FROM FARM TO FORK TO FARMER

The official blog of Regenerative Farming Ireland

"LAND IS A CRITICAL RESOURCE"

by

Stuart M. Meikle

"Land is a critical resource" is the headline from the press release accompanying the latest report emanating from the Intergovernmental Panel on Climate Change (IPCC). A perusal of some of its contents [chapter 6 on food security is 300 pages!] suggests that a deeper realization is happening, that 'soil is the critical resource'.

The IPCC very kindly provides a press release and then 'headline statements'. The report itself, Climate change and land then, conveniently begins with a 43-page 'summary for policy makers'. They are clearly wanting people to understand the highly complex issues. And they are complex.

Despite these efforts some have decided to simplify the complex. A case in point was with the statement by Debra Roberts, Co-Chair of IPCC Working Group II, "Balanced diets featuring plant-based foods, such as coarse grains, legumes, fruits and vegetables, and animal-sourced food produced sustainably in low greenhouse gas emission systems, present major opportunities for adaptation to and limiting climate change". It was nearly verbatim from section 6.2., "Balanced diets, featuring plant-based foods, such as those based on coarse grains, legumes, fruits and vegetables, nuts and seeds, and animal-sourced food produced in resilient, sustainable and low-GHG emission systems, present major opportunities for adaptation and mitigation while generating significant co-benefits in terms of human health (high confidence)".

Why in the Irish Times did this statement become, "The consumption of healthy and sustainable diets, such as those based on coarse grains, pulses and vegetables, and nuts and seeds… presents major opportunities for reducing greenhouse gas emissions,"? Were those three dots necessary to justify the subheading "Report proposes a major shift towards vegetarian and vegan diets"?

From a soils-first, ***regenerative*** food-production perspective the exclusion of "and animal-sourced food produced in resilient, sustainable and low-GHG emission systems" is a dangerous omission. It is also counter-productive to combating climate change. Likewise, restoring the health to our soils. And the two go hand-in-hand, they must, they are indivisible.

Soil restoration and the regeneration of its natural fertility is vital to our future. To attempt either without the fertility derived from [mainly] grazed animals is nigh on impossible, not least when the use of artificial fertilizers is seen as polluting in both their manufacture and their application. It is probable that they also pollute the soil biome and inhibit the function of the very soil food web that should be feeding our crop plants.

The above said, it is feasible to have a completely plant-only, organic diet but it is likely to be exclusive to a few. Providing for a sustainable plant-heavy diet for the many will be a challenge but it will have to be met. Nutrient cycling will be a difficult [and encompass recycling nutrients emanating from both humans and their pets]. Composting will be to the fore. It is also important to understand the role of carbon as a nutrient. It is not just about non-renewable N. P and K fertilizers. Soil degradation [a core part of the IPCC report] has resulted from excessive soil carbon consumption, and it will continue to happen so long as we consume plant-based foods, be they as a breakfast cereal or hidden in the substrate production for a highly processed non-meat burger.

To produce food in a truly generative fashion means replacing the nutrients currently consumed away from the soil that produces them. It is a fact of life in an urbanized world. Over the last century this has been done by the manufacture of artificial fertilizers and mining of others. Neither practice is sustainable. The extensive externalized costs of using artificial fertilizers now must be addressed. The realistic solution is not a plant-only diet, it is to revert to mixed farming systems. And central to that is the production of "animal-sourced food produced in resilient, sustainable and low-GHG emission systems". It is about 'eat less meat but better', but we must know what 'better' means.

Land degradation, or more correctly, soil degradation is a massive issue for climate change and food security. The loss of soil carbon/organic matter is, however, too rarely mentioned, but it is critical to the future of the human race. Less well understood is that it, along with the associated breakdown in soil food web functionality, it is the root cause of biodiversity loss. It is a fact that it is relatively easy to understand closer to home, but our wider demands for access to more soil carbon are the reason for global deforestation. We are unsustainably mining soil carbon and nobody realizes.

On a broader 'sustainable' note, food production produces significant externalities, only one of which are greenhouse gases. Others are nitrate and ammonia pollution, antibiotic resistance and farmland biodiversity loss. These must all be addressed. As per the detail of the IPCC report, feeding the seven, growing to nine billion, is complex. We must not be tempted to reduce it to headlines and sound bites, to do so will only lead to erroneous policy and unforeseen consequences.

Ireland is a less industrialized nation where agriculture accounts for a higher proportion of its GHG emissions. It is geographically adjacent to a highly industrialized nation where agriculture accounts for a much lower proportion of GHG's. Ireland supplies food to that nation but Ireland, as the producer, is penalized. As with its failing to include sequestered carbon, such an accounting methodology can and does lead to erroneous conclusions and weak policy choices. Common sense will most likely win out and Irish agriculture will eventually be judged fairly in the context of its productions systems and ability to supply adjacent markets with nutrient-dense foods from resilient, regenerative farming systems. Such is, however, not a 'get-out-of-jail-free' card.

To date, the importance of the carbon cycle is being discounted, not least because the accounting methodology is struggling to quantify carbon sequestration. There must also be a much clearer understanding of the differences between biological and fossil-fuel methane. Farming ***must*** reduce its reliance on fossil-fuels per se and especially the use of resources that consume fossil fuels in their manufacture and/or mining, emit GHG when utilized, and release other pollutants into the atmosphere / environment. A priority must be to change production practices to significantly reduce the use of artificial nitrogen. To do so will mean a see-change for Irish farming, but it has to happen.

This will mean changing how we keep livestock and possibly reducing the size of the national herd, but it is not about a wholesale exit from livestock farming. There should be a far greater focus upon producing coarse grains, legumes, fruits and vegetables for the domestic market and even adjacent markets. There are quality Irish soils that should be producing these and not milk for milk powder for export to some faraway destination. That

Ireland wastes its best soils thus has been both a marketing and policy failure. Both have to be addressed if the country is to holistically embrace a low-carbon way forward. Ideally, the production of such should be integrated with high-quality milk, meat and fibre products and, critically, farmers must be adequately rewarded for doing so.

A soil carbon regenerating focus can contribute to mitigating climate-change. A climate-change focus may not regenerate our soils, not least if appropriately pastured ruminant livestock are removed from the equation in the misguided belief that culling ruminants will solve climate change. It is a little more nuanced than that. Carbon sequestration is part and parcel of soil regeneration and properly pasture-grazed livestock are a key tool for carbon sequestration, soil regeneration and, hence, food security. A plant-only dietary focus without soil regeneration will deliver little beyond staving off the inevitable as it does not get to the core of the problem of soil carbon consumption.

Further, albeit their GHG emissions will be accounted for elsewhere, Ireland must reduce its reliance on imported feeds that can be attributed to soil degradation, biodiversity loss and adverse land use change. In particular the focus should be on soya imports from South America where soya has driven land use change. It is responsible for the ploughing out of the ancient grasslands of the Pampas and the Cerado savannah [long-term carbon sinks] and putting major land-use pressure onto the Amazon. It is these land-use changes that go under the radar in the days of sound bites.

The IPCC report is about the proportion of the Planet's land that feeds us. It is about understanding how food choices impact upon soils, wherever that food is sourced. But it is about the whole supply-chain. Farming systems such as exist across much of Ireland are reliant on imported feedstuffs and imported fertilizers. The origin of those is questionable. Their impact increasingly so. At present too many people are trying to defend a minimal-change, get-a-little-more-'efficient' scenario for Irish agriculture but that is not an option. Significant change is required, and Ireland can lead the way on adapting food systems to meet the many crisis facing our future food security. If it embraces change.

Few farmers anywhere in the World, will escape the need to change. Ireland can lead by showing that it is not entrenched in the use of farming ways that are passing/are past their use-by date. There are strong arguments for Ireland to maintain its livestock farming systems to provide high-quality, nutritious food but these will fall on deaf ears if those systems do not swiftly change to ones built upon the evolving principles of regenerative agriculture. There is really no alternative.

About the author

Stuart Meikle is a farm business economist, a writer and a farming/food advisor. He was brought up with agriculture and studied at the then World-renown Wye College, University of London. Upon graduating with First Class Honours he joined the faculty at Wye and taught agricultural and horticultural business management. His last 30 years have seen him advising and working for governments, the World Bank and the IFC, NGOs, universities and private businesses in places as far afield as South East and Central Asia, the Caucuses, the Levant, Central Europe and the United Kingdom and now Ireland. In recent years he has been working on rural regeneration in agriculture-reliant, often remote-to-the-market, regions that are also environmentally important and where the future is about linking farming to high-value food products to enhance farming and rural incomes and to sustain and preserve the biodiversity-rich, farming-created landscapes. Apart from being an advisor, there has been times within his career when Stuart Meikle has been directly involved in farm and agribusiness management. Most recently, he established a water buffalo milk production and processing business located within Transylvania's stunning natural beauty, where he was also the British Honorary Consul. Nowadays he and his family reside in County Wexford.

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