



**Public Consultation on the Draft Agriculture, Forest and Seafood
Climate Change Sectoral Adaption Plan.**

Submission by the Agricultural Consultants Association (A.C.A.)

15th August 2019

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Executive Summary

Climate Change is a fundamental and new challenge for not only the agricultural community but our entire society. The majority of people in society have a poor understanding of this issue and its effects on the world, mainly due to incorrect communication methods, confusion with all the scientific research and data and a skepticism of some of the players in the debate and their real motivations.

Farming is receiving substantial negative publicity on this topic and although the sector must and will contribute to the debate and its solutions, there is an unease that agriculture is being unfairly and disproportionately targeted compared to other sections of society.

World population and demand for food will continue to grow rapidly during our lifetime. Farmers will be required to play a major role in ensuring that food is produced in a safe and sustainable manner. However, a fair and equitable price for their produce and changes in their behaviours and management practices must be rewarded by the greater society.

Ireland has significant potential due to our current climate, resources and committed farmers and stakeholders in the sector to meet the challenges of food production and still meet our climate action objectives. Further significant research by public bodies and actions in many management areas of on-farm practices must be encouraged and completed before we consider radical changes to our agricultural industry.

ACA members have embraced the opportunity to contribute to this issue in providing significant independent feedback from their roles as advisors and consultants within the farming community. A substantial number of recommendations are outlined in this paper for all farming enterprises, and when implemented will have significant and positive impacts on the entire agricultural sector. These recommendations clearly show a committed and willing private farm advisory sector to embrace the climate change challenges for the betterment of farmers and their families, their own future and for society.

The commencement of this process must involve a significant training programme for farm and forestry advisors/consultants and Irish farmers. ACA members advising 55,000 Irish farmers are a critical element of the success of any climate action plan. Funding and resources will have to be provided immediately to private advisors/consultants to ensure a long term plan with structure and collaboration is committed in return.

1. Introduction

According to the United Nations (UN), the world's population is set to increase by 1.1 billion by 2030 and reach 9.8 billion by 2050 with 50% of the world's population growth to be concentrated in just nine countries¹. Many of these countries are developing countries, already struggling in harsh weather and environments, presenting considerable challenges to end poverty and hunger.

In the UN Food and Agriculture Organisation's (FAO) published documents '*The future of food and agriculture trends and challenges*² and '*How to Feed the World in 2050*³ they state the following:

- Farmers will have to produce 70% more food by 2050 to meet the needs of the world's expected 9 billion population and
- Annual meat production will need to rise by over 200 million tonnes to reach 470 million tonnes.

These trends mean that market demand for food will continue to grow. Demand for cereals, for both food and animal feed uses is projected to reach some 3 billion tonnes by 2050, up from today's nearly 2.1 billion tonnes³. Therefore, World governments will be faced with a balancing act between feeding the world's population whilst ensuring that farming is conducted through sustainable farming activities.

In Ireland, the Department of Agriculture, Food and the Marine (DAFM) in their strategic policy document '*Food Wise 2025*', states that environmental protection and economic competitiveness will be considered as equal and complementary, one will not be achieved at the expense of the other but that sustainable growth of the industry is a core element of the plan.

Therefore, there needs to be a balance between economic, environmental and social objectives but an understanding that an expansion of global food production, which will need to take place, can occur in Ireland and still ensure that it does not conflict with our targets under the Climate Action Plan. This will only be achievable through a number of advancements in cattle breeding and rearing, fertiliser usage, improved animal health, dairy EBI, low emission fertilisers and other adaptation measures as identified by Teagasc⁴.

ACA in this submission present our views on the proposed Climate Action Plan and outline the challenges and our recommendations to ensure the successful implementation of the plan for the agricultural sector.

1. 2019, United Nations, World Population Prospects 2019: Highlights.
2. UN Food and Agriculture Organisation (FAO) *The future of food and agriculture trends and challenges*
3. United Nations High Level Expert Forum - How to Feed the World in 2050
4. Lanigan, G. J. and Donnellan T., An Analysis of Abatement Potential of Greenhouse Gas Emissions in Irish Agriculture 2021-2030, prepared by the Teagasc Greenhouse Gas Working Group.

2. Analysis of the Climate Action Plan

ACA have reflected on the Climate Action Plan and the Climate Action Plan: Annex of Actions. At the outset it is a **very thorough and ambitious plan** and the **authors must be acknowledged** for their contribution to a very serious issue for society.

It must be considered that a large proportion of the **current generation of Irish farmers** commenced their enterprises in an era when **full farm production was both encouraged and rewarded**. In recent times a greater emphasis has been placed in agricultural policy of the role of the farmer in protecting and securing our environment and landscape for future generations. Now Irish and global farmers are being challenged further to embrace and understand the effects of climate change and their industry activities on the greater society. **Farmers are understandably confused and worried** for the future of their businesses and their families but equally concerned at possible future implementation costs at farm level in an already very difficult market environment.

Climate change will not be stabilised or reversed by one person, one community, one industrial sector, one country or one continent acting in isolation. It requires the world to act as a village with everyone contributing. ACA state that a massive awareness campaign is required for the entire general public and explain plainly to those in our own sector in agriculture what is occurring and their role in proposed solutions.

ACA propose that further significant research be conducted in analysing and evaluating the releasing of methane and greenhouse gases from agricultural sources. It is imperative that independent, reliable and unbiased research is finalised with unequivocal results provided before policy changes are implemented in the agricultural sector.

The **challenge to engage with and incentivise farmers** on the agricultural actions to ensure the successful implementation of the plan is **considerable** but can be achieved through measures that are outlined in our recommendations. ACA state that the greatest challenge for farmers and both public and private advisors and associates in the sector is a **fundamental shift in behaviours** and to encourage new adaption measures.

Although ACA are supportive of the plan once it is balanced and not unfairly targeted towards agriculture, **there is disappointment and frustration** within the private advisory service that throughout both documents and in particular the Annex of Actions that the public advisory service is identified as the only stakeholder to assist in the implementation of the plan, particularly where such targets involve the entire farm advisory service. In fact the **advisory service in Ireland is listed only once** compared to 56 times for Teagasc in the Annex of Actions, despite the private sector being the largest farm advisory body in Ireland.

ACA fully support the role of Teagasc in the identified sectoral actions where enhanced research and education are a core element and in particular in relation to actions 101, 102, 105, 106, 112, 113 and 114. The development by Teagasc of the Marginal Abatement Cost Curve (MACC) which quantifies the abatement potential of a number of mitigation measures is an essential tool for the industry and is fully endorsed by ACA.

The proposed CAP 2020 discusses the Agricultural Knowledge and Innovation Systems and outlines that successful **AKIS strategies** include four main groups of actions⁵:

- Enhancing knowledge flows and **strengthening links between research and practice**;
- Strengthening **all farm advisory services and fostering their interconnection within the AKIS**;
- Enhancing cross-thematic and cross-border **interactive innovation**;
- Supporting the **digital transition** in agriculture.

The EIP-AGRI experience has shown that success depends on the combined performance of advisors, agricultural training and education systems, researchers and farmer organisations (AKIS).

However, ACA state that the objectives of AKIS are not being implemented correctly in Ireland and our farmer clients are at a disadvantage when compared to those receiving a service from the public advisory service. This must be addressed and structures developed to ensure the correct delivery of these programmes.

It is the view of ACA that unless their members and the private farm advisory service are included in a structured collaborative system with all public body stakeholders to ensure their farmer clients are incorporated into all actions, then the Action Plan will not be successful. This will lead to detrimental effects on the agricultural sector and the Irish economy.

5. EU-Agri (2019,p.1) 'Building stronger Agricultural Knowledge and Innovation Systems (AKIS) to foster advice, knowledge and innovation in agriculture and rural areas building stronger agricultural'

3. Methodology and Structure of ACA

ACA consulted with its members in collating views, experiences and knowledge in the preparation of this policy paper. Our **members are uniquely positioned** to interact on a regular basis with their 55,000 Irish farmer clients to listen and discuss their experiences and challenges, particularly in recent years with the change in weather patterns and crisis such as the fodder shortage caused by the drought in 2018.

ACA have in excess of **150 member offices** in Ireland and employ **248 Agricultural and Environmental graduates and professionals** with a comparable number employed as administration and technical staff. Members are situated in all areas of Ireland and are assisting their farmer clients with their businesses on different soil types and land/farming conditions.

11 members of ACA are **forestry consultants** and apart from running their own businesses they assist all other ACA members and their farmer clients with forestry related matters providing opportunities for forestry programmes on those farms.

The **structure of ACA** is outlined in **Annex 1**. ACA is governed by a National Council which is elected along with officers at an Annual General Meeting. In recent weeks a **General Secretary was appointed** by ACA. The role of the General Secretary will involve creating and driving a long-term strategic plan, building up strong professional relationships with all relevant stakeholders, creating a strong professional public profile, and a public affairs capability to ensure that private advisors can further their agenda with official policy makers.

Annex 2 describes the role of ACA in the sector and based on DAFM figures, ACA are the largest farm advisory service in Ireland. The **majority of our members support Irish farmers with technical advice** in all sectors across farming including dairy, beef, tillage, sheep, pigs, poultry, horticulture and the environment.

The structure, client base and the proportional workload of the farm advisory service in Ireland is outlined in Annex 3. ACA members complete in the region of 80% of all private advisory work. DAFM figures state that ACA members facilitated over 50% of the farmer groups in the Knowledge Transfer programme. KT programmes will be an essential element of any training and dissemination of knowledge to farmers in the future objectives of the Climate Action Plan.

4. Contributions from Members

In compiling this policy paper, ACA received comprehensive contributions from many of its members. Those members are based in various locations around Ireland and advise farmers across all agricultural enterprises. The majority of member believe that there needs to be substantially more balanced information, discussion and public debate around greenhouse gas emissions, carbon sequestration and the responsibilities of all stakeholders in delivering a fair and just outcome.

Following an extensive review of all contributions, the following is a summary of the main points and comments which encapsulates fears, challenges and threats but also many opportunities for the agricultural sector:

(a) Main impacts/comments on agriculture:

- In the main, farmers are currently reacting very negatively to climate change action requirements and the amount of negative publicity being levelled at the agricultural sector. Individually farmers are quite positive to actions which benefit the environment and also improve their on farm management skills.
- Variable and changeable weather patterns have impacts on fodder production and harvesting of crops causing pressures on farmers such as financial losses, deterioration in soil quality and mental health challenges.
- One of the main effects of climate change will be on purchased fertilisers and animal feeds. Meeting climate change requirements globally in relation to sources and supply of these inputs may have critical long term effects on livestock and crop farming.
- It is contributing to hardship for Irish farmers in terms of planning their farming activities such as poorer timing of operations, increased input costs and reduced yields/outputs. Farmers are currently absorbing the impacts in reduced income.
- Lack of knowledge by farmers of the effects of climate change on their enterprises.
- Farmers can prepare for one off events. However, changes in the seasons will require long term changes to farm systems and management. Instability will make this much more difficult, particularly changes or occurrences during the growing season.
- Recent years have seen an increase in the amount of extreme weather conditions faced by farmers. There has been an increase in the severity and number of flooding incidences coupled with wind storms to a lesser extent. This has caused problems particularly on developing farms where they are trying to achieve and/or maintain a reasonable income. Coping with these issues is increasing cost and reducing margins.
- Seed potatoes and cereal seed availability is weather dependent, both from production yields and for the amount of rejections for diseases - both of which will affect availability.

- The consequences of farmers actions and management decisions needs to be explained relating to their specific enterprise. Constant education and updates will greatly benefit.
- There are numerous external pressures on intensive farming systems to reduce livestock numbers, change the management of their enterprises and reduce emissions as they are being portrayed very negatively in media forums as being non environmentally friendly.
- Climate Change is causing the producer to bear the entire risk. Producers cannot afford in today's market environment to mitigate entirely against this risk due to farm gate prices and the political uncertainty of many issues including direct supports.
- Poor economic sustainability - particularly of beef and sheep farming - is a significant threat to the government climate action plan. Under current market conditions there is a strong possibility of widespread land abandonment in the main beef/sheep regions within the next 10-15 years.
- Neither land abandonment nor conversion to intensive dairy production will aid in achieving carbon mitigation targets. Therefore, ensuring economic sustainability in extensive beef and sheep production is paramount.
- **At present there is no credit given to Ireland for our grassland carbon sequestration in dairy, beef and sheep-meat production.**
- Ireland's strongest asset in terms of carbon metrics is our extensive areas of permanent grassland but it is being ignored.
- International reports such as the IPCC report quantify beef or dairy production emissions based on indoor feedlot and not grass-based systems. The quantification of carbon sequestration in the soils under permanent grassland, "scrub", hedgerows and other farmland habitats must be an immediate and top government priority. The conflict between scrublands in the Basic Payment Scheme and the benefits of retaining them for carbon sequestration and also biodiversity benefits needs to be resolved. The crop classification for eligibility needs to be reviewed to permit for managed scrublands and habitats to be paid under BPS.
- Extreme weather events are causing increased incidents of nutrient run-off.
- If the climate becomes warmer we may need to investigate more drought tolerant crops and building farm lagoons for water storage.
- There was substantial political emphasis of producing as much as possible from one sector (i.e. dairy) at the expense of other sectors. We need long term stability for all Agri sectors including longer scale agri policy documents rather than 5 to 10 year periods.
- There is substantial potential in Irish bogs and peatland areas for carbon sequestration. Farmers received payments in REPS from these areas in the past but in recent years many areas are now overgrown and there is a risk of scrub and other invasive species encroaching and threatening the potential of the bog areas in this issue.

- Replacing dry stock systems with trees as proposed will have consequences for the structure and balance in rural communities.
- Current scientific literature and public media dispensed information on climate change, GHG emissions, action plans etc. are both (a) very divergent in content and (b) very confusing to the ordinary person
- The whole concept of using native grains for animal feeding over and above imported grains is continually being put down as not having an impact on carbon emissions. From an economic and whole cycle perspective, native grain production with straw for bedding and utilising manures efficiently is a whole life cycle approach to agriculture.

(b) Impacts on forestry

- There is an increased risk of the incidence of exotic pests and diseases entering the country. Extremes in weather is making any forestry planning operation difficult. Potentially parts of the country may become unsuitable for existing forestry crops and alternatives may have to be developed.
- There are already indications that forest health is being affected by changing climate particularly in relation to forest pests & diseases (e.g. Ash Dieback). Spruce Bark Beetle is a serious threat and has the potential to wipe out the Irish sawmilling sector.
- The climate action debate should acknowledge the positive impact that forestry can have whilst avoiding displacement of land required for food production.
- Mono culture forestry will be impacted greatly by climate change and current forestry practices will need to change. This has already been recognised across Europe as far back as 1990.
- Recent droughts have increased afforestation costs and in some cases have had serious effects on businesses. Current grant structures will need to be reviewed considering these new challenges.
- Resilience of forests to adapt to changing climatic conditions is unknown. The impact on different species may be different.
- The impact of a carbon tax or carbon credits for economic activities if they are developed will impact on the management of forests.
- Summers have been extremely wet for a number of years followed by a couple of very dry months. The wet summers are challenging for harvesting operations resulting in increased impact on soils and limiting harvesting and management options.
- Increased storminess in some years can have a greater impact in conjunction with wetter summers/winters. The dry summers have caused increased mortality in establishment crops and established trees and established plantations in some situations have been under stress.

- Farmers who plant broadleaves on their lands will not receive an economic return on their lands outside of the forest premium which is only payable for the first 15 years for loss of farm income foregone. These farmers whose forests continue to deliver public goods and have a natural capital value for society receive nothing for these values which are highly desired by society. In fact their actions (planting trees) have facilitated others to operate in a business as usual manner. This lack of reimbursement for these natural capital values makes philanthropists out of farmers who are most often on very modest incomes.
- The Natural capital values and carbon credits that forest owners generate and manage by their forest management activities should bestow a reward that benefits society to these forest owners.
- The rejuvenation of natural woodland areas has been poorly supported to date.
- There should be a whole farm approach to climate abatement measures so that those that do more are rewarded and that every farm completes a minimum of tasks. It must not be the case that those that do more just facilitate others to do none or the minimum.

(c) Adaptation to Climate Change:

- Adaption methods currently are in the form of a more ad hoc approach and dealing with them as they occur.
- There is little evidence to suggest adaption in rapidly expanded dairy herds and this sector has many challenges in conflict with climate actions such as large increases in fertilizer usage and inaccurate applications, large and accelerated increase in livestock numbers, pressures on organic manure applications and production of high volumes of fodder.
- More investment is required to build in resilience into production systems. Some businesses will become unviable as they cannot invest in the necessary investment such as improved soil fertility or improved drainage systems.
- Changing adaptation methods requires an investment which must be driven by legislation changes, education and training, research dissemination and behavioural and culture changes.
- Reducing the area of forest planted late in the planting season. This is the only practical approach but it needs a coordinated approach from the Forest Service to ensure approvals are issued on time.
- Farmers have engaged and adapted new technologies for the spreading of slurry and reducing emissions and the incentives in GLAS and through LESS and the YFS in TAMS have been very successful. An additional incentive of a Vat rebate would greatly assist in conversion rates.

- The Beef Data and Genomics Programme (BDGP) has been very influential in showing to farmers the details of their breeding policies and identifying areas that are in need of review and better management such as calving intervals, number of calves per cow and calving down heifers at 24 months. These all contribute to more efficient beef production systems.
- New forest management systems are being tried and developed in Irish conditions. Agro-forestry, close to nature and continuous cover forest management options are being researched and pilots are being developed.
- Tillage farmers are beginning to adopt mitigation measures through new farm crop practices whilst dairy farmers are exploring many new options in the efficient use of water and electricity. However, there needs to be incentives through the introduction of a tariff payment for surplus electricity.

5. Recommendations

In a continuation of our extensive discussion with members, ACA have formulated recommendations and actions below as our contribution to assisting in the Climate Action plan for the agricultural sector. The recommendations propose solutions for general agriculture and forestry to address many of the challenges. This section concludes by addressing the biggest issue in ensuring the success of the plan; incentivising farm advisors/consultants and farmers through training and funding programmes.

5.1 General recommendations for agriculture and forestry

- 1 Unbiased Independent Research and Scientific analysis with fact based conclusions showing both the negative and positive effects of Irish farming on the climate.
- 2 Our government and legislators must show caution and ensure that ‘faulty’ science is not considered in any policy decisions. There is ongoing research which is likely to be published in the future disputing that methane and nitrous oxide are greenhouse gases.
- 3 Farmers are currently not engaging in the process. Farmers, farm advisors/consultants and the general public must be convinced and influenced by independent scientific research and analysis on all issues related to farming and Climate Change to ensure a balanced and non-hostile debate.
- 4 The entire sector must complete substantial more work on our indigenous farming enterprises (dairy, beef, sheep and tillage) and use scientific fact to draw up an informed action plan to get farmers in these enterprises to adapt a strategy to achieve carbon neutrality without slashing national herd numbers.
- 5 The EPA in Ireland state that ‘government policy is generally to apply the polluter pays principle. This means that the generator of the waste is obliged to ensure that the waste is properly managed and this is applied equally to householder and businesses’⁶ Therefore, on rapidly expanding individual farms such as in the dairy sector, they should be required to mitigate any potential risks by contributing directly through initiatives on their own farms rather than an expectation that other farmers or other parts of the land base in Ireland will offset their risks.
- 6 Any current publication on climate change runs to 100 plus pages of highly technical content. This needs to be simplified and presented in more concise format which can be fully understood by (a) those most affected by its content and (b) all parties challenged with implementing the action requirements.

⁶ EPA Ireland, Waste Management policy, <https://www.epa.ie/waste/policy/>

Available resources and soil

- 7 Ireland had a huge competitive advantage over other food exporting countries in terms of water availability. This advantage should be maximised to produce food for our own needs especially but also for sustainable food production system for export. Most of the adaptation is required in Ireland for management of excess water. This is a much less intensive problem than finding water in more arid areas.
- 8 Targeting the promotion of lime application on farms to outline its benefits to address low pH levels (as evidenced on farms nationally through latest soil reports) thus ensuring more efficient uptake of applied fertilisers. Liming of land has massive benefits both to the farmer, climate change, carbon sequestration and to the balance of payments in the Irish economy.
- 9 Continuous tillage depletes soil organic matter and carbon levels and negatively impacts on soil biology. Key components for consideration:
 - a. Establish baseline measurements for nutrient status, soil biology and organic matter through laboratory analysis and new technologies
 - b. Restoration of soil organic matter through encouragement of organic manures and replacement of inorganic fertilisers.
 - c. Incentivise improved crop rotations legumes, brassicas, oats and cereals.
 - d. Incentivise minimum cultivation techniques and other good practice

Training systems and relationship with state bodies

- 10 All Information Technology (IT) systems developed and funded by the DAFM should be made available at no cost to all private advisors as they will use those tools to advance their farmer clients in terms of innovation, efficiency and income. Some of these tools include connectEd, the Nutrient Management Planning system, the eprofit monitor for the Knowledge Transfer and include all future tools including those being developed and to be used in the climate action plan. It also includes the sharing of state funded materials, presentations and access to Teagasc specialists to engage and contribute to private advisor/consultant events.
- 11 The relationship between Teagasc and the private sector advisors should be put on a formal footing, and a co-operative relationship should be governed by a Memorandum of Understanding (MOU). The clear rationale for this is that the overall quality of farm advisory services would be elevated and Irish agriculture would be the ultimate winner from such an approach. In any event, Teagasc receives significant funding from the Irish Exchequer and the private sector advisors do not receive any funding.

- 12 Dissemination of information. The information is available but not being disseminated. AKIS has identified this as being one of the main challenges in the future. There is too much focus on research programmes and not enough on getting available information out where it becomes useful. For example information on land drainage and soil fertility building is available for decades but the information and experts in the past are no longer actively involved in the sector.

Forestry, Hedgerows and Trees

- 13 In the area of forestry support and development, there is a strong consensus that Teagasc has not delivered on national forestry plans. The private forestry advisors do not receive any State support and with proper support and structures can play a much stronger role in the development of Irish forestry and income diversification for farmers.
- 14 Forestry and tree planting will have a role to play but widespread planting of land without due consideration for rural communities will not provide a solution to climate change. If the land resource of a community is all or mostly planted how do we deal with the “community” that will inevitably become urbanized?
- 15 Annually hedges are controlled for health and safety and road safety reasons alone and in the majority of cases they are universally burned. A system of utilizing the carbon from hedgerow management must be found, whether brought to bio digesters, trees used for wood fuel heating or even pelletising the wood for wood fuel or other options.
- 16 With Agro forestry, (where trees are planted and the farmer can continue farming the land), that the premium time is increased to the length of the crop e.g. 35 years, so farmers are paid each year the trees are in the field - and have the payment index linked.
- 17 Increase incentives for forestry for farmers (not non-farmers) by doubling the annual forestry premium rates and increasing the term of payment to 25 years.
- 18 ACA Forestry Consultants have no knowledge and are unaware of the reports outlined in the Climate Action Plan for actions 117, 118, 119, 121, 122, 123, 124,125, and 126. However, ACA is available to discuss and explore these initiatives and assist the DFAM with their objectives.
- 19 Farmers must be supported to consider climate change abatement measures such as afforestation and forest management activities by;
- a. Streamlining the licensing application process
 - b. Screening of the licensing application process must be robust enough to avoid swamping by serial and nuisance objectors.
 - c. Funding of reports requested by Further Information Requests required during processing of applications e.g. Natura Impact Statement, Ecologists and Hydrologists reports

- 20 An independent Irish Forest Institute should be established to carry out research, and to develop and promote forestry industry in Ireland.
- a. This is required to carry out the relevant research for practical issues that the forest industry and society requires (solve problems, new areas for development that the industry and farmers have identified using a ground up approach).
 - b. Such a respected body can be the definitive voice on Irish forestry backed by the correct science.
 - c. The body will have a board comprised of members of the industry, farm organisations and science professionals.

Application of fertilisers and related tools

- 21 Accuracy in the application of fertilisers through correct calibration of machinery and the training of such operators.
- 22 User friendly Nutrient Management Plans (NMPs) summary reports for farmers to ensure targeted use of chemical and organic fertilisers based on accurate soil samples, waste storage capacities, stocking rates, feed usage inputs and organic fertiliser imports and exports.
- 23 Campaigns and training to show the critical timing of fertiliser applications, especially of urea and lime.

Farmer Produce

- 24 Market a sustainable beef product produced at lower volumes from reduced inputs with a primary focus on biodiversity from species rich grasslands, along the grounds of organic production
- 25 There is not enough focus on the potential impact on tillage and horticulture to produce food for direct human consumption. Climate change will impact on other countries which in turn will affect the ability of Ireland to source food like potatoes, vegetables, milling wheat, fruit. We need to become more self-sufficient for food.
- 26 Research alternatives for beef farms for example cutting grass for anaerobic digesters where a farmer wants an alternative to rearing cattle. The Teagasc research budget is huge and their focus should be subjects such as 'agri' alternatives and a sole focus on improving farmers' incomes/viability.
- 27 Build profitability into agricultural systems or risk sharing systems between producers, intermediaries and consumers. Investment is required and the share of the market price that primary producers currently get is not sufficient to make necessary investments to build flexibility to overcome impacts of climate change.
- 28 Focus must be on becoming more self-sufficient on major foodstuffs like milling wheat, potatoes and fruit and vegetables. Reliance on imports to feed the population is too risky in the long term

Role of Advisors

- 29 Advisors to be funded to set up cluster groups of farmers with a host farmer who is willing to be an early adopter of new technologies and his fellow farmers can see the effects of these adoptions and implement them on their own farms. In conjunction with the host farmer model where 6 walks take place per year, the advisor visits the individual farmers in the group twice a year to encourage adoption to these new technologies.
- 30 Stocking levels on farms should be consistent with the stock carrying capacity of the lands available to the farmer. ACA believe this can only be achieved by way of a physical assessment of the farm, farmyard and land assessment by a registered farm advisor.

The role of grassland areas

- 31 As the successful incorporation of clover in swards is dependent on optimal pH levels, introduce an awareness campaign to ensure correct application.
- 32 Allow farmers to convert forestry land back to productive land if they so wish - once tree crop is harvested.
- 33 Extended grazing has a role in reducing emissions. However, extended grazing is not a viable option in some parts of the country and there may be potential negative impacts in terms of water quality. Further research must be conducted and land and areas of the country identified as best suited to the practice.
- 34 Promote establishment of diverse pasture swards as a standard for reseeding, including legumes, herbs and multiple grass species
- 35 Introduce incentives for maintenance of existing "old-pastures" with diverse swards to reduce chemical N dependence and increase carbon sequestration in soil

Animal Health

- 36 Healthy animals are more efficient feed convertors. A specific and practical farm animal health plan can contribute to healthier herds and should be encouraged. In the KT programme the veterinary health plans were underutilised or perhaps not fully understood by the participating farmers.
- 37 Establish a "carbon-credit" or "bio-diversity credit" system for higher stocked dairy farms to offset their emissions by transferring funding to extensive beef/sheep farms to maintain and manage farmland habitats
- 38 The benefits of a targeted feed usage system to be investigated and implemented on farms. Furthermore, improved grassland management and feed budgeting can ensure more efficient feed usage on farms.

New Agri Environmental Schemes

- 39 All future **agri environmental schemes** should be based on a **whole farm approach**. At the suspension of REPS 4 there was anecdotal evidence to suggest that REPS was very successful for the environment, biodiversity and soil fertility through a compulsory lime programme. However, no baselines were established and no significant measurement recordings were conducted during 15 years of this programme. Therefore, in consideration of a new agri-environment scheme the following must be completed:
- a. Every farm should be assessed and a climate action, biodiversity and water quality plan prepared possibly similar to a REPS type formula
 - b. Baseline assessment conducted for every farm**
 - c. Identify and target those farms where new adaption measures will have the greatest and earliest effect
 - d. Prepare a remediation plan
 - e. Monitor and review the process. An annual review of result best actions to be conducted annually.

Use of technology and latest systems

- 40 LADAR technology to be funded to create information to identify and quantify landscape features.
- 41 Require the use of GPS recording for soil sampling to ensure quality control in nutrient management planning.
- 42 Require online, map-based recording of fertiliser usage as a pre-requisite of chemical fertiliser purchase. Online mapping should take weather, topography, geology, hydrology, groundwater vulnerability and agronomic management
- 43 Anaerobic Digesters mitigate against greenhouse gases and produce digestate with lower ammonia and reduced methane. A special case must be made to factor in financial support for these in the future. We are suggesting 50% aid towards investments of over €1m to €2m investments. This would link into Gas Networks Ireland, on a similar basis to milk collection.
- 44 Incentivising the use of slurry additives and/or latest agitation technology systems where they provide evidence based conclusions of their benefits in reducing emissions to include agitation equipment where bacteria can be incorporated into the slurry. Such items to be supported in TAMS.
- a. Improved soil and crop management is fundamental for biodiversity and carbon sequestration as a high percentage of soils have sub optimum levels for soil ph.

- b. Future structural building schemes should have greater incentives for loose/straw bedded sheds from an animal welfare, greenhouse gases and water quality perspective. Spent bedding from straw bedded sheds is much more stable less risk to water sources, comfortable for livestock and more beneficial for the soil.

Biodiversity and Boglands

45 Encourage biodiversity:

- a. Meaningful sustainable use of all agricultural chemicals. Focus on a healthier soils, crops and animals through good nutrition and practice.
- b. Establish measurement techniques through remote sensing for hedgerows, identify weak hedgerows and target maintenance improvement programs
- c. Establish proper wide nature corridors from habitat to habitat, the Irish hedgerow plays an important role.

46 An entire review of the potential of all Irish bogs and peatland areas should be conducted to evaluate their potential for carbon sequestration and incentivize farmers to conduct appropriate environmental measures on areas that have been neglected or invaded by scrub and/or undesirable species where it is shown to have long term positive impacts.

5.2 Training Programmes

Meaningful participation in the Climate Action Plan can only be achieved through farmer buy-in to the process. This is most likely to be achieved through targeted, repeated educational programmes and information campaigns.

However, the most important player in this process is the farm advisor. The private farm advisory service has a unique relationship with their farmer clients and for many customers that relationship can exceed 30 years. The farm advisor is the best placed professional person to discuss, encourage and show the benefits of behavioural and management changes.

This can be achieved through:

1. Training Programmes

(a) For Farm Advisors:

Commencing immediately in 2020 for farm and forestry advisors/consultants and a further new and enhanced 3 year programme commencing in the next Common Agricultural Policy (CAP)

Rationale:

The **educational and training programme** of registered farm advisors/consultants and foresters is in **need of radical reform**: the public advisory service is supported financially and educationally by state funds through the DAFM and other public agencies with a vast selection of programmes in agriculture and related areas but also in the softer skills, whereas the private advisory training is ad hoc and generally a decision for the individual if they wish to partake in developmental programs. In a tight margin industry, many private advisors believe training and upskilling is expensive/cost prohibitive with little return in their investment, which requires significant investment in time and finances. In the public service farm advisory system they do not have these concerns. The unstructured training and development of the private advisory service is a serious risk and threat to both the Climate Action Plan objectives and for the future of the agricultural industry. A training programme will outline objectives and methodologies to address behavioural changes in all farm advisors. ACA members are at a serious disadvantage compared to the public advisory service as we do not have direct access to the latest state funded training and research services. ACA members must be supported through meaningful programmes, thus ensuring our 55,000 farmer clients are not disadvantaged in meeting the new sectoral challenges.

Action: Training of all private farm and forestry advisors/consultants through partnerships with government agencies such as the Department of Agriculture, Food and the Marine including the Forest Service, Teagasc, Environmental Protection Agency, Department of Environment and Housing and establishing additional links with educational institutions and associations such as UCD, IASIS, the Soil Science Association and Ecology Association of Ireland. The **training programme** of all **private farm and forestry advisors/consultants** will be **governed through ACA** with a steering committee to oversee its objectives and funding and include representatives from the DAFM. Upskilling of all advisors/consultants who will be providing the farmer advice and training must commence in 2020 to ensure consistency, clarity and relevance of the advisory message for all farmer clients.

Private sector advisors/consultants must receive funding and an allowance similar to public sector advisors to ensure a successful programme. This programme and a cost benefit analysis is being finalised presently by ACA and will be presented to the DAFM shortly.

(b) For Irish Farmers

Training for all farmers through annual training days and also as part of an improved Knowledge Transfer Programme.

Rationale:

We make this recommendation based on an ever aging farm workforce and lack of a baseline understanding of climate change and measurements. As over 50% of Irish farmers are 55 years of age or older, many do not have formal training on the future demands in terms of climate actions and in general for the environment. Climate Actions are a new challenge in mindset and behaviours for a generation of Irish farmers and they require leadership, help and incentives to embrace these new challenges. There will need to be a strong coherent and comprehensible education programme delivered to the farmers who will be front line “soldiers” in delivering a climate action programme.

Action: Training of all Irish farmers through a reformed and enhanced Knowledge Transfer programme and a number of days training per annum similar to GLAS/BDGP with remuneration for their attendance. Key areas include sustainability, environment and health and safety.

6. Conclusion

This current generation of farmers commenced working on the land when full farm production was both encouraged and rewarded. The same generation of farmers in the past 20 years have changed to meet the demands of the environment and water quality whilst still aiming to gain rewards from the land. They are now faced presently with a third challenge – climate change and demanding actions with an expectation that they will vigorously change their behaviours and management practices for both their benefit and that of society.

However, all of society needs to change their behaviours if the challenge of climate change is to be addressed. We need unbiased scientific research without personal motivations to ensure the engagement of all in society. An educational platform that teaches farmers children, and children of non-farmers about farming and how farming can have both positive and negative effects on climate change must be implemented. Farmers with the support of a professional and very technical advisory service can act as leaders on transferring knowledge to everyone. This engagement by farmers would also enhance local peoples' knowledge and willingness to buy locally produced farm produce, thus helping in reducing agriculture's emissions.

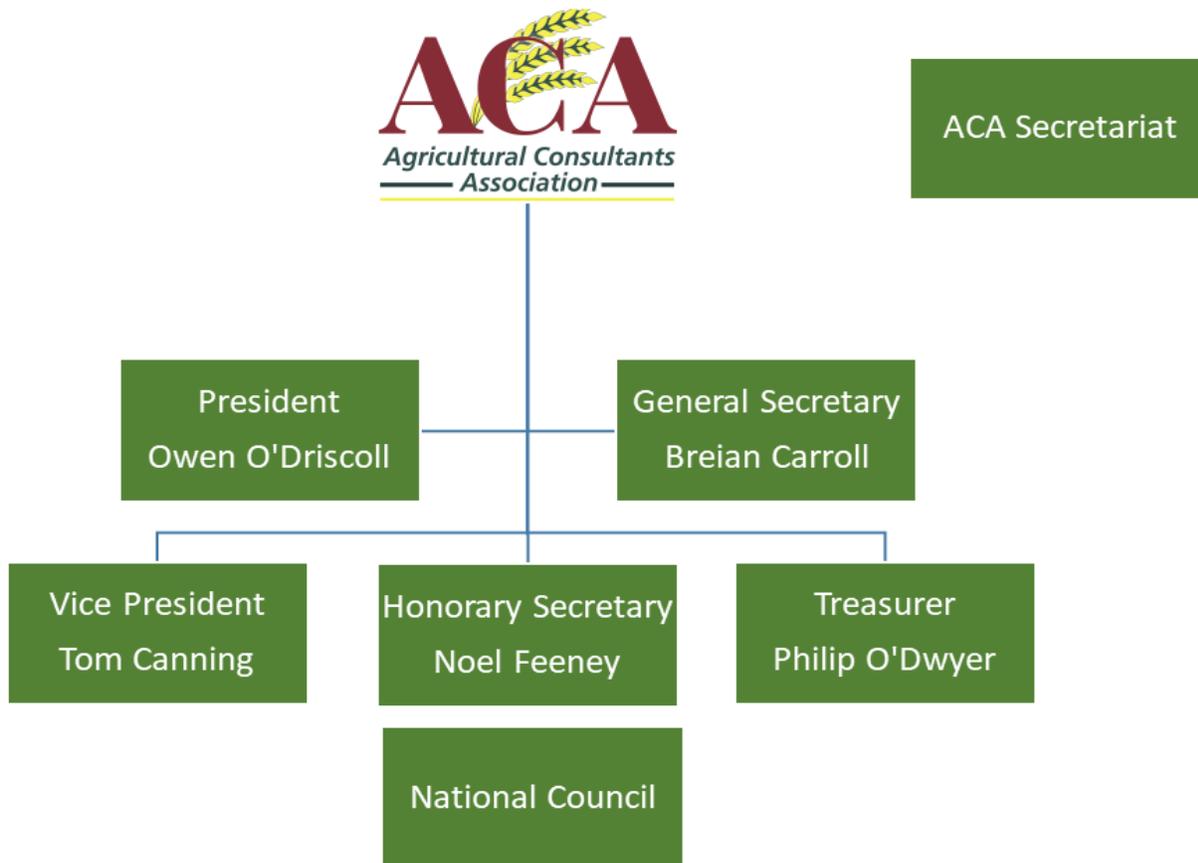
Private farm advisors and consultants have a unique and precious relationship with their farmer clients. They are best placed to help and show farmers the benefits of changing their management decisions and behaviours to meet the actions of the climate plan whilst ensuring security of their livelihoods on their farms. The ACA have suggested many new ways in this submission of thinking and innovation methods in learning and teaching to farmers but also in the development of any schemes for the sector. ACA no longer want to work or be left in isolation.

The climate action plan challenge requires a commitment from everyone in agriculture and the wider community. Incentives with clear targets which are easily measured and evaluated annually against baseline results must be conducted on all farms immediately. ACA members are willing and able to commit to all the challenges once their involvement is rewarding and equitable and their role is acknowledged as being a critical element to any successful plan.

Annex 1

Information and Structure of the Agricultural Consultants Association (ACA)

The Agricultural Consultants Association (ACA) are the sole representative body for private agricultural consultants and advisors in Ireland. ACA have in excess of 150 member offices across all of Ireland and employ 248 Agricultural graduates and professionals with a comparable number employed as administration and technical staff. The ACA is governed by a National Council consisting of 14 elected ACA members whom are elected annually at an AGM. The present organisational structure of the Association is outlined below.



National Council members 2019:

Tim Bourke, Paul Finnegan, Laura Johnston, Ian Kenny, Martin O'Sullivan, Michael Ryan, Michael Tennyson and Ruairi Ward.

Annex 2

Analysis of ACA and their role in the Irish Farm Advisory service

The latest Department of Agriculture statistics in 2019 indicate that our members provide advisory support service to over 55,000 farmers nationally across a wide range of programmes and schemes. It is also estimated that an additional 15,000 Irish farmers receive farm advisory services for other non ACA private advisors. The number of farmers receiving farm advisory services from ACA members has increased substantially when compared to 2010 when research conducted by our Association and supported by DAFM figures at that time, stated we advised in the region of 45,000 Irish farmers. **Annex 3** outlines the involvement of private farm advisors in Ireland across numerous DAFM programmes with ACA members completing 80% of the work in the private sector.

The Department of Agriculture, Food and the Marine (DAFM) have confirmed our current market share over a range of Agricultural Schemes is as follows:

1. TAMS – 80% of applications completed.
2. Nutrient Management Plans and Nitrates Derogation applications – 76%.
3. Knowledge Transfer Programme – 52% of groups facilitated by ACA members.
4. Basic Payment Scheme applications – 58%.

These industry statistics now indicate that the **private farm advisory service is the largest advisory body in Ireland** accumulating in excess of 115,000 one to one consultations with Irish farmers by ACA member in 2018.

The **majority of our members support Irish farmers with technical advice** in all sectors across farming including dairy, beef, tillage, sheep, pigs, poultry, horticulture and the environment.

Although the role of ACA members in DAFM lead programmes is critical and vast, **many other members specialise in related agri-business** areas such as nutrient management planning and cross compliance guidance, soil fertility and grassland management, farmyard design and planning permission for agricultural developments, farm accounts and taxation, training programmes and education to farmers, farm succession and related business plans and financial planning.

Appendix 3

Analysis of the Private Farm Advisory Service activities in Ireland in 2018 (unless stated)

	ACA members	Total Private Sector
Total Clients 2018	55,000	70,000
Advisors	248	498
BPS submitted	43,072	53,840
Derogation applications	2,560	3,201
TAMS	14,656	18,320
GLAS annual visits	27,180	33,974
KT Programme		
KT Groups	665	832
Farmers in groups	11,036	13,795
KT Farm Improvement Plans and profit monitors	11,036	13,795
Other		
GLAS training – since 2017	27,180	33,974
NMPs – GLAS and Derogations (2017, 2018 & 2019)	47,936 (GLAS 36,080 and Derogations 11,856)	59,920
Farmer Consultations 2018: BPS, GLAS, Derogation, TAMS and KT	115,920 ¹	132,400

1. Total number of one to one consultations by ACA members with their clients in 2018. It includes a minimum of 3 consultations in relation to the KT programme and does not include the actual contact at the KT meetings. It includes 10,000 consultations for TAMS – initial contact, farm visits, applications for grant aid and payments.