Cynulliad Cenedlaethol Cymru | National Assembly for Wales
Y Pwyllgor Newid Hinsawdd, Amgylchedd a Materion Gwledig | Climate Change, Environment and Rural Affairs Committee
Ailfeddwl am fwyd yng Nghymru | Rethinking food in Wales

RFW 07

Ymateb gan : Rhwydwaith Calon Cymru a'r One Planet Council
Evidence from : Calon Cymru Network and The One Planet Council

This consultation asks:

What is your vision for the future of food in Wales and what needs to be done to achieve it?

How can we rethink food so that we have:

- Healthy, locally produced food that is accessible and affordable;
- An innovative food industry sustaining high quality jobs;
- Sustainably produced food with high environmental and animal welfare standards; and
- An internationally renowned destination for food lovers?
  Please feel free to let us know any other issues which you feel are relevant.

Contents

SUMMARY of Recommendations

- The questions need to be addressed in the context of other Welsh policies and legislation, such as Planning Policy Wales, the National Development Framework and the WBFGA.
- Healthy, sustainable food is central to many other issues of public interest: tackle them together to obtain the greatest benefit.
- Farm subsidies need shifting from supporting unsustainable practices to sustainable ones.
- Rural Wales needs revitalisation not neglect, and this is an opportunity to support it.
- Therefore, deploy an approach that builds on the experience and principles of 'One Planet' Development, agro-ecology and mixed farming with training, subsidy shifts and planning policy.
- Use the National Development Framework and Joint Governance Committee approach to develop sustainable food provision for Wales using a hinterland approach in combination with encouraging One Planet Communities.

1. The central importance of food

We agree with the influential Gunhild Stordalen[i], of the EAT Forum in Sweden, that food is the main issue around which coalesces many others: climate change, poor health, social inequality, soil loss, biodiversity loss[ii]. "We need action to change this and to end **the disconnect between consumption and production**".

1.1 With what models do we end this disconnect?

Peter Seggers of Blaencamel Farm[iii], Cilycennan, Carmerthenshire provides one model. He practices agro-ecology with market gardening and feeds his 300 strong local community with year-round organic produce by feeding the soil and using polytunnels. His thermophilic composting increases the nutrients in the food, making it healthier, and gives greater protection to the crops from disease. He is highly valued in his community.

1.2 Cost issues:

Food produced this way might be more expensive than in supermarkets. Seggers believes that to end the above disconnect we must **educate consumers** about the add-on benefits of this kind of food through passionate communication, and telling them of the damage done by intensive farming.

1.3. M&S

Through their Plan A policy, M&S believe the solution is to drive change through their supply chain and are reportedly only planning to buy food produced this way to sell in their shops. They are working with the NFU.

2. 'One Planet' Development

This type of business model is encouraged by **'One Planet' Development (OPD).** *See Appendix I*. Land management supported by OPD addresses all the above issues and helps Wales move towards its target of reducing its ecological footprint from three planet Earths (food accounts for about 40%) – and carbon emissions, while improving biodiversity. This will also increase Wales' resilience to disruptions to food supply due to problems abroad such as drought.

2.1 Growing methods

'One Planet' communities make the most of their assets to strengthen their local economies, managing the land sustainably using organic horticulture, agroforestry and mixed woodland. Encouraging this approach by conversion of existing farms, or parts of farms, to agro-ecological smallholdings would enable them to supply much of their needs, their local areas and beyond with produce.

2.2 Marketing

OPDs add significant value to produce, marketing it with the distinguishing 'one planet' label (top right of packaging below). They provide pleasant places to live/work that are zero carbon, non-polluting and healthy.

2.3 'Patchwork' farms

OPDs and similar food suppliers in a local area are beginning to co-operate to market produce using the 'patchwork farm' concept whereby producers sell through a collectively-managed portal. In east Carmarthenshire, coordinated by Red Pig Farm[iv] and supported by Calon Cymru Network, one of these uses the Heart of Wales line to deliver food to pick-up points in station hubs, for customers who have ordered online to collect. It is a new kind of food market.

3. Ways forward

What follows are suggestions as to how this fresh approach to farming and food can be further supported.

3.1 Changing the economics

To mainstream this approach, a shift of policy support is required to alter the price balance between this type of food and food sold in supermarkets. We support two methods:

3.1.2 Richard Young[v] of the Sustainable Food Trust's idea of a **tax on nitrogen fertiliser** to reflect the external costs of its use.

3.2.2 The Landworkers Alliance's proposal of a post-Brexit shift in subsidy and planning practice to support small farms, smallholdings and measurably sustainable agriculture, enabling the wider uptake of 'one planet' developments, neighbourhoods and communities.

3.2 Feeding Wales

One hundred years ago Wales was more or less self-sufficient in food, farming was more diverse, and most of it was organic[vi]. Yet the population was only 600,000 less. So Wales could, in theory, feed itself. Several studies[vii] show it's possible to do this, protect the environment whilst creating jobs. A Soil Association study[viii] that compared yields of foods producable in England and Wales under organic production (which produces half the greenhouse gas emissions) with the volumes currently produced under "conventional" production found that jobs would be almost doubled.

3.3 Unite the sectors and provide training

We agree with Wales' former Commissioner for Sustainable Futures, Peter Davies, who says:

> "There will still be an export advantage and opportunity for Welsh meat, but we must address the fact we have two parallel universes: sheep and beef and fruit and vegetables. You hardly ever see farmers at gatherings for local food and vice versa. The debate at a policy level is dominated by the dairy and red meat producers, led by the Welsh Farmers Union, because they are big contributors to the national economy. Some community supported agriculture schemes (CSA) cross these boundaries, but they are the exception. The Welsh Farmers Union needs to be brought into the dialogue, while we also need to address a massive shortage of horticulture skills."[ix]

3.4 Support higher productivity

One planet smallholdings and some Community Supported Agriculture schemes are **more productive than conventional agriculture, without subsidies and using no artificial inputs**. Productivity improves after a switch from sheep grazing to agroecology. Data from a conversion of a sheep farm into nine 6 acre family-held smallholdings run as OPDs in Pembrokeshire is as follows (data made available annually as a condition of planning permission, 2016 figures):

Value of needs met directly from site:	**£59,109**
Income from land-based produce:	£26,873
From educational activities:	£21,283
Total from land-based activity:	£107,265
Value placed on total household needs:	£116,474

92% of the 9 families' household needs were therefore met from the land. Prior to conversion, the single farmer's annual income was £2,500–£3,500 from raising sheep (not including agri-subsidy). This is a 30-fold increase in land-based productivity. Productivity will increase as soil fertility increases. No subsidies were given or required.

3.5 Further evidence on productivity

These results are underscored by a recent report from the Landworkers' Alliance[x]. Key findings:

- Productivity data for 18 indicator vegetable crops showed small farm yields being higher than non-organic field-scale yields for those which benefit from more intricate husbandry and hand picking (e.g. salad leaves, French beans, kale leaf-beet and chard). At established market gardens vegetable yields were much higher than average non-organic yields.
- The prevalence of integrated, mixed farms, means that inputs and waste are reduced compared to monoculture farms. Such diversity may also lead to resilience, by spreading economic risk, improving ability to cope with extreme weather and increasing disease resistance.
- When compared to average UK farm incomes the sample was performing well financially. 78% received no farm subsidies; subsidies made up under 20% of the income for 19% of those who did.
- Most farms were adding value either by direct marketing or processing produce into cheese, juices or preserves. Vegetable box schemes, farmers' markets and community supported agriculture schemes enable better incomes, while building customer trust through provision of fresh and sustainably produced food.

3.6 Provide more processing facilities in Wales

To support the switch to more, smaller farms providing local food, more processing facilities, including packers and abattoirs, need to be provided in Wales. This will add value to produce and keep more of the profit and jobs within Wales while reducing food miles.

4. Looking closer at the economics

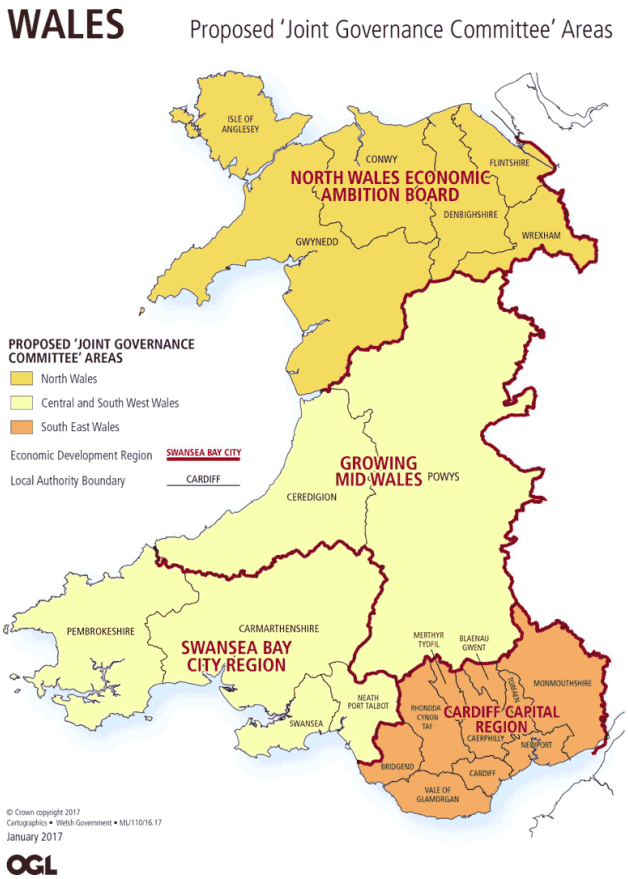
One Planet Developments can only be permitted without subsidy. In 2009-10 the average subsidy for sheep farms on the hills was £53,000, while the average net farm income was £33,000[xi], suggesting that the contribution the average farmer makes to subsidising his income by keeping sheep was £20,000. Unsustainable farming practices are heavily supported by subsidy in Less Favoured Areas (80% of the agricultural land area of Wales). The UK National Ecosystem Assessment (NEA)'s chapter on Wales[xii] documents that about 37.4% of Wales is Enclosed Farmland, consisting of 34% Improved Grassland and just 3.4% Arable and Horticultural land, a balance which OPD demonstrates can be shifted. ***Each OPD conversion of a sheep farm could therefore save an average of £53,000 of taxpayer's money, as well as making the land more productive, improving biodiversity, and reducing carbon emissions from livestock.***

4.1 Account for the negative value of conventional agriculture

The value of Low Impact Developments (LIDs) (an older term for one planet developments) is undisputed. "There is little evidence either that residents of LID are an economic burden on society."[xiii] Enclosed Farmland may have certain value for provisioning and cultural services in Wales, which needs to be recognised, but it also imposes significant disbenefits: greenhouse gas emissions, diffuse water pollution and losses to biodiversity.

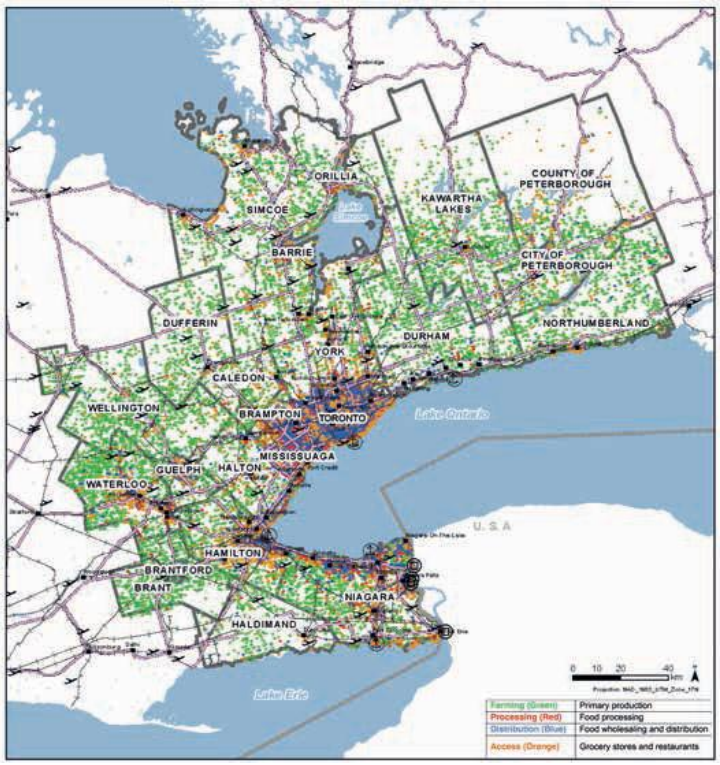
5. Local food and the importance of hinterlands

The National Development Framework for Wales, currently being developed, envisages four regions, which are known as Joint Governance Committees[xiv]. These regions could be managed as hinterlands to provide food and natural resource services for urban areas.

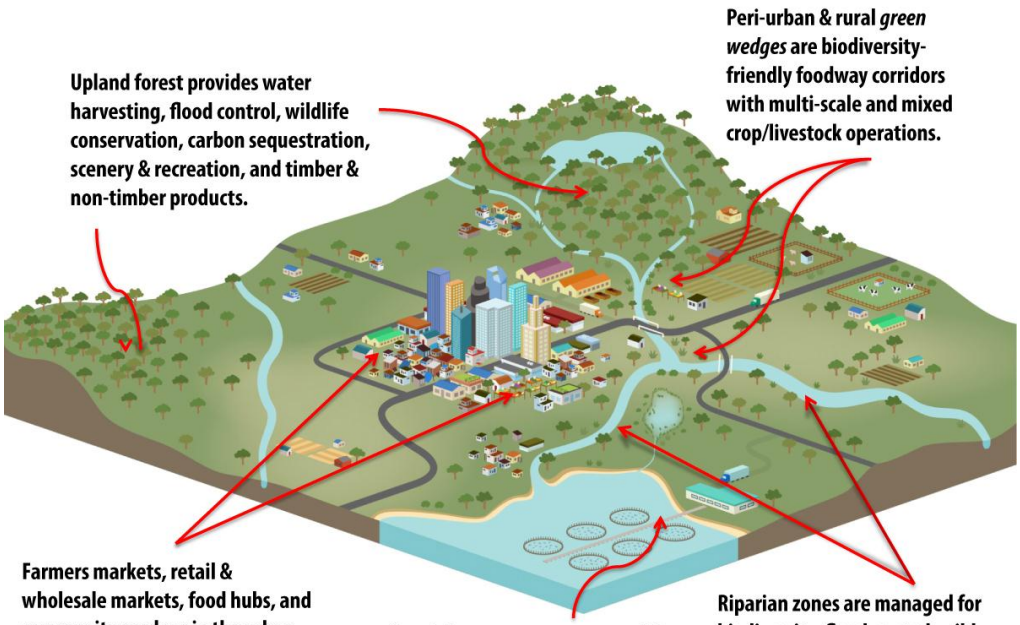


5.1 Toronto's example

A recent report[xv] contains insights into how cities can design and maintain highly-developed, integrated food-related policies. A pertinent example for Wales is the Toronto Food Strategy[xvi], which uses the hinterland model. The Golden Horseshoe region runs around the Greater Toronto area and neighbouring communities. The hinterland is shown in the map below.



In 2011/12 these municipalities adopted a ten-year plan to help the food and farming sector remain viable, link food, farming and health through consumer education, enhance competitiveness and sustainability and cultivate new approaches. Its broad aims and membership have achieved much but also seen conflict arise between advocates of small-scale, ecological agriculture and so-called "big agriculture". Face-to-face meetings are sorting out differences. In Wales, a similar approach is possible. The purpose of Joint Governance Committees is to support partnerships between local authorities upon issues which transcend their borders, so that their development plans do not run in conflict. Land management, food provision and one planet development can be tackled together better at this scale. A hinterland approach can give rise to a model as illustrated in the following picture:



Landscapes for People, Food and Nature
An International Initiative for Dialogue, Learning and Action

Adapted from: Victoria (Australia) provincial government framework "Building healthy and resilient ecosystems across the landscape", Chapter 6: 72-73.

5.2 Recolonising the countryside

Having more people living and working in the countryside is difficult within current planning culture, which is why the Joint Governance Committees should be tasked with changing this and making it easier to obtain planning permission for accommodation in rural areas providing that land-based occupation is prioritised. This is why the OPD policy was designed: to address this failure and regenerate the countryside. Many remote areas would benefit from higher levels of population density, provided it was introduced in a sensitive and sustainable manner. The lamb and mutton currently produced on 3.6 million hectares of rough pasture - approximately 15 per cent of the land area of UK - represent just 1.5 per cent of our national diet[xvii]. It can be better used. Furthermore, tens of thousand of sheepskin fleeces are burnt every year because there is not a sufficient market demand (although with targeted support this could be created, e.g. for insulation, instead of using polystyrene EPS/XPS).

Appendix I: One Planet Development

Through **Technical Advice Note 6 and Planning Policy Wales (PPW)** the Welsh Government sets out land use planning policies to support sustainable rural communities. Section 4 of TAN 6 defines One Planet Developments as applying Low Impact Development (LID) principles in the Welsh context and being exemplars of sustainable development. Criteria include:

1. An initial ecological footprint of 2.4 global hectares per person or less and clear potential to move towards 1.88 global hectare;
2. Buildings being zero carbon in construction and use;
3. If located in the open countryside over a reasonable length of time (no more than 5 years), to provide for the minimum needs (65%) of the inhabitants in terms of income, food, energy and waste assimilation. (No criteria of this nature have yet been determined for urban or peri-urban one planet developments but something comparable is anticipated at a collective community level);
4. Carbon analysis;
5. Biodiversity and landscape assessment;
6. Community impact assessment;
7. Transport assessment and travel plan.

The **Well-Being Of Future Generations Act** requires Welsh Ministers to promote sustainable development and publish national indicators to measure progress towards the achievement of the well-being goals, and take account of United Nations Sustainable Development Goals, the UK's assessment of the risks of the current and predicted impact of climate change and report their progress every year. Ecological footprinting is one of the indicators.

Planning Policy Wales (2016) states:

> 4.5.11 "Closely aligned to the commitments to tackling climate change is the Welsh Government's approach to reducing the ecological footprint of Wales. Our Sustainable Development Scheme sets out an ambition for Wales to use its fair share of the Earth's resources, where, within a generation, our ecological footprint is reduced to the global average availability of resources – 1.88 global hectares per person. The current footprint shows that, if everyone on the Earth lived as we do, we would use 2.7 planets worth of resources. Reducing Wales' ecological footprint will require a large reduction in the total resources used to sustain our lifestyles. The policy and guidance set out here in PPW will make an important contribution to reducing our footprint, whilst delivering sustainable development and tackling climate change."

The last, 2015, **update on Wales' ecological footprint**[xviii] says:

> "The people of Wales currently represent approximately 0.04% of the world population (assuming Welsh and World populations of 3 million and 7 billion respectively). Therefore, Wales should aim to live off 0.04% of the resources that the world can sustainably provide; currently it consumes around 0.14%. In 2050, the global population is forecast to grow to 9 billion, an increase of close to 30%, whereas Wales' will remain relatively stable. Therefore, in 2050, to achieve One Planet Living, Wales will need to live off a correspondingly smaller share of the world's resources."

It adds:

> "Most of the greenhouse gas emissions associated with Wales' carbon footprint occurs from purchases of domestic goods and services. Therefore the priority should be to improve both the efficiency of production and size and type of consumption within Wales."

Appendix II: Soil care

In 2015 the UN issued a major report on the world's soils[xix]. Fertility is being depleted and carbon is being lost. To protect food supplies for the future, nutrients need to be resupplied back to the soil using organic matter in an appropriate form (e.g. composted, not slurry, which causes nitrate pollution). Atmospheric carbon can be sequestered in soils too, which improves fertility and fights climate change.

The 4p1000 initiative[xx] argues that increasing the amount of carbon in the soil by 4 parts per thousand each year would counteract all human GHG emissions, = 16bn tonnes/yr. One farm which exceeds this modest challenge is La Vialla farm in Italy[xxi]. It sequesters 7 parts per year – the link is to a peer-reviewed research report validating and explaining this.

Richard Young is a strong advocate of **grassland use and ruminants**. He believes that grassland sequesters carbon for 50-100 years while cropland loses it for the same period. "It is a myth that ruminants' emissions are a really big problem if they are on grassland in the UK. They are only a problem in indoor intensive farming and in pasture created by deforestation." The latter, he said. is responsible for 15% of global GHGE[xxii].

As this crucial paper[xxiii] shows, a range of management practices reduce carbon losses and increase carbon sequestration in grassland soil:

1. avoiding soil tillage and the conversion of grasslands to arable use;
2. moderately intensifying nutrient-poor permanent grasslands;
3. using light grazing instead of heavy grazing;
4. increasing the duration of grass leys;
5. converting grass leys to grass-legume mixtures or to permanent grasslands.

We therefore support grassland grazing where the land cannot be used for other purposes and as part of a mixed farming approach, and we believe there should be no support for indoor, intensive rearing of animals.

Appendix III: Biodiversity and agroecology

The conversion of sheep-grazed land to organic horticulture or agroecology sees the arrival of many new species previously absent. This is supported by research and a necessary planning condition for OPD. Results published in the journal 'Ecology Letters'[xxiv] of research by teams from the Universities of Leeds and York show that, compared to paired conventional farms, the organic farms studied had:

- an overall 12% increase in biodiversity,
- more plant diversity,
- greater floral diversity,
- more earthworms,
- more insects,
- more butterflies,
- increased numbers of some types of birds.

Also the biodiversity benefits in areas with a high proportion of organic farming were higher than in those with a low proportion.

More recent and more important research was published in 2015 by the Land Use Policy Group[xxv] (LUPG), which advises the government and environmental agencies. This defines 'sustainable intensification' as a form of land use which involves the practice of agroecology. The paper says:

> *'There is a growing consensus that sustainable intensification should not only avoid further environmental damage, but actively encourage environmental benefits. This includes addressing issues of consumption (including diets), waste, biodiversity conservation and resource use, while ensuring sufficient overall levels of production to meet human needs.'*

This seminal document describes in detail how agroecology achieves this and how it benefits the environment, soil management and productivity. It concludes that:

> *'There is a clear case that agroecological approaches can make a substantial contribution to sustainable intensification, but this needs to be supported by an improved knowledge system (including training, education, advice and research with active farmer engagement), as well as by policy drivers'.*

NOTES

[i] http://www.eatforum.org/person/dr-gunhild-anker-stordalen/
[ii] At the Harmony in Food and Farming Conference, Llandovery College, June 2017
[iii] http://blaencamelbox.com/
[iv] The Black Mountain Food Hub: http://agroecology.co.uk/black-mountain-food-hub/
[v] http://sustainablefoodtrust.org/team/richard-young/
[vi] *Dan Theophilus, Galltyrerw, Rhandir-mwyn interviewed by John Williams Davies of the Welsh Folk Museum, St Fagans, on 22 & 25 July 1975. Transcribed & translated by Handel Jones, February 2013. © National Museum Wales Tape No. 4663*
[vii] *Double Yield: Jobs and Sustainable Food Production*, Vicki Hird, SAFE Alliance, 1997
[viii] Jones, P. & Crane, R. (2009) *England and Wales under Organic Agriculture; How much Food could be Produced?* Centre for Agricultural Strategy, Reading.
[ix] In conversation, September 2013
[x] A Matter Of Scale: A study of the productivity, financial viability and multifunctional benefits of small farms (20 ha and less), Landworkers' Alliance and Centre for Agroecology, Coventry University, 2017
[xi] The Institute of Biological, Environmental and Rural Sciences (IBERS), Aberystwyth University, Farm Business Income statistics for 2009-10: TABLE B3 Hill sheep farms
http://www.aber.ac.uk/en/media/departmental/ibers/pdf/farmbusinesssurvey/statisticalresults/outputsinputsincomes/0910/0910Iy_11d.pdf Retrieved August 2013
[xii] UNEP-WCMC, Cambridge, 2011, *op. cit.*
[xiii] *Low Impact Development – Planning Policy and Practice*, Final Report, University of the West of England, Land Use Consultants, Countryside Council for Wales, December 2002
[xiv] See White Paper – Reforming Local Government: Resilient and Renewed Consultation - Summary of Response, July 2017, Welsh Government
[xv] IPES-Food. 2017. What makes urban food policy happen? Insights from five case studies. International Panel of Experts on Sustainable Food Systems. http://www.ipes-food.org/images/Reports/Cities_full.pdf
[xvi] See http://bit.ly/2wAUgWm
[xvii] *Rewilding and Food Security, The Land* magazine, issue 14, Summer 2013
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[xviii] conducted by the Stockholm Environment Institute, available at:
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[xix] Status of the World's Soil Resources (SWSR) – Main Report. Food and Agriculture Organization of the United Nations and Intergovernmental Technical Panel on Soils, Rome, FAO and ITPS. 2015
[xx] http://4p1000.org/understand
[xxi] http://www.lavialla.it/uk/images/co2/co2-uk-2015.pdf
[xxii] At the Harmony in Food and Farming Conference, Llandovery College, June 2017
[xxiii] Mitigating the greenhouse gas balance of ruminant production systems through carbon sequestration in grasslands, J. F. Soussana, T. Tallec, V. Blanfort, Animal, Volume 4, Issue 3, March 2010 , pp. 334-350
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[xxiv] Gabriel et al (2010) More information at http://bit.ly/2nM2TEM
[xxv] 'The Role of Agroecology in Sustainable Intensification' by Lampkin, N.H. et al. http://bit.ly/2nM2TEM