. S van Berkum et al, op cit 2, p 10. This is the WTO definition of agricultural goods.
7. 2013 figures *Trade Indigineity* op cit.
8. G Le Puill, “Et Si le Mouton Etait une Production d’Avenir en France”, *L’Humanité*, 1 March, 2016 <http://www.humanite.fr/et-si-le-mouton-etait-une-production-davenir-en-france-00647#xtor=RSS-1>; Réseau Coupures de Combustible, Groupe MAE DFCL, *Dispositif Agroenvironnemental Appliquée à la Prévention des Incendies de Forêt en Région Méditerranéenne*, Document de Synthèse 11, June 2006, <http://www.cardere.fr/doc/RCC11.pdf?PHPSESSID=9>
9. A Gattinger et al, “Enhanced Top Soil Carbon Stocks under Organic Farming”, *PNAS*, 2012, <http://www.pnas.org/content/109/44/18226>
10. Michael Oakes of the NFU interviewed on *Farming Today*, BBC Radio 4, 2 February 2017,
11. S Fairlie, “Dairy Miles”, *The Land* 13, 2012-3.
12. Keith Moore, “Do British Dairy Farmers Really Make a Loss on Milk?” *BBC Magazine Monitor*, 31 January 2015.
13. Government of Canada, Agri-Stability. <http://www.agr.gc.ca/eng/?id=1291990433266>
14. There are complications, particularly concerning the precise definition of farm worker, which can be addressed, but which are not covered here for reasons of space.
15. Maplefield Milk website: www.maplefieldmilk.epageuk.com
16. Ben Barnett, *University Deal for Sheffield Dairy Farm*, Yorkshire Post, 8 November 2014; <http://www.yorkshirepost.co.uk/news/environment/university-deal-for-sheffield-dairy-farm-1-6941368>
17. L Madureira et al, *Advisory Services for Small Farmers: How Effective Is Its Response to Farmers Needs and Demands*, PRO-AKIS May 2015, http://www.proakis.eu/sites/www.proakis.eu/files/PROAKIS_WP4_SynthesisReportT1_Final.pdf; L Sutherland et al, *New Knowledge Networks of Small Scale Farmers in Europe’s Periphery*, Harper Adams University, <http://www.harper-adams.ac.uk/events/ifsa-conference/papers/1/1.1.04%20Sutherland.pdf>, 2015.
18. *Resolved Development*, Adas website: <http://www.resolved-developments.uk/>
19. Wikipedia, *Co-operative State Research, Education and Extension Service*, retrieved 8 Dec 2016.
20. E.T. Lammerts van Bueren et al, “Improving Production Efficiency, Quality and Safety in Organic and ‘Low-Input’ Food Supply Chain”, *NJAS - Wageningen Journal of Life Sciences*, Volume 58, Issues 3-4, December 2011, Pages 193-205, <http://www.sciencedirect.com/science/article/pii/S157352141000014X>; *Breeding for Organic: New Populations and Varieties*, 9th Organic Producers’ Conference, Elm Farm Organic Research Centre, November 2014 http://www.organicresearchcentre.com/?go=Information%20and%20publications&page=Nov2014Conf_breeding_arable
21. *Syngenta*, Rothamsted Research, <http://www.rothamsted.ac.uk/collaborators/syngenta>
22. S Fairlie, “Meat Tax”, *The Land* 19, 2016; <http://www.thelandmagazine.org.uk/articles/meat-tax>.
23. Ibid
24. DEFRA, *British Food and Farming at a Glance*, March 2016, <https://www.gov.uk/government/statistics/british-food-and-farming-at-a-glance>
25. DEFRA, op cit 124 xx; Eurostat, *Agricultural Census in the UK*, 2012, http://ec.europa.eu/eurostat/statistics-explained/index.php/Agricultural_census_in_the_United_Kingdom
26. Eg Dieter Helm, *British Agricultural Policy After Brexit*, Natural Capital Network, Paper 5, Sept 2016, <http://www.dieterhelm.co.uk/natural-capital/environment/agricultural-policy-after-brexit/>

ILLUSTRATIONS

The illustrations in the main text are all by Charles Tunnicliffe, and are taken from *Both Sides of the Road: A Book About Farming*, by Sidney Rogerson, Collins, 1949. The illustrations in the box “Mind the Yield Gap”, are by F Edward Hulme.