April 2009

Friends of the Earth

Briefing

Feeding the beast

How public money is propping up factory farms

Introduction

In England, factory farming is propped up with vast amounts of public money - over £700 million each year. Factory farming for meat and dairy is at the heart of a hidden chain that links the food on our plates to rainforest destruction in South America. To make them grow quickly and produce high yields, animals in factory farms are being pumped full of imported soy – creating demand for vast plantations that are wiping out forests and forcing communities off their lands in South America.

If current trends continue, soy farmers and cattle ranchers alone will destroy 40 per cent of the Amazon rainforest by 2040.[1]

Meanwhile the supermarkets, unchecked and unregulated by the Government, are abusing their buyer power and forcing farmers into ever more intensive farming methods by constantly driving down prices.[2]

Factory farming is thriving at the expense of the climate and Earth's critical life-support systems. The meat and dairy industry – the majority of it intensive – is responsible for more climate-changing emissions than all the world's transport[3].

The Common Agricultural Policy (CAP) provides support and funding to the agricultural sector in the European Union. It accounts for nearly half the EU's total budget and has a significant influence on farming policy and practices. This briefing outlines the main ways in which the CAP supports intensive meat and dairy farming in the UK and the environmental and social impact of this.

It outlines that public support for farming is necessary to ensure the long term security and sustainability of the UK food system and that a fundamental overhaul of the goals and mechanisms of the CAP is a first step to achieving this within the livestock sector.

It considers possible policy options in the short and long term for promoting more sustainable forms of livestock production in the UK in order to reduce the overall negative environmental and social impacts of the livestock sector globally.

What is the CAP?

The CAP is a system of subsidies and other measures which forms the main support for European agriculture and food. It takes up 40% of the EU budget and is one of the only major pieces of legislation applied across Europe. The CAP was set up in the 1960s, to re-establish West European food security after the Second World War. The complex suite of mechanisms was intended to maintain prices, increase production and ensure farmers' incomes. Guaranteed high prices allowed farmers to invest in increasing production and productivity. Farmers were incentivised to produce without demand from local markets leading to the famous wine lakes and

---

1 Modelling conservation in the Amazon basin, Soares-Filho BS et al., Nature 440:520-523, March 2006

2 Competition Commission, 2008, Groceries Market Investigation Final Report, http://www.competition-commission.org.uk/rep_pub/reports/2008/538grocery.htm

3 Livestock's Long Shadow, UN FAO, 2006

butter mountains. These incentives along with technological advances ensured that Europe's farming became heavily mechanized, input-heavy and intensive. High and complex tariffs shielded the European market and ensured the functioning of the CAP.

Over the last decade a series of reforms have attempted to address this structural overproduction as well as the CAP's negative environmental and social impact in Europe and overseas.

How does the CAP work?

CAP support is divided into two Pillars: Pillar I consists of direct payments to recipients and market intervention measures intended to maintain prices above a certain threshold. In 2007, UK expenditure on direct payments accounted for 95 per cent of the Pillar I budget, with the remainder spent on market interventions. Pillar II relates to expenditure through national or regional Rural Development Programmes (RDP) which are targeted at specific social, economic and environmental outcomes.

In the UK, 2007 expenditure under Pillar I of the CAP was €3,951 million while the Pillar II budget allocation was €264 million plus some national co-financing. Therefore despite recent reforms to increase funding in Pillar II, it is still dwarfed by the huge financing of Pillar I.

Payments through the CAP are detailed in the table below:

	Type of payments	Budget
Pillar I	Direct payments – income support payments for farmers paid through the Single Payment Scheme (SPS) that replaced coupled subsidies since 2005. (Prior to 2005 payments were coupled to a certain types of production on a per animal or area basis.) SPS payments are conditional on compliance with specific environmental, animal welfare and other standards under a system known as cross compliance.	€3,832.41 million
Pillar I	Market interventions - commodity price support through export subsidies, purchasing and storage of surplus, quotas, and others.	€219.01 million
Pillar II	Rural Development Measures - a series of	€264 million

	measures under the European Agricultural Fund for Rural Development (EAFRD) targeted at improving the competitiveness of farm businesses, the environment, and quality of life in rural areas. Some measures in this are subject to cross compliance.	

Prior to 2005 and the decoupling of payments from production, Pillar I support for livestock production varied according to the production of certain types of livestock or agricultural commodities. This support can be summarised as follows:

- *Beef production – mainly through coupled per animal payments until 2005 but also through market interventions, to a lesser extent, and BSE measures;*
- *Sheep production - mainly through coupled headage payments until 2005 but also through market interventions;*
- *Dairy production – significant support through market interventions (mainly export refunds and storage of various non-perishable dairy products) but switching to direct payments from 2004 onwards with the introduction of the area based Dairy Premium and then fully decoupled direct payments in 2005;*
- *Pigs and poultry production – no coupled direct payments but some expenditure on market interventions (much less than dairy and to a less extent beef and sheep interventions);*
- *Arable production – mainly through area based arable payments until 2005 but also through market interventions. Any crops produced on land in receipt of direct payments (decoupled or coupled) and then consumed by livestock will indirectly have supported livestock production, principally, poultry, pigs, dairy and feed based beef production.*

CAP reform

The CAP has been reformed three times in the last 12 years, and expenditure has now been frozen - in real terms - until 2013. Following the Mid-Term Review in 2003, and the 2008 Health Check, there has been a clear movement towards greater market orientation in the CAP. This has involved moving towards delinking payments from production (decoupling) and a reduction in expenditure on market interventions such as export refunds and intervention storage. The decoupling of CAP was also a response to the WTO's Agreement on Agriculture which disallows subsidies directly linked to production. The UK Govt in particular has favored market based agriculture. It has fully decoupled funding, and is moving towards removing the SPS payments entirely only paying producers under Rural Development Programmes.

According to current CAP rules, farmers in receipt of SPS are under no obligation to produce any particular commodity but must comply with certain baseline environmental and other conditions under a system known as cross compliance. In England each farmer receives funding calculated partly on an historic basis and partly on the area farmed through per hectare payments. These vary per region. The regional model will eventually account for 100 of the payments.

The table below shows how the model for England will change till 2013:

Basis of payment	2005	2006	2007	2008	2009	2010	2011	2012
Flat Rate (%)	10	15	30	45	60	75	90	100
Historic (%)	90	85	70	55	40	25	10	0

However, the redistribution of funds across regions is mitigated by the introduction of three different payment regions – England normal, England moorland and England Severely Disadvantaged Areas (SDA) non-moorland – each with different payment structures. This limits redistribution of direct payments from arable and lowland regions to the more severely disadvantaged land.

The more market-based approach to agriculture has come under increasing criticism. It poses risks for farmers exposed to volatility in global price fluctuations as seen in the food price crisis of 2008, when prices of feeds increased exponentially putting huge pressure on livestock farmers. Allowing markets to dictate rewards for public goods such as environmental and food security benefits under pressure from food corporations also drives a race to the bottom with production moving to areas with ever lower environmental, social, welfare and ethical standards.[4]

The CAP is currently in a period of transition, and will be completely reformed in 2013. Friends of the Earth belives that if we are to ensure a new era of sustainable and secure food production in the UK and Europe, we need to provide support for the agriculture sector but there must be a complete rethink of the CAP's purpose and instruments.

CAP and factory farming

The impact of the CAP on meat and dairy farming varies according to the type of production system, particularly the volume and the relative intensity of production. A key indicator of production intensity is the consumption of compound feeds with a high protein component, usually soy, needed to increase yields.

The CAP has had a significant role in the intensification of EU and UK livestock production and has failed to combat concentration driven by ever-decreasing prices paid to farmers by supermarkets. Up until 2005 subsidies coupled directly to the production of livestock products encouraged overproduction. Payments per animal and price support for products like beef and milk incentivised greater and more intensive production. Price support provided artificially high prices for certain products without sufficient demand from local markets, creating surplus.

The CAP also granted the food industry huge export subsidies which never reached farmers. This led to the export of excess and unwanted products to developing countries at prices well below the real cost of production, or 'dumping,' which decimated agricultural sectors in several developing countries. For example, imports of EU chicken, fed on subsidised grain, has in recent years wiped out 70% of Senegal's poultry industry.[5]

---

[4] For a discussion on risks from market oriented agriculture see http://www.foe.co.uk/resource/media_briefing/food_crisis.pdf and http://www.oaklandinstitute.org/pdfs/Food_Prices_Brief.pdf

[5] Kwa, Aileen. "TRADE-AFRICA: Why Food Import Surges Are an Issue at the WTO," IPS, March 7, 2008. Accessed March 10, 2008

The CAP has also delivered cheap animal feed to factory farms, via subsidies on both its cereal and protein components. This has been delivered via:

- Large payments for cereal production and high tariffs on its import, which promoted over production of cereals in the UK.
- Zero import tariffs on soy which ensured access to cheap protein from abroad.

The pigs and poultry sectors never received coupled production payments, but they benefited indirectly along with all other feed-based systems through subsidised cereal feed from large arable payments. These form a key input for intensive feed systems. They also benefitted from export subsidies and other market interventions which maintained prices above a minimum threshold.

The introduction of 2005's decoupled Single Payment Scheme (SPS) reduced the CAP's impact on production. However, the CAP continues to support and allow the expansion of an increasingly intensive livestock sector in the following ways:

1. The historical promotion of intensive farming has led to an infrastructure and technology to support it. Modifying this to support extensive farming methods would require a targeted redirection of funds and investment. The SPS payment promotes business as usual.

2. SPS payments are paid per hectare, meaning that the largest producers are still receiving the most money.

3. As payments are still based on historical receipt of subsidies, intensive livestock farms that previously received high levels of subsidy - based on production levels - are more likely to receive high levels of subsidy per hectare today than more extensive farms. In England this bias lessens every year as the historic basis for calculating payments decreases in favour of a flat rate payment per hectare but even flat rate payments means big farms receive disproportionate support.

4. There is still a severe lack of environmental and social safeguards for agricultural production which distorts production decisions and acts as a hidden subsidy for intensive production

5. Import controls such as tariffs on certain products - and conversely the lack of tariffs on others - continue to affect production decisions.

6. Export subsidies means the processing industry still receives significant support – encouraging a model that relies on cheap intensively-produced meat and dairy products and continues dumping.

How much of the CAP is spent supporting intensive livestock production?

The information available on CAP spend does not stipulate how much money is given to factory or intensive farms as the decoupling of subsidies in 2005 removed direct links between specific types of production and funding. In assessing how much of the total 2008 CAP spend supported intensive livestock production assumptions have been made based on the analysis above and using best available information from existing research by DEFRA and new research for Friends of the Earth from the

Institute for European Environmental Policy.[6] While these calculations are indicative and cannot take into account all the regional and production variations in livestock farming, what is clear is that if the CAP is to support sustainable livestock farming in the UK it must be overhauled. The calculations are based on the understanding that CAP funding has supported intensive livestock production through:

- Subsidies for cereal production which are used in animal feed (encourages growing cereals at home and importing protein feed component)
- Export subsidies which largely go to processing companies
- Untargeted SPS payments in the pig and poultry sector which are allowing business as usual and increasing the money given to these sectors.
- Historical SPS payments that continue to reward intensive production of the past.
- Dairy payments that are based on historical production quotas
- Subsidies for lowland grazing livestock that do not adequately support extensive models and therefore continue the trend in those areas to intensify or exit the farming sector.

Cereal subsidies:

In the UK the livestock sector and feed crop production sectors are inextricably linked through the production of cereals, protein crops, oilseeds, feed crops, maize, and other dietary supplements for consumption by animals. While the consumption of feed crops varies significantly between different forms of production as well as between animals, compound feed production usually consists of cereal component and protein component.[7] CAP policies have provided large subsidies for cereal production, a key input for intensive livestock production. It has also created a system of import controls restricting the imports of cereals and heavily promoting the import of protein feeds. Imports of soy and rape seed are not subject to any import tariffs encouraging imports of soy from South America to provide the cheap protein component in UK feeds.

Pigs and poultry are the most intensive sectors of UK livestock farming and largest users of soy and cereal feeds. The quantity of feed fed to cows has also gone up in recent years in response to mounting pressure to increase yields. Forage and roughage, principally grass, can also form a proportion of the diet of cattle, but constitute the main part for more extensive forms of beef and sheep production. Intensive, high input/high output livestock systems are also less likely to switch from feeds with high energy and protein content to competing feed stocks with lower energy and/or protein content. In general, feed-based systems of production can be considered to be relatively intensive, in comparison to low-input pasture based systems. Thus the subsidies for cereal production are counted as an indirect support

[6] The research on which the categorizations below are made is listed in tables in Annex 1.

[7] See Food Climate Research Network working paper "Meat and Dairy Production & Consumption" http://www.fcrn.org.uk/frcnPubs/publications/PDFs/TG%20FCRN%20livestock%20final%206%20Nov%20.pdf

for factory farming. For a full explanation of the calculations and assumptions made please see Annex 1.

Cereals account for a large proportion of feed consumption in the UK, particularly in more intensive livestock systems such as pigs, poultry, dairy and more intensive beef production.

The percentage of cereal used in different livestock feeds is approximately[8]:

- pigs – 60%
- poultry – 60%
- cattle – 22%

Using this incorporation rate in the different sectors and factoring in the proportion of each sector that is intensive (or for dairy and beef, that uses intensive feed) the amount of cereals used in intensive livestock farming is = **10.4 Million tones.**

Total cereal production in England in 2008 was **20.8 Million tones[9].**

Therefore the amount of cereal used in *intensive livestock production* is = 50% of total cereal production.

Table 3 in Annex I shows the amount of funding available for cereals from 2005 – 2012. From this CAP subsidies for cereal production in 2008 = **€ 803,021,140**

Therefore we have calculated the subsidies given for cereals that serve as an input into intensive livestock to be 50% of € 803,021,140 = € 401,510,570

Export refunds:

Export refunds paid to large companies and processing units enabled them to export livestock products at prices well below global prices. This practice devastated the livestock sectors of several developing countries. Although expenditure on export refunds in the UK declining overall, expenditure fluctuates on an annual basis in response to market conditions. For example, in 2008 export refunds for all milk products were set to zero[10] in response to relatively favourable market conditions, but in January 2009 export refunds were reintroduced[11], because of deteriorating market conditions. From January 2009 export subsidies have been announced for all livestock sectors. By encouraging the production of cheap highly processed livestock products and dumping, export subsidies contribute to a model of intensive and unsustainable production.

---

[8] Ibid

[9] DEFRA Economics and Statistics https://statistics.defra.gov.uk/esg/Cerealsoilseedsns.htm

[10] Commission Regulation (EC) No 620/2008 of 27 June 2008 correcting Regulation (EC) No 386/2008 fixing the export refunds on milk and milk products.

[11] Commission Regulation (EC) No 57/2009 of 22 January 2009 fixing the export refunds on milk and milk products.

This analysis uses DEFRA figures on the export subsidies available for each livestock sector in 2008[12]:

Pig meat = 197,494.28 GBP

Eggs = 155,581.47 GBP

Poultry = 13,141.77 GBP

Total export subsidies = 366,217.52 GBP

Pig and poultry payments:

Prior to 2005, there was no direct support linked to pigs and poultry producers, unless they owned land on which they claimed support for other commodities, such as arable crops. The sectors also received some support through market intervention measures, such as export refunds and intervention storage linked to pig meat and poultry products. However, the redistribution of payments via SPS increases subsidies available to the pig and poultry sectors for their agricultural land holdings.

Table 3 in Annex 1 provides a figure for the subsidies for pigs poultry and horticulture sectors in 2008 = **€ 31,730,332**

To isolate the spend on pigs and poultry, the likely subsidies for horticulture payments have been subtracted from the total. To calculate this figure the area of horticulture in England was multiplied by the payment per hectare of land area under SPS, discounting historical component of the payment. As the historical element, accounting for 55% of the payments for horticulture in 2008 are very small, this method is likely to be an overestimation of subsidies for horticulture. The pig and poultry sectors are among the most intensive sectors in the UK. 98% of pigs spend almost all or most of their life indoors and 90% of the poultry sector is intensive[13]. Due to this high percentage and overestimation of horticulture payments we have not factored in intensive percentages into this.

Payments for horticulture = **€ 19,05,000**

Therefore payments for pigs and poultry = € 31,730,332 - € 1905000 = € 29,825,332

Dairy payments:

Soy and intensive feed formulas have particularly suited the dairy industry which has been under overwhelming pressure to increase yields. The vast majority of dairy farms in the UK are intensive. Between 2003 and 2006 the average UK milk yield per cow per year increased from 6,805kg to 7,095kg. On the most intensively managed dairy farms, yields are in excess of 10,000 kg. By comparison, average milk yields in the EU-15 increased from 6,325kg to 6,661kg over the same period.[14]

[12] See DEFRA parliamentary written answers http://www.theyworkforyou.com/wrans/?id=2009-03-12b.262013.h

[13] Pers Comm with Compassion in World Farming April 2009

[14] DG Agri (2007) The Agricultural Situation in the European Union. Table 4.20.0.1. Available at: http://ec.europa.eu/agriculture/publi/agrep/index_en.htm

In terms of CAP payments the dairy sector historically received significant support through market interventions (mainly export refunds and storage of various non-perishable dairy products) which mainly benefited the food industry rather than farmers. From 2004 onwards, the dairy sector received the area-based Dairy Premium and then fully decoupled direct payments in 2005. These subsidies are based on historical production quotas which means that, although fully decoupled, the highest payments are still made to those units that produced the highest yields in the past, which tend to be more intensive systems.

It is therefore assumed that the historical element of dairy subsidies in 2008 supported intensive systems. In reality, more than just the historical element will be going to intensive production as the dairy sector in the UK is predominantly intensive using intensive feeds.

The dairy sector in the UK is in a crisis with farmers unable to survive on low farm gate prices. In many areas especially lowland grazing, famers survive primarily due to CAP payments while being paid extremely low prices. In reality low prices paid to farmers for milk products mean that effectively the supermarkets and others up the supply chain are the real beneficiaries of CAP subsidies in the dairy sector.

Table 3 in Annex 1 provides figures for dairy subsidies in 2008. In 2008 55% are historic.

55% of € 280,285,627 = € 154,157,094.8

<u>Other lowland grazing livestock:</u>

Lowland grazing farms are among the least profitable farming enterprises in the UK. Many, particularly small farms on marginal land, survive primarily on SPS payments. Conversely, the more extensive sheep and beef farms are exactly those kinds of farming that deliver landscape and conservation benefits - and would be among the lowest users of intensive feeds, grazing on grassland instead.

When the SPS was introduced the Government assumed that the market would pay adequately for the meat, dairy and crops produced by English farms and that incomes would be maintained as the level of SPS were gradually reduced. The UK Government intends to remove the SPS portion of the CAP, leaving farmers to earn income from the value of its produce. If this is to provide adequate income, prices paid to farmers need to be increased by 30 per cent.[15] If they are to improve their sustainability through investment, a further increase of the same amount would be needed. Lowland grazing farms are also under pressure to intensify because they are receiving low prices from the market. Table 4 in Annex 2 shows that in beef farms on lowland grazing areas, average farmed land area is 78.5 hectares and average number of beef cattle is 31. This makes the stocking density 2.5.

Anything above 1.4 stocking density is considered intensive production.[16]

---

[15] Farm Business Income survey 2006/2007Lowland Grazing Livestock Production in England http://www.fbspartnership.co.uk/documents/2006_07/Lowland%20Grazing%20Livestock%20in%20England%202006.pdf

[16] This is based on the extensification premium payments which were made for livestock stocking of less than 1.4 / hectare. http://www.macaulay.ac.uk/livestocksystems/tdv/tate.htm

Based on this all current payments going towards lowland grazing livestock are being paid to farms that are becoming more intensive = € 216,375,337 Euros

Total payments supporting intensive livestock = 801,868,333.9 Euros (720,043,819.23 GBP) + export subsidies = 720,410,036.7 GBP

What needs to change?

The current CAP, while continuing high levels of support, is failing to reduce climate emissions, protect wildlife, support good farming practice or maintain food security. It is also failing to provide a counter to the market forces and corporations driving further concentration in the meat and dairy sector. If we are to ensure a new era of sustainable and secure food production in the UK, Europe and globally, the CAP's purpose and mechanisms must be overhauled to deliver real change. Funds for the meat and dairy sector must urgently be redirected to support sustainable low-input livestock systems.

In the short term this means using measures currently available in the CAP to support more grass-based and extensive meat and dairy production and to promote protein crop production such as:

- Introduce new measures which substantially increase domestic production of sustainable feeds including grassland (for example a 'grassland premium' as in France) and other crops and livestock system or breeds suited to a new domestic feed regime based on sustainable stocking rates
- Promoting the Protein Crop premium (€10.5m available per year to 2012) and the Dried Fodder premium
- Using the maximum available incentives under Article 69 of the CAP to redirect money into disadvantaged livestock sectors, such as hill farming, using support available for '*specific agricultural activities entailing additional agri-environment benefits'*
- Using Article 69 in the arable sector to support environmentally sustainable production including greater use of crop rotations. This could help indirectly to promote the production of protein and other crops such as peas and beans for animal feed as alternatives to imported soya.
- Using Crop Rotation Standards in Good Agricultural and Environmental Condition GEAC to promote the use of peas and beans and other protein feeds
- Using funds from £100 million under Axis 1 of Rural Development targeted at 'improving competitiveness' of the livestock sectors to improve on-farm feed production. This is a key long-term solution in the face of rising global feed prices.
- Providing financial incentives for crop and livestock system or breeds suited to a new domestic feed regime based on sustainable stocking rates
- Incorporating into the new Rural Development Plans - to be finalised by October 2010 - incentives for farmers to meet new broader environmental challenges such as climate change, global biodiversity loss, and protection of water sources where the market will be unable or to too slow to deliver.
- Making funds available, for example through agri-environment schemes in the

UK budget, specifically to maintain and increase levels of organic and mixed farming systems (with target levels for each) and the research and development required to support this growth.

In the long term the CAP must be reformed so that it provides support for the benefits from agriculture that the market is not rewarding, such as food security, climate and global biodiversity protection, rural employment, animal and human health and welfare and resource protection. It must also ensure European and UK use of land and other natural resources for livestock production is equitable and does not lead to damage to the environment and livelihoods overseas.

The CAP will go through a full reform in 2013. The UK Government should use this opportunity to push for change that completely transforms agriculture in the UK and Europe.

A new CAP must be the engine for change in the meat and dairy industry. It must deliver:

1. Targeted support for farming that delivers on environmental and social goals and is in line with other EU environmental policy goals such as climate policy and targets to halt deforestation by 2030.
2. Assessment of other policy tools or measures that can be applied to intensive systems to prevent negative environmental impacts and shift them towards more sustainable practices. For example the government must enforce tough pollution controls so that the most intensive livestock systems pay the costs of the damage they incur and the price of goods from these systems reflect that cost, good practice is rewarded and innovation is promoted.
3. Investigate measures to regulate supply, and ensure fair prices so that farmers can stay in business in the face of volatile global markets and increasingly unpredictable weather patterns brought on by climate change. Regulating supply is also key to ensuring that the UK and EU is not consuming unsustainable levels of resources inputs and from around the world for our food systems. Allowing unregulated companies and markets to dictate the way food is produced will drive a race to the bottom, with production moving to areas with ever lower environmental, social, welfare and ethical standards.
4. Measures to match sustainable production with reduced demand for meat and dairy through funded awareness raising programmes, public food procurement policy, regulation of the influence of agribusiness on farming and consumers.

The UK Government must present a proposal for negotiations on CAP 2013, that includes all these measures and removes all EU subsidies that are associated with intensive livestock production, processing and exports and present new options to reduce production of intensive livestock overall while maintaining more extensive especially grass fed / alternative feed systems. This would form the basis for all negotiating positions at EU and on international trade. This will mean ensuring the budget is available for incentives and free advice, maintaining appropriate support for sustainable production in difficult areas and in key areas of high biodiversity and landscape benefit, whilst replacing animal production where suitable with other crops.

What else need to change?

While the CAP has a central role to play in revolutionising the way that meat and dairy is produced in the UK, the Government must also tackle the impact of the meat and dairy industry by:

- Introducing new legislation to ensure public money is not spent on environmentally damaging, unhealthy food for schools, hospitals, care homes, the armed forces and prisons.
- Addressing the climate change impacts of livestock production, including the worldwide impacts of the global food chain.
- Changing global investment policy and stop spending taxpayers' money on finance for damaging intensive livestock schemes
- Making UK companies, including supermarkets, accountable for the impact on people and the environment abroad.
- Revising the Sustainable Consumption and Production Strategy so that it addresses the full impacts of livestock production, and recognises the benefits of changed consumption patterns to the environment and human health.
- Calling for a review of European Trade Policy and ensure greater priority is given to the environmental and social impacts of global trade.

ANNEX 1

Research that forms the basis for calculations on funding for intensive livestock:

The tables below are from research done by the Institute for European Environmental Policy for Friends of the Earth

Table 3 is the basis for our calculations on funding to the intensive livestock sector from CAP. Table 3 calculates the payments to each sector by scaling up payments per hectare in table 1 obtained from DEFRA. It does this by matching activated area of payments + factoring in dynamic hybrid from historic to flat rate each year. There are a number of assumptions made in this calculation which are available from Friends of the Earth. The main assumptions are 1. Land use patterns have not changed dramatically since 2005. 2. Compulsory and voluntary modulation are not taken into account. A combined rate of modulation of about 19% will apply to England between 2009 and 2012.

Table 1 Average English subsidy payments by farm type in 2005 derived from SPS payment and field data

Farm type	Payment (€m) (a)	Area activated ('000 ha)	Payment rate (€/ha) (a)	% of SPS receipts
Cereals	830	2,688	309	37.1%
General cropping	324	1,252	260	14.5%
Pigs, poultry & horticulture	28	130	220	1.2%
Dairy	279	1,011	274	12.5%
LFA grazing livestock	172	880	195	7.7%
Lowland grazing livestock	220	749	293	9.8%
Mixed	273	855	320	12.2%
Other	54	402	136	2.4%
England (link to June data)	**2,181**	**7,968**	**274**	**97.6%**
No main holding number	1	3	186	0.0%
No link to June dataset	54	342	158	2.4%
England (overall)	**2,235**	**8,313**	**268**	**100%**

Source: Defra (2007a) Agricultural Change and Environment Observatory Research Report No. 07: 'Distribution of payments and payment rates for the 2005 Single Payment Scheme'. .Available at: https://statistics.defra.gov.uk/esg/ace/research/pdf/observatory07.pdf
(a) Figures taken from Defra (2007) and converted to Euros at a €/£ conversion rate of 0.68195; the value of the Euro on 30 September 2005.Note: Definitions for each farm type are based on those used in the Defra June Agricultural Census and can be found in **Error! Reference source not found.** of this report. These definitions are based on economic output of agricultural

Table 2 Estimated variation in Single Payment rates in England by farm type between 2005 and 2012 (€/ha)

Sector	Basis of payment	2005	2006	2007	2008	2009	2010	2011	2012	% change 2005-2012
Cereals	historic	€ 281	€ 266	€ 219	€ 172	€ 125	€ 78	€ 31	€ 0	
	flat rate	€ 28	€ 42	€ 85	€ 127	€ 169	€ 211	€ 254	€ 282	
	Total	**€ 309**	**€ 308**	**€ 303**	**€ 299**	**€ 294**	**€ 290**	**€ 285**	**€ 282**	**-8.9%**
General cropping	historic	€ 231	€ 218	€ 180	€ 141	€ 103	€ 64	€ 26	€ 0	
	flat rate	€ 28	€ 42	€ 85	€ 127	€ 169	€ 211	€ 254	€ 282	
	Total	**€ 260**	**€ 261**	**€ 265**	**€ 268**	**€ 272**	**€ 276**	**€ 279**	**€ 282**	**8.6%**
Pigs, poultry & horticulture	historic	€ 192	€ 181	€ 149	€ 117	€ 85	€ 53	€ 21	€ 0	
	flat rate	€ 28	€ 42	€ 85	€ 127	€ 169	€ 211	€ 254	€ 282	
	Total	€ 220	€ 223	€ 234	€ 244	€ 254	€ 265	€ 275	€ 282	**28.2%**
Dairy	historic	€ 246	€ 232	€ 191	€ 150	€ 109	€ 68	€ 27	€ 0	
	flat rate	€ 28	€ 42	€ 85	€ 127	€ 169	€ 211	€ 254	€ 282	
	Total	**€ 274**	**€ 275**	**€ 276**	**€ 277**	**€ 279**	**€ 280**	**€ 281**	**€ 282**	**2.8%**
LFA grazing livestock (SDA moorland and non-moorland)	historic	€ 179	€ 170	€ 140	€ 110	€ 80	€ 50	€ 20	€ 0	
	flat rate	€ 16	€ 23	€ 47	€ 70	€ 93	€ 117	€ 140	€ 155	
	Total	**€ 195**	**€ 193**	**€ 186**	**€ 180**	**€ 173**	**€ 166**	**€ 160**	**€ 155**	**-20.3%**
Lowland grazing livestock	historic	€ 265	€ 250	€ 206	€ 162	€ 118	€ 74	€ 29	€ 0	
	flat rate	€ 28	€ 42	€ 85	€ 127	€ 169	€ 211	€ 254	€ 282	
	Total	**€ 293**	**€ 293**	**€ 291**	**€ 289**	**€ 287**	**€ 285**	**€ 283**	**€ 282**	**-3.9%**
Mixed	historic	€ 291	€ 275	€ 227	€ 178	€ 130	€ 81	€ 32	€ 0	
	flat rate	€ 28	€ 42	€ 85	€ 127	€ 169	€ 211	€ 254	€ 282	
	Total	**€ 320**	**€ 318**	**€ 311**	**€ 305**	**€ 299**	**€ 292**	**€ 286**	**€ 282**	**-11.8%**
England (overall) average	historic	€ 242	€ 228	€ 188	€ 148	€ 107	€ 67	€ 27	€ 0	
	flat rate	€ 27	€ 40	€ 81	€ 121	€ 161	€ 201	€ 242	€ 268	
	Total	**€ 268**	**€ 268**	**€ 268**	**€ 268**	**€ 268**	**€ 268**	**€ 268**	**€ 268**	**0.0%**

Table 3 Estimated distribution of the Single Payment in England by farm type between 2005 and 2012 (€)

Sector	2005	2006	2007	2008	2009	2010	2011	2012	% of total in 2005	% of total in 2012
Cereals	€ 831,685,607	€ 827,590,684	€ 815,305,912	€ 803,021,140	€ 790,736,369	€ 778,451,597	€ 766,166,826	€ 757,976,978	37.1%	34.0%
General cropping	€ 324,956,375	€ 326,516,900	€ 331,198,475	€ 335,880,050	€ 340,561,625	€ 345,243,200	€ 349,924,775	€ 353,045,824	14.5%	15.8%
Pigs, poultry & horticulture	€ 28,594,472	€ 29,042,452	€ 30,386,392	€ 31,730,332	€ 33,074,272	€ 34,418,212	€ 35,762,153	€ 36,658,113	1.2%	1.6%
Dairy	€ 277,230,002	€ 277,666,520	€ 278,976,074	€ 280,285,627	€ 281,595,180	€ 282,904,734	€ 284,214,287	€ 285,087,323	12.5%	12.8%
LFA grazing livestock	€ 171,625,486	€ 169,689,860	€ 163,882,983	€ 158,076,105	€ 152,269,228	€ 146,462,351	€ 140,655,473	€ 136,784,222	7.7%	6.1%
Lowland grazing livestock	€ 219,664,198	€ 219,194,361	€ 217,784,849	€ 216,375,337	€ 214,965,825	€ 213,556,313	€ 212,146,801	€ 211,207,127	9.8%	9.5%
Mixed	€ 273,319,158	€ 271,529,071	€ 266,158,809	€ 260,788,548	€ 255,418,286	€ 250,048,024	€ 244,677,762	€ 241,097,588	12.2%	10.8%
Miscellaneous*	€ 103,702,617	€ 109,548,069	€ 127,084,423	€ 144,620,777	€ 162,157,131	€ 179,693,485	€ 197,229,839	€ 208,920,742	4.9%	9.4%
England (overall)	**€ 2,230,777,916**	**€ 2,230,777,916**	**€ 2,230,777,916**	**€ 2,230,777,916**	**€ 2,230,777,916**	**€ 2,230,777,916**	**€ 2,230,777,916**	**€ 2,230,777,916**	**100%**	**100%**

ANNEX 2

Detailed calculations on funding for intensive livestock farming from CAP
Only calculations not covered in the main briefing are covered here

Cereal Calculations:
Assuming cereal incorporation rate in feed is pigs – 60% poultry – 60% cattle – 22%

All figures for cereal incorporation in feed are from DEFRA feed statistics notice in Annex 3 available at https://statistics.defra.gov.uk/esg/feedstuffsns.htm and FCRN research paper available at http://www.fcrn.org.uk/frcnPubs/publications/PDFs/TG%20FCRN%20livestock%20final%206%20Nov%20.pdf

Poultry:

- Amount of cereal used in IPU poultry units = 1,808.4 (exactly 60% of total feed)[17]

Pigs:

- Total amount of pig feed produced = 1,432.4. Can assume 60% of this is cereals = 859.44 thousand tonnes

- 93% of pigs reared intensively[18] X 859.44 = 799.27 thousand tonnes cereals used in intensive feed (factoring in percentage of intensive pigs)

Dairy:

- 22% of all compound feeds produced for dairy cows (assuming that if dairy cows are being fed compound feed then they are being reared intensively since otherwise their extensive diet in the summer is grass 50% and in winter silage 50%)
- 22% of 2,046.3[19] = 450.186 thousand tonnes

Beef:

- We can also assume that all compound feed fed to other cattle (suckler beef mostly) will be for intensive finishing as otherwise beef cattle are either bred in uplands on grass or lowlands on grass. So 22% of all cattle compound feeds are cereals (have not included blends as am not sure if they incorporate cereals)

---

[17] Table 6a in DEFRA feed statistics

[18] **Pig intensive figures: From CIWF**
60% born indoors and stay indoors for entire life
33% born outdoors but brought indoors at weaning (at around 27 days of age on average)
5% born outdoors and reared outdoors but then brought indoors for approx. half of life
2% born outdoors and stay outdoors for entire life
i.e. 93% spend most or all of their life indoors and a further 5% spend half of their life indoors

[19] Table 1 in DEFRA feed statistics notice

- 22% of 659.2 [20] = 146.8 thousand tonnes

Total cereals for intensive livestock in retail feeds = 1808 + 799.27 + 450.186 + 146.8 = 3204.256 thousand tonnes

However this figure does not include farm to farm transactions which form a large part of purchase of cereals for animal feeds.

The figure for total cereal usage in animal feed from Home Grown Cereals Authority = 10,614,000 Million tonnes

Therefore we have scaled up the percentages of cereal feeds used in intensive feeds from retail feeds to total figure for cereals used in livestock feeds.

For example Intensive pigs cereals usage = 24.40% of 3204.25 therefore we have calculated 24.40% of 10614000 as scaling up to get usage for intensive pig farming from total cereals used for livestock = 25,89,816 Million tonnes

Intensive poultry 55.21% of total = 58,59,989.4

Intensive dairy 13.74% of total = 14,58,363.6

Intensive beef 5% of total = 5,30,700

= 10,438,869 Million tonnes

Total production of cereals in England = 20.8 million tonnes

Cereals used in intensive livestock production = 50% of total cereals

Subsidies = 50% of 2008 subsidies for cereals in Table 3 = 401,510,570 Euros

Pigs and Poultry Calculations:

The figure in Table 3 gives the payments for pigs poultry and horticulture together. So we have tried to subtract from this payments to horticulture. In order to do this we have assumed that payments for horticulture are area based payments not historical and have used the figure for flat rate area payment 127 Euros based on Table 2.

According to DEFRA 2% of total area of agricultural holdings (9291 thousand hectares) is horticulture = 150 thousand hectares

Subsidies for horticulture = land areas under horticulture X SPS payment per hectare = 150000 X 127 = 1905000

---

[20] Table 1 of DEFRA feed statistics

Lowland Grazing Livestock:

Table 4:

LAND USE AND INDICATORS OF TECHNICAL EFFICIENCY, 2006/2007

	Average all farms	Farm Sub type				
		Beef	**Sheep**	**Beef & Sheep**	**Agri-related**	**Other**
Number of farms in group	236	25	19	46	73	48
Average farmed area (hectares)	91.6	78.5	117.9	86.5	93.8	97.4
Average proportion of owned total farmed area (%)	58%	72%	28%	55%	61%	52%
Land use						
Area of crops	3.4	3.2	1.4	3.5	1.3	8.9
Area of forage	84.1	74.1	115.2	81.9	84.4	84.5
Let keep & bare land	4.2	1.2	1.3	1.1	8.1	4.0
Temporary grass	10.0	8.8	3.7	9.4	5.4	23.4
Permanent grass	64.0	54.2	68.5	62.7	73.1	53.8
Forage crops	1.5	4.1	0.3	0.7	0.9	2.2
Rough grazing	4.3	0.5	37.3	1.8	2.1	0.6
Forage hired in	4.3	6.6	5.4	7.2	2.9	4.5
Stocking						
Average number of dairy cows	1	0	0	0	0	3
Average number of beef cows	24	31	5	27	23	24
Average number of other cattle	139	171	6	115	77	351
Average number of ewes	182	48	449	264	162	177
Average number of other sheep	530	146	1248	766	477	529
Grazing livestock units			GLUs per farm			
Dairy cows	0.6	0.0	0.0	0.0	0.0	3.1
Beef cows	11.8	15.5	2.5	13.4	11.4	11.8
Other cattle	43.2	83.2	4.5	45.6	39.7	42.8
Sheep	31.4	7.8	74.3	45.7	27.0	34.2
Other livestock	1.4	0.9	0.2	0.0	1.8	2.8
Total	88.4	107.4	81.4	104.7	79.9	94.8
GLUs per ha	1.05	1.45	0.71	1.28	0.95	1.12
GLUs per adjusted ha	1.06	1.45	0.73	1.30	0.95	1.13

ANNEX 3

DEFRA animal feed statistical notice

Table 1

RETAIL PRODUCTION OF ANIMAL FEEDINGSTUFFS
IN GREAT BRITAIN

NOVEMBER 2008 TO JANUARY 2009

Thousand tonnes

	NOVEMBER	DECEMBER *	JANUARY	Crop Year JULY TO JANUARY	12 Month Moving Total
CATTLE AND CALF FEED	327.2	390.6	332.0	2,244.2	3,885.8
All calf feed (3)	15.0	16.2	15.0	101.3	170.9
Compounds for dairy cows	161.6	194.7	162.5	1,183.6	2,046.3
Blends for dairy cows	65.5	83.0	70.0	408.8	659.2
All other cattle feed	56.2	62.7	55.5	365.4	667.3
All other cattle blends	23.8	27.4	22.9	151.1	281.6
Protein concentrates (1)	5.1	6.5	6.1	34.0	60.5
PIG FEED	112.3	128.4	104.9	827.2	1,432.4
Pig starters & creep feed	4.2	5.4	4.0	32.9	57.7
Link/early grower feeds	5.0	6.0	5.0	37.8	64.2
Pig growing feed	25.9	30.8	24.6	203.0	348.0
Pig finishing feed	48.0	51.7	42.4	336.5	584.8
Pig breeding feed	27.8	33.2	27.9	207.7	362.4
Protein Concentrates (1)	1.4	1.4	1.1	9.3	15.2
POULTRY FEED (2)	205.5	223.9	209.7	1,546.6	2,600.6
Chick rearing feed	9.3	11.1	10.1	75.7	124.4
Layer feed	74.0	85.7	76.1	548.4	930.2
Broiler chicken feed (4)	64.5	72.4	80.8	481.3	807.0
Poultry breeding & rearing feed	19.2	22.8	19.0	139.3	249.7
Turkey feed	24.3	18.8	10.9	136.4	204.1
All other poultry feed	14.1	13.0	12.6	164.6	283.6
Protein concentrates (1)	0.1	0.1	0.1	1.0	1.5
SHEEP FEED	40.2	59.4	85.2	271.5	672.6
Compounds for breeding sheep	12.2	23.3	50.9	101.8	346.5
Blends for breeding sheep	1.3	2.1	1.8	10.2	24.5
Compounds for growing and finishing sheep	23.3	29.2	28.4	134.6	256.9
Blends for growing and finishing sheep	2.8	4.0	3.3	21.0	38.2
Protein concentrates (1)	0.6	0.8	0.8	3.9	6.6
HORSE FEED	16.7	21.7	17.8	112.4	195.0
OTHER COMPOUNDS, BLENDS AND CONCENTRATES (1)	27.0	27.2	24.8	209.6	330.3
TOTAL COMPOUNDS, BLENDS AND CONCENTRATES (1)	729.0	851.2	774.3	5,211.5	9,116.7
OTHER PROCESSED FEEDINGSTUFFS FOR DELIVERY IN STRAIGHT FORM	10.6	12.2	10.0	76.4	132.5
Flaked maize	0.9	1.0	0.9	6.6	11.1
Other maize products	0.7	0.7	0.7	4.4	7.5
Molassed feedingstuffs	0.9	1.0	0.9	9.0	17.8
All others	8.1	9.5	7.5	56.4	96.0
TOTAL ALL FEEDINGSTUFFS	739.6	863.4	784.3	5,287.9	9,249.2