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**Agriculture at a crossroads:
Perceptions of Irish Agricultural
Sustainability**

by

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Abstract

Ireland's current agricultural development paradigm is increasingly leaning towards high-input, intensive farming particularly incentivising the beef and dairy sectors while simultaneously laying claim to the sector's sustainability. In response to pressing issues such as climate change and food security, 'sustainable intensification' has become an accepted way forward within the dominant agricultural narrative. Alternative models question the long-term impacts of agricultural intensification on sustainability while conventional, input-intensive farming appears to accept the narrative to scale up and intensify.

This research paper proposes to explore how farmers and experts from various agricultural models perceive the current status quo in Irish agriculture. Alternative approaches such as: agroecology, permaculture as well as organic farming question the issues around sustainable farming in Ireland and provide possible ways forward. In giving voice to different opinions and various interpretations of sustainability this paper examines the debates in Irish agriculture through a different lens and offers an alternative perspective on how Irish agriculture could become truly sustainable.

Key Words: sustainability, intensive farming, sustainable agriculture

Abbreviations

CGIAR	Consultative Group on International Agricultural Research
CSA	Community Supported Agriculture
CIDSE	Coopération Internationale pour le Développement et la Solidarité (Cooperation for Development and Solidarity)
DAFM	Department for Agriculture, Food and the Marine
EPA	Environment Protection Agency
FAO	Food and Agriculture Organization of the United Nations
GHG	Greenhouse gas
IAASTD	International Assessment of Agricultural Knowledge, Science and Technology for Development
IUCN	International Union for the Conservation of Natural Resources
IIEA	Institute of International and European Affairs
SDG	Sustainable Development Goal
UN	United Nations
UNCED	United Nations Conference on Environment and Development
UNCSD	United Nations Conference on Sustainable Development
UNEP	United Nations Environmental Programme
WCED	World Commission on Environment and Development
WWF	World Wildlife Fund

1 Introduction

We abuse land because we see it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.

Aldo Leopold, (1949: viii) *A Sand County Almanac and Sketches Here and There*

Ireland currently finds itself at an agricultural juncture. As the Irish beef and dairy industries are steadily increasing their export output under government incentivisation and the push towards market expansion this research looks at how stakeholders view the environmental impact that such an increase in agricultural exports implies. This paper explores the perceptions of what agricultural sustainability means for these stakeholders. Against this backdrop is the fact that agriculture is Ireland's single largest contributor to Greenhouse Gas (GHG) emissions at 33.1% in 2015 (DAFM, 2015) with projected GHG emissions at 47% of total GHG emissions by 2020 (EPA, 2016) and so the case clearly needs to be made to specifically address the environmental sustainability of the sector. Irish agriculture is supported through the European subsidy system essentially assisting in the creation of environmental externalities such as GHG emissions which are not being accounted for in the current definition and understanding of Irish agricultural development. The implications of espousing continued growth in the sector are considerable, as one agricultural expert interviewed during this research points out, "*we have responsibilities and as long as we keep playing the national interest card exclusively then we are not standing up to those responsibilities*". Furthermore, our model of agricultural development may not be exemplary as stated by one contributor, "*if China and India become meat eaters on the Irish scale then the globe is probably in big trouble in the years ahead.*"

In exploring how farmers and farming experts view the environmental externalities being created in the drive to reach overseas markets and the incentivisation to scale up production and acquire land the question of whether Ireland is at the crossroads of industrial farming becomes significant. This paper positions itself from an environmental perspective arguing that sustainability concerns should be removed from a purely anthropocentric standpoint. The notion that Irish agriculture can reach sustainable development necessitates an analysis of what sustainable agricultural development might mean for different actors within Irish agriculture; where questions arise regarding agricultural sustainability in relation to ecological sustainability in Ireland. Such an analysis should address the impact of GHG emissions and the long-term view of intergenerational sustainability.

2. Key Concepts and Debates

This section discusses key concepts and debates relevant to the research topic, clarifies key terminology and addresses the major debates arising in Irish agricultural sustainability.

2.1 Influencing Factors

Since conducting my primary research in the summer of 2015, which explored perceptions of sustainability in dominant agricultural development models and alternative agricultural practices in

Ireland, several factors have emerged to influence the path of agricultural sustainability in Ireland. The Irish government successfully re-negotiated its emissions targets in 2016 with Brussels giving carte blanche to the unchecked expansion of Irish agriculture (Woodworth, 2016). The Department of Food, Agriculture and Marine (DAFM) published its next ten-year plan in 2015, *Food Wise 2025*, with the aim of “Increasing the value of agri-food exports by 85% to €19 billion” (2015: 10). Most worrying for Irish farmers and foremost in the news in 2016 was the potential effects of a hard Brexit, which could spell economic woes for Irish agriculture and consequently impact how much priority is given to environmental sustainability. With total agricultural exports from Ireland worth 11.1 billion euro and over 37% of agri-food exports going to the UK (Bord Bia, 2017) Brexit looms large on the horizon. *Food Wise 2025* published by the DAFM makes gestures towards environmental sustainability which appear at best aspirational as pointed out by NGO bodies such as Stop Climate Chaos (2016) citing the prioritisation of its target-driven growth. As stated, questions remain regarding the sincerity to reach agricultural sustainability when economic sustainability is at stake. The anticipated increase in exports within the beef and dairy sectors as set out in *Food Wise 2025* indicates an impossible circle that needs to be squared while addressing an industry that continues with strong indications of continued GHG emissions tempered by claims to greater efficiency (Matthews, 2015; Arnold, 2016), begging the question of how environmental sustainability can be addressed with such expansionist ambitions?

The accepted representation of sustainability draws attention to the three pillars paradigm as set out by the UN; “We reaffirm that development is a central goal in itself and that sustainable development in its economic, social and environmental aspects constitutes a key element of the overarching framework of United Nations activities” (UN Outcome Document World Summit, 2005: 2). This paper, however, argues that the anthropocentric focus, evident in the Brundtland definition,¹ forgoes the underlying importance of environmental well-being which is what ensures social and economic sustainability.

2.2. Agriculture’s Footprint

The recognition globally that agriculture needs to respond to its impact on climate change and biodiversity loss has led to its inclusion in the Sustainable Development Goals (SDGs). Most notably, SDG 2 sets out to ensure sustainable agricultural development by 2030 by promoting the concept of ‘sustainable intensification’ in response to the increased production envisaged to meet worldwide demand for food (UN, 2015; FAO 2009). Meanwhile the convergence of issues facing governments referred to as the “nexus of concerns” by Godfray and Garnett (2014) posits the issues of sustainable agricultural development among other issues such as “price volatility, hunger in all its forms, environmental damage and population and consumption growth” (2014: no pagination). Ireland’s agricultural industry also needs to meet international obligations on GHG emissions as determined at the Paris Global Summit on

¹ The Brundtland Commission Report, *Our Common Future*, stated “humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p.8).

Climate Change 2015 (Matthews, 2015) albeit these obligations have been successfully renegotiated with concessions to previously binding emissions targets (Lynch 2016).

While the DAFM states that the agriculture sector “accounted for 32.6% of Ireland's total national emissions in 2013 and this is amongst the highest of any country in the developed world” (2016: no pagination) can Ireland justify its GHG emissions from this sector with its claim to increased efficiency? The drive to export-driven growth in the Irish beef and dairy sector responds in kind to growing demand from external markets as westernised diets become a new norm for burgeoning middle classes in countries such as China. Matthews (2015) refers to “changes in the economic environment for the agri-food sector” including the removal of milk quotas and “strong demand for protein (livestock products and seafood) arising from growing economic prosperity in emerging markets and Africa, and more differentiated consumer demand opening up high value-added opportunities in consumer markets” (2015: no pagination). Ireland’s agricultural expansion can be said to be strongly driven by economic concerns and pursuing its perceived competitive advantage. The coalition of Irish-based NGOs, Stop Climate Chaos (2016) counter this assertion outlining how Ireland cannot lay claim to addressing food insecurity through agricultural intensification and high input farming with our exports primarily destined for middle income countries and considering the higher-end products that are being exported.

2.3 Sustainable Development and Agriculture

The definition of sustainable development put forward by the World Conservation Strategy stated that:

For development to be sustainable, it must take account of social and ecological factors, as well as economic ones; of the living and non-living resource base; and of the long-term as well as the short-term advantages and disadvantages of alternative action (1980, IUCN/WWF/UNEP).

There are contradictions implied within the term ‘sustainable development’, Sachs is critical of the irreconcilable nature of sustainable development referring to its lack of recognition for the importance of “supporting the flourishing and enduring of an infinitely diverse natural and social life” (2007: 13).

Commentators from agro-ecological² practices point to the destruction of our natural resource base; Gliessman paints a clear picture of the destructiveness of non-regenerative agricultural systems.

We face a problem that in the long-term will be even more challenging to the global food system: the techniques, innovations, practices, and policies that have allowed increases in productivity have also undermined the basis for that productivity. They have overdrawn and degraded the natural resources upon which agriculture depends—soil, water resources, and natural genetic diversity. They have also created a dependence on non-renewable fossil fuels and helped to forge a system that increasingly takes the responsibility for growing food out of the hands of farmers and farmworkers, who are in the best position to be stewards of agricultural land. In short, our system of agricultural production is unsustainable—it cannot continue to produce enough food for the growing global population over the long-term because it deteriorates the conditions that make agriculture possible (Gliessman, 2010: 4).

² The FAO *Climate-Smart Sourcebook* defines agroecology as “an ecological approach to agriculture that views agricultural areas as ecosystems and is concerned with the ecological impact of agricultural practices” (2013, p.547). Altieri (2012) outlines how agroecology is an ecologically regenerative agriculture that also critically addresses the social and political elements within the current food system.

The economic valuing of nature through its ecosystem services is in conflict with the ‘Land Ethic’ espoused by Leopold who points out how “we abuse land because we regard it as a commodity belonging to us” (1949: viii). This demands a reappraisal of the value of biotic community where farming is aligned with stewardship. The concept of sustainable intensification of agriculture according to Godfray and Garnett (2014) can be problematic as it leads to assumptions and “sustainable intensification, if it is to be a meaningful aspiration, needs to be mindful of the social, economic and ethical context within which food production activities take place” (2014: 43).

2.4 Climate Smart Agriculture

The generally accepted dictum that agriculture must increase yield by 70% to meet global demand by 2050 (FAO, 2009) and the recognition that environmental concerns must be addressed has led to the espousal of ‘climate smart agriculture’³ (UN, 2010). Viewed by certain NGOs and academic commentators as greenwashing the Global Alliance for Climate Smart Agriculture has been referred to as a lobby group where vested interests such as fertiliser companies have disproportionate influence on the agenda (CIDSE, 2015; GRAIN, 2015; Concerned Scientists for Agroecology, 2015). Anderson (2014) points to how climate smart agriculture encompasses practices that may well have led to the current predicament also citing how fertiliser companies have a large stake in proceedings perpetuating a business-as-usual model rather than considering alternative models. There are fears that climate smart agriculture is just green-washing as CIDSE point to how “the concept of climate-smart agriculture varies according to the people defending it: for some it means business as usual with a nice touch of green” (2015, p6).

Arnold (2016), however, explains how climate smart agriculture can address Irish GHG emissions while creating greater business opportunities for farmers who are willing to expand and respond to the market. Stop Climate Chaos and the Environmental Pillar (2016) point to how Ireland’s agricultural intensification is not based on a proper assessment of all the environmental externalities produced. International opposition to climate smart agriculture cite the destructive agricultural practices included under the climate-smart banner:

Instead of creating one more body for business-as-usual, governments, funding agencies, and international organizations should be taking bold action: committing to shift resources away from climate-damaging practices of chemical-intensive industrial agriculture and meat production and towards investment in and commitment to agroecology, food sovereignty, and support to small-scale food producers (Climate Smart Concerns, 2014: no pagination).

Stabinsky points to the responsibility of “high-consumption societies and high emissions agriculture” (2014: no pagination) in addressing the significant externalities of export economies such as Ireland’s.

³ The Food and Agriculture Organization of the United Nations define Climate-smart agriculture as “an approach that helps to guide actions needed to transform and reorient agricultural systems to effectively support development and ensure food security in a changing climate. Climate-smart agriculture aims to tackle three main objectives: sustainably increasing agricultural productivity and incomes; adapting and building resilience to climate change; and reducing and/or removing greenhouse gas emissions, where possible” (FAO, 2016: no pagination).

Carolan (2006) points out how “this process of externalization makes seeing the costs of conventional agriculture difficult at the level of the farm, regardless if such costs involve damage to wildlife and ecosystem diversity, reduction in water and air reserves, or harm to human health” (2006: 233). Climate-smart agriculture feeds into notions of Ireland’s comparative advantage in pursuing its increase in production and prioritizing yield as seen in departmental publications (DAFM, 2015) and in other publications (IIEA, 2016). Ireland’s competitive advantage in this regard is seen as its climatic conditions leading to determine an approach to agricultural sustainability that proffers the argument of efficiency. In the global context, the IAASTD (2009), *Agriculture at a Crossroads Global Report*, warns how agricultural specialization can lead to increased vulnerability: “Increased specialization at the field, farm, and landscape levels produces monocultures that potentially increase environmental risks because they reduce biodiversity, ecosystem functions and ecological resilience, and they may be highly vulnerable to climate change” (IAASTD, 2009: 10).

Carolan however points out how “today comparative advantage can be produced by using such things as direct payments, export subsidies and tariffs” (2012: 16). However, in the face of the value of Irish agricultural exports to GDP the economic growth model is proving a strong argument to counter environmental concerns where in 2015 “the value of exports to Asia jumped 45 per cent to reach €850 million. There were also increases in exports to North America (€740 million, +18 per cent), the Middle East (€330 million, +11 per cent) and Africa (€610 million, +9 per cent)” (Burke-Kennedy, 2015: no pagination). Although the economic benefits of increased agricultural production in the Irish context are noteworthy Sweeney in describing the impact of agriculture on global climate change points to the implications of Irish agricultural expansion describing how “in areas such as Ireland significant changes in climate will be observed” (2008: 4).

2.4 Reaching Environmentally Sustainable Agriculture

The issues facing Irish agriculture at this juncture are critical and feed into a global system where sustainability can no longer be argued from a purely economic standpoint. In contrast to the economic argument, commentators such as Rockström et al. remark how “sustainability is not a relative concept or an act of balancing competing claims; it sets absolute biophysical limits” (2016: no pagination) pointing to how ideological stances are no longer possible within the parameters of science. Rockström et al. (2009) also previously referred to the transgressed planetary boundaries outlining just how much of an impact land-system change and the land degradation of input-intensive agriculture has had on GHG levels and global nitrogen levels. In recognition of the anthropocentric focus Tickell states “Agriculture could be more local, various and specialized” (2011: no pagination). Gleissman outlines how a sustainable food system can be reached:

Diets must change to reduce demand for meat, other animal products, and all food products that require excessive transport, processing, and packaging... More land must be cultivated under a stewardship ethic, by independent, relatively small-scale farmers with a stake in their communities, able to make a decent living, unconstrained by the demands of the agribusiness oligopoly (2007: 332).

Concerns around the yield differential between conventional and agroecological practices, where farming is diversified and organic, are addressed by Holt-Giménez et al. (2012) and De Schutter (2014) as they make the point that agro-ecological models are more effective in addressing the underlying issues that cause food insecurity:

The deeper debate concerns not whether productivity should be raised, but how to achieve this. Increasing yields alone will not do. Any prescription to increase yields that ignores the need to transition to sustainable production and consumption, and to reduce rural poverty, will not only be incomplete; it may also have damaging impacts, worsening the ecological crisis and widening the gap between different categories of food producers (De Schutter, 2014: 8).

3. Research Outline

The primary research gathering stage was conducted during the summer of 2015 in this qualitative study. Thirteen semi-structured interviews were conducted with farmers and farming experts on the topic of agricultural sustainability in different farming practices and around issues pertaining to efficiency, land use, stewardship and other issues related to agricultural sustainability.

As an interpretative, phenomenological study on participants' perceptions of sustainability within the Irish agricultural context, this research was highly subjective. This subjectivity is problematic in generalising from the research, I can only report on what I found with the research participants I spoke to at the specific time I spoke to them. However, one of the strengths of the methodology is that it gave an opportunity for diverse actors to voice their opinions and thoughts on this topic.

Contributors were farmers from both conventional farming practices representative of the Irish beef and dairy industries and farmers from organic farming and Community Supported Agriculture (CSA) schemes as well as experts from academia and government agencies. My sample was not intended to be representative yet I was keen to get a range of opinions and depth on the issues facing farming and so attempted to get contributors from across the spectrum. The semi-structured nature of the interviews meant that contributors could speak at length on topics that most interested them. Depending on their availability contributors were interviewed in person at their place of work or in some cases contacted online. Transcripts of interviews were written up and themes emerged across interviews from which findings were drawn.

4. Summary of Findings and Analysis

I was interested to see whether farming participants would reflect on their farming practices and stances in relation to issues around sustainability. Similarly, I wanted to see how participants involved in other non-conventional forms of agricultural would view their choices to farm as they do and what had led them to take these decisions. It was particularly interesting to me to hear about the perceptions of different agricultural models and how this related to issues around sustainability. I wanted to explore whether interpretations influence practice and how notions regarding environmental stewardship and increased productivity might be held in tension. As stated earlier, it is important to note it has been two years since this research was conducted and that the agricultural landscape has changed in this short time.

4.1 Our Natural Advantage

Participants were asked about Ireland's farming reputation and many pointed to the perception of Ireland as a, "*clean, green country*", as one participant phrased it, invoking the imagery of a bucolic Ireland as seen in government publications such as *Food Harvest 2020* and *Food Wise 2025*. One farming expert referred to the notion of Ireland "*being the clean, green country for production with hormone-free cattle with grass-fed, rain-fed agriculture and with generally a good environmental track record*". However, as this contributor was at pains to point out, although "*our fields are lovely and green*" it simply means "*we have different levels of fertilizer in the fields*".

One beef farmer noted that Ireland's advantage was present in its ability to evolve to market demand, "we're driving ourselves forward and the world is getting richer and richer, the first world anyway". The notion of equity in our agricultural development was addressed by another expert participant who noted that agricultural intensification also carried ethical issues: "our objective at the moment is to sell large quantities of powdered milk to countries like China this is the basis of our current agricultural expansion, if you think about it we're encouraging Chinese mothers to forego breast feeding to go with powdered milk while there's a large campaign here in Ireland for Irish mothers to do the opposite, so there is this dichotomy in what we say and what we do which is at the heart of all climate policy in Ireland and agricultural policy in Ireland". These issues around supplying external markets with our dairy and beef industries is also raised by Stop Climate Chaos (2016) pointing to the myths of Irish agriculture one of which sees it fêted as addressing global food insecurity by increasing output.

4.2 Environmental Farming

As one CSA participant noted in taking a determined stance and choosing to practise a non-conventional agricultural model, "*it's always more difficult to swim against the tide*". For participants from organic and other non-conventional agricultural models the importance of stewardship in protecting the landscape for future generations was part of their understanding of sustainability. One organic dairy farmer noted that "*there's environmental sustainability, and there's community sustainability and then there's economic sustainability, in general not taking any more from the earth that people are using than can be replenished*". One expert took issue with how sustainability was defined in the dominant discourse: "*it usually takes account of economic issues and a*

limited perspective on social and environmental issues. Sustainable farming isn't properly understood. Sustainability has to be about all three things, you can't have one without the others". The same expert was cautious to point to the *"whole spectrum of perspectives"* when it came to defining farmers relationships to the land and the importance of the *"relationships between people and place effectively"* especially as *"that relationship has become a bit imbalanced"*.

In contrast, another expert pointed out that the sustainable label should include all models of farming noting that *"sustainable is an industry that can feed a population first and foremost. There is a lot of contention about whether organics can do that, whether a full conversion to organics. I firmly believe that there's room for both systems, and that both systems in their own way, depending on what way you read sustainable, are sustainable."* This is contrary to what Gliessman (2010) maintains placing organic farming as mid-way towards truly environmental, agro-ecological farming; the above contributor was keen to point to the importance of economic sustainability and so the financial incentive for farmers to expand their businesses. Some participants were concerned with what was seen as the romantic version of environmentalism with one beef farmer clearly outlining how concerns are more pragmatic:

people talk about how attached you are to the land, at the end of the day every farm is a business, you have to evolve... society got an environmental consciousness during the Celtic tiger years when we all had money in our pockets, when you don't have money in our pockets we all return to type. First thing we return to is survival, so I get very nostalgic about the farm when I have money in my pockets when I haven't I get very concerned about how the hell I'm going to make a living this year.

In discussing sustainability one farming expert elucidated further on what farming can encompass, *"for me farming is about a lot more than food production, it's about landscape, it's about biodiversity, it's about water, it's about the ecosystem services delivered from the land if it's properly managed. Our vision and our model is limited in some ways I'd like to see that broaden out."* On the issue of landscape, it was noted by one expert *"we now have an Ireland of two halves an Ireland of the east where intensive agriculture is really taking over, commercial agriculture is the dominant driver of landscape change and a landscape of the west where the landscape is much more small fields and hedges"*.

There was a degree of cognitive dissonance amongst stakeholders in conventional agriculture regarding how actions, such as the use of chemical pest control and synthetic fertilizer, could be rationalised for short term economic gain despite long-term environmental consequences. This compartmentalization was addressed by one participant who despite their own use of chemical inputs admitted *"We are the caretakers, you don't take it with you, you're there to mind it and look after it. And probably not to abuse it, you know, with chemicals and stuff"*. However, one expert pointed to how farmers *"reserve the right to use"* what was referred to as *"plant protection products"* and this was a part of sustainable intensification as farmers had less risk of losing a crop. In contrast, one permaculture farmer pointed to how within organic agriculture simply removing synthetic inputs from agriculture was not enough:

permaculture doesn't use chemicals but it goes that little bit further, my problem with organic you can fly organic mint from Israel, that's not what permaculture is about, it's about local, seasonal, it's much more defined, organic [farming] seems to be portrayed as it's better for you, there's no sprays and that's it.

4.3 Agricultural Intensification

The concept of 'sustainable intensification' was linked strongly to economic concerns by one contributor who focused in on the investment many farmers were making to increase their output: *"you have to get the absolute maximum return for that investment, which means that it does lend itself towards a series where you monocrop"*. The government were recognized by some participants to be the principal drivers of change, one conventional dairy farmer pointed to how *"they want to try and get more people into intensive dairying, just to produce more milk for the export market for the image of Ireland and it's providing jobs so if there's milk, there's more people getting jobs"*. One expert pointed to how intensification was part of addressing agricultural sustainability, phrasing concerns in economic terms how

Living off the depreciation of farm, it's a family farm it's been going for 50 years, but just constantly working down that depreciation, that's not sustainable, and likewise the farm not being sufficient size. You have to reinvest, you have to buy more land, you have to get to a size where the farm itself can become sustainable.

One participant noted that more traditional diverse farming meant greater self-sufficiency: *"it closes a lot of the cycles, produces an awful lot more for itself, to keep itself more operational than modern farms where nearly everything comes from outside to keep the farm operational including capital and inputs"*. Contributors considered the importance of agricultural diversification as one participant noted this allowed natural systems to work together: *"part of our goal is to have a little diverse unit in itself which is why we have a multitude of animals, all these animals are found together in nature, for disease control, they all work in harmony together"*. Another farming participant pointed out how Ireland's celebrated conventional dairy and beef agricultural model of intensive high-input farming was damaging to biodiversity: *"growing grass in a very intensive, very damaging way for biodiversity. That image we promote of a cow in a green field, is actually a kind of green desert... it's a monoculture, there's nothing else in there but rye grass, it's intensive, it's fertilised, it's a dead field"*. Carolan refers to "the epistemic value of the sustainable agriculture" (2006: 232) examining how agricultural externalities are perceived and though not immediately visible at farm level are borne out by society; similarly, participants referred to the responsibility to ensure greater awareness in all communities. One participant from a Community Supported Agriculture (CSA) scheme highlighted the importance of people being involved in their food and becoming members of a community, *"it's very important this kind of thing exists, the suburban mentality is the dominant mentality"*.

Another farming participant mentioned how Ireland's apparent competitive advantage was used to encourage farmers to scale up and take on more debt: *"they want to try and get more people into intensive dairying, just to produce more milk for the export market for the image of Ireland and it's providing jobs so if there's milk there's more people getting jobs"*. This was viewed as a situation where *"the big will get bigger and the small will not exist anymore"*. One conventional dairy farmer mentioned how the intensive agricultural practice incurred too many financial risks and he regretted the financial burden: *"I wouldn't be as intensive, I wouldn't have invested as much money, or borrowed as much money"*.

The importance of being efficient was discussed with participants in relation to the farm system and on a larger scale as part of the drive towards sustainable intensification. As one expert participant noted “*being very efficient can cause a lot of environmental damage*”. Participants from alternative agricultural models commenting on the notion of sustainable intensification mentioned the effects of environmental degradation incurred by intensive farming. One organic dairy farmer noted:

I think intensification automatically means it's not sustainable. There's a point where efficiencies are met and maybe it's not at the scale we're at right now, we have to put in so much time so much labour so that you exhaust the human element of agriculture whereas other people exhaust other things.

The atmosphere does not recognize efficiencies touted by industry stakeholders and publications such as *Food Harvest 2025* as pointed out by one participant “*we talk about carbon dioxide emissions per litre of milk or per kilogramme of beef, which are indices that the atmosphere doesn't really recognise*”.

Referring to the paradigm shift necessitated in dealing with the issues regarding increasing agricultural exports and expressing concerns regarding Ireland's farm lobbies seeking deals at EU level one expert participant noted: “It's an indication of the power of commercial interests and their unwillingness to change their way of working if they are making a profit, and the threat of job losses to convince politicians that votes will be lost as well”. Another farming expert in discussing government farming schemes underlined what was seen as ill-judged efforts to bring about sustainability: “the environment isn't simple, it's very diverse, it's very sophisticated, it's very complex so to start off with the notion of simplifying everything to the point that the impact becomes redundant is crazy”.

5. Conclusion and Recommendations

Ireland, as a small nation, has the potential to show a more sustainable vision of agriculture. Our agricultural systems have not fully reached the intensive levels found in other temperate climates and in this sense, we are at a crossroads in development. This research shows that despite the myriad opinions on what sustainable agricultural development is, farmers are primarily the agents of change and must be central to bringing about sustainability. Government policy at the moment is to pursue an agri-export expansion policy which will serve to undermine social and environmental sustainability for short-term economic gains for agri-business interests while farmers are incentivised to scale up under the banner of ‘sustainable intensification’ or face the prospect of abandoning farming.

This research, in addressing the human relationship to the environment through agriculture, shows how a path towards sustainability means reconsidering our understanding of environmental sustainability in recognition of the deleterious effects human influence has had on the planet. Following a ‘business-as-usual’ model is flawed and there needs to be space for a discussion of what is feasible as an alternative to large-scale, input-intensive, agriculture. The issues around agriculture at this time are complex and all stakeholders demonstrated awareness of such complexities when reflecting on Ireland's current path

towards more intensive agricultural practice. There was awareness amongst participants of the juncture at which farming in Ireland finds itself, as one participant put it “*either the farms are going to get way bigger and more industrialised or we’re going to rethink about how we’re going to do the whole thing, that’s a bit of a crossroads*”. As Irish agriculture faces into a period of economic uncertainty for its export-driven growth model it is my hope that that space to rethink might be possible with all voices present.

The government needs to invest in grant aid to small-scale producers who are working within communities to supply organic locally-sourced food. As one CSA participant clearly set out, “*there’s no support system in place for what we are doing and there is for other, we’re at the absolute periphery of agriculture, we’re at the absolute edge, most of the farms like this are that’s why there’s no funding, no support, we’re not on the agenda*”. The agenda needs to be re-evaluated with greater support offered extending beyond the restrictions of current conversion grants from conventional to organic farming.

As incentivisation for farmers is geared towards the dominant model, small-scale diversified farmers continue to struggle. Ireland needs to address what a thriving organic farming industry and CSA initiatives could mean for this country to attain a truly clean green image. A complete re-evaluation of how farming is perceived, as a CSA participant observed, a change of perspective is required: “*mentality would have to come first*”. As one permaculture participant pointed out

Ireland because it’s a small nation, it’s very good for trials, it’s very good for getting a broad demographic on the island of Ireland that would give you a really good reading on what is possible elsewhere. It’s thinking... is there a different way?

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