Association of Independent Crop Consultants (AICC) - Written evidence (EGD0003)

In lieu of being able to make face-to-face at the council selects committee meeting, scheduled to take place on Wednesday, 18 March (cancelled due to Covid19), in order to discuss the farm to fork strategy as part of the EU green deal

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My name is Sean Sparling, I am an associate fellow of the Royal agricultural society and a multi-award winning and fiercely independent agronomist, having been advising farmers on all aspects of crop production for over 30 years and having been 100% independent of all commercial influence since 1993. I founded my own independent agronomy business here in Lincolnshire in 2004, I am the Chairman and a director of the Association of independent Crop Consultants (AICC), which has over 270 members across the UK. It is the largest Association of independent crop consultants in Europe providing guaranteed independent agronomic advice on over 46% of all UK arable food production, advising upon over 2.2 million ha of UK arable production.

Q. *"Which agricultural measures in the green deal have the biggest potential implications for the UK and why? Are there particular policies from the EU's farm to fork that you'd like to see in the U.K.'s upcoming national food strategy?"*

In order to further reduce plant protection products (PPPs) and fertiliser use, the way PPP & other agronomic advice is delivered on farm should be addressed. If we wish to attain and maintain a high level of IPM implementation and reliance, reduce and optimise the use of pesticides and fertilisers, both the education of the grower and the way that on-farm advice is delivered and applied is the key. The move by the EU to introduce mandatory targets for the reduction in use of these inputs, could be achieved more quickly by separating pesticide and fertiliser advice from sales, implementing and enhancing the uptake of IPM protocols and by providing support to growers adhering to IPM management strategies.

- There are consequences for getting it wrong when IPM is implemented fully and adhered to. Relying upon IPM pest thresholds in making decisions, means that mistakes are bound to happen, they are unavoidable, so therefore a support package for farmers and advisers who are prepared to stand by those IPM protocols, based upon the advisers observations and their subsequent convictions, should be available.
- This broad adoption of IPM has been underway in UK agriculture for many years, but in order to achieve its true implementation, we need to do more to support growers in the event of difficult decisions not to apply PPPs leading to losses where the use of PPPs would have led to a more positive outcome.
- We could further reduce our PPP and fertiliser use if those delivering the agronomic advice on farm were all guaranteed to be independent of any commercial influence and potential conflict of interest, by only using the services of advisers who sell nothing but their advice.

QUOTE FROM THE FARM TO FORK STRATEGY DOCUMENT. *"the commission will work with member states to ensure that the post 2020 national strategic plans, adhere to a concerted and ambitious approach including on pesticides, fertilisers and antibiotics. The commission will take action to reduce the use and risk of synthetic chemical pesticides, including through a targeted revision of the relevant directive, enhanced provisions on integrated pest management (IPM) and greater use of other ways to protect harvest from pests and diseases. In order to improve biodiversity and the quality of ground and surface water and soil, action will be taken to prevent [nitrogen and phosphorus-based] fertiliser pollution and to achieve sustainable water management".*

- The scope for further reductions to PPP and fertiliser inputs on those farms already advised upon by an independent agronomist is clearly more limited, because both the optimum and minimum levels of these inputs are already being observed as a matter of course as only targeted, timed and purely necessary inputs are being recommended. However, I do believe there is scope to reduce both PPP and nutritional inputs in more of the service led advice situations. If this detachment of sales from advice were implemented, there would be a reduction in PPP and fertiliser use with no effect on either yields or quality.

There are however complications within the current advice provision structure.

<u>The current situation in the UK arable advice sector</u>

There are four types of agronomic advice currently being delivered into UK agriculture

1. **Advice from a member of the Association of Independent Crop Consultants (AICC)**. Advice from wholly independent crop consultants who charge purely for their expertise and their advice and for **nothing** else. The independent AICC adviser has no sales targets, no commercial influence, no vested or conflicts of interest and no stock of PPPs or fertiliser to sell. Therefore, an independent AICC member is able to remain purely focused on the growing crop, the environment, the protection of soils, water, non-target species, while adhering to IPM (Integrated Pest Management) protocols with regards to every input decision.
    - It is precisely because there are no product sales involved (whether that be seed, fertiliser, agrochemicals or other farm inputs), that all husbandry and crop input decisions can be focused upon what is actually being seen in the field at any one time – using IPM thresholds and IPM protocols.
    - Members of the AICC are the only guaranteed source of commercially independent advice in the UK and therefore the only guaranteed practitioners of IPM. The 270 men and women who make up the AICC membership, are responsible for delivering the agronomic advice to over 2.2 million ha of the total 4.714 million ha that comprises UK arable crop production[1]. This leaves AICC members free to only recommend what is most appropriate in terms of crop nutrition, seed and plant protection products (PPPs) such as fungicides, herbicides, molluscicides and insecticides, but only if or when absolutely necessary.
    - PPPs are simply one of the tools we employ in order to protect the quality and health of the crops we are growing for our food and forage. We need PPPs to protect our crops from the effects of weeds, pests or diseases and therefore ultimately to protect the quality of the food we grow, our environment, soils and

the consumers themselves, by ensuring we protect non-target species and prevent collateral damage while producing plentiful, safe and affordable food.

1.DEFRA farming statistics, Table 2.1 Agricultural Land use (a). https:/assets.publishing.service.gov.uk/government/uploads/attachment_data/file/865769/structure-jun2019final-uk-22jan20-rev_v2.pdf. There are 17.65 million hectares of agricultural land in the UK, just 4,714 million hectares (26.7%) of which is capable of arable crop production. email: farming-statistics@defra.gov.uk

2. **Tied advice**. This is on farm agronomy, crop protection and nutrition advice which is paid for by an additional percentage cost being added onto the price of the input that has been recommended. This sort of advice is delivered by trade agronomists or technical sales representatives, who are both salaried and employed by the agrochemical sales and distribution companies for whom they sell the same plant protection products PPPs and other inputs which they are recommending the use of.
    - These advisers have targeted sales turnover figures and are mostly salaried, with additional bonuses being paid to individuals depending upon the scale and levels of sales generated. There is a financial reward made to the adviser for any products sold or recommended.
    - This type of advice provision is assumed, incorrectly, by the non-farming public to be the way all on-farm advice is delivered in the UK and the rest of the world. It is consistently questioned by many lobby groups and NGOs as it, in their opinion, does not always have the best interest of the grower, the environment or IPM protocols at its core.
    - Sales of products are one of the main focuses behind this type of advice and therefore, reducing levels of inputs, could be argued is not the priority.
    - 30 years ago there were in excess of 30 similar distribution companies in the industry, but since then and as a result of many mergers and acquisitions, we now have 5 very large distribution companies in the UK and so choice and flexibility are far more limited.
3. **Advice given by distributor owned "independent advice" companies**, which operate from within the above distribution companies, where on-farm advice is delivered under the claim that it is fee-based and therefore independent.
    - Through the use of the U.K.'s segmented market and strategic planning, much of the PPP and other input sales can remain in-house, and therefore advisers and sales/distribution companies will still benefit from the sale of any PPPs, nutrition or seed mixtures.
    - Crucially this type of adviser remains in the employ of those same distribution companies.
    - The independent advice from such companies is **not** therefore independent advice as interpreted and applied by the AICC, which is the professional body of the truly independent advice sector. Under the AICC code of conduct if an adviser is being paid, reimbursed or incentivised by any company which benefit financially from that advice and recommendations on farm, that cannot be classified as being truly independent advice.
    - This type of agronomy provider does not meet the criteria for AICC membership, as the AICC do not consider them to be independent in the same sense of the word both we and the public interpret it.
4. **Farm managers and/or farmers** who have undergone rigorous training and an exam in order to hold a BASIS (British Agrochemical Standards Inspection Scheme) qualification. This qualification is held by ALL on farm advisers across the UK, who are therefore able to advise on farm.

- A farm manager or farmer holding a BASIS qualification can issue their own recommendations, purchase their own inputs and use them accordingly with no further training required. This type of advice is not widespread and is mainly practised in-house by mostly the larger farming businesses.

N.B. *As with other BASIS qualified advisers, there is a BASIS professional register which, if the member wishes to accrue a set number of annual CPD points throughout every season, that member may be a part of this professional register and attain Member of the BASIS Professional Register (MBPR) status. Also as part of the BASIS register there is a fertiliser equivalent, FACTS where FACTS Qualified Adviser (FQA) status gives a recognised level of competence and currency.*

<u>FARM TO FORK STRATEGY DOCUMENT TARGET 1.</u> To reduce by (X%) the use and risk of synthetic chemical pesticides between 2017 and 2030. Within the first (XX) years of its mandate, the commission will establish this as a mandatory target, with a clear legal basis and using the existing Harmonised Risk Indicator (HRI), first established under the sustainable use directive (SUD). The commission will monitor progress towards achieving this target each year and for each member state and make that data public.

The commission also considers that more can be done to implement integrated pest management (IPM) to achieve these targets. In addition to encouraging implementation of the existing provision in the SUD, a proposal will be made for new legislation, enhancing the provisions related to IPM and to related record-keeping.

Q. "*are there particular policies from the EU's farm to fork that you'd like to see in the U.K.'s upcoming national strategy? How do you expect the EU to reduce the use and risks of pesticides?"*

- Any policy which promotes commercially independent IPM based crop protection will have knock-on benefits for UK agriculture and to the wider environment. Unnecessary or extraneous PPP applications not only potentially cause more collateral damage than is desirable, but they can and do lead to increased expenditure across a wide range of crops. This is seen where sales and advice are so linked. This is not only potentially harmful to the ecology within the farmed environment, it is also damaging for the publicly perceived image of this entire industry.
- Removing an incentivised system where the overuse of inputs is considered acceptable would automatically reduce the overall use of PPPs in UK agriculture, with little impact upon crop yield or food quality.
- The UK is unique in Europe for having such a high percentage of on-farm PPP advice delivered by wholly independent and commercially unbiased advisers. The AICC **is** that independence.
- Reducing PPP use by removing commercial influence achieves many of these aims. When an AICC independent agronomist is used the advice source on-farm, IPM is the driving ethos and consequently gross margins and profitability on independently advised farms are generally better due to the lower variable input costs, but yields and field biodiversity levels benefit because of those strategically targeted and IPM tailored inputs. We take the time to become fully involved in the farm environment itself and the business, rather than simply see it as in any way a golden goose. In fact, in 2017 in a wide-ranging study by the annual rural business survey carried out by leading economist Gary Markham, using the annual results from clients' farming businesses,

the report highlighted that the top 25% of profitable businesses in the East used the services of an Independent Agronomist & reduced inputs were a big part of that result.

- AICC member agronomists are already ensuring a minimum PPP input level and a high degree of IPM implementation for the reasons outlined above, owing to our broad adoption of crucial IPM protocols in all day-to-day PPP and nutritional decisions. The removal of any financial incentives which could result from the sale of PPPs et cetera would be a very quick and simple solution to any level of extraneous applications which exists in the commercial advice sector. The AICC lead the way on purely commercially independent advice. Interest in AICC backed independent advice has never been greater. We have necessarily strict criteria for membership and our interpretation and implementation of "independent" is the only guaranteed source of truly independent agronomic advice in the UK. This would ensure that PPP use would be carefully monitored and ICM (Integrated Crop Management), IPM (Integrated Pest Management) and LEAF (Linking the Environment And Farming) protocols are all adhered to and therefore the guaranteed norm. Removing any incentive to "sell more to earn more" must be the way forward in a post Brexit version of the UK. AICC promotes that mentality and enforces the ***"the sale of advice is our only source of income"*** model strictly, so unless your income is from advice alone, you cannot be a member of the AICC.

Q. *"how closely should the U.K.'s approvals process the pesticides following the EU's after the transition period? For instance, once the EU has decided on whether or not to reapproved glyphosate, should the UK follow suit".*

Decisions on PPPs must be made based upon independent government led science and fact and not upon myth and hysteria. As responsible advisers and users of PPPs, we absolutely accept that older, less safe chemistry, **must** be superseded by newer and safer active substances and their technically superior formulations and expect all advisers to strictly adhere to label recommendations and guidelines. That is now - and has always been - the correct way to run this industry. But UK and EU agriculture are at risk of losing entire crop groups such as oilseed rape (OSR) and sugar beet, due to a lack of viable tools left in our armoury for controlling pests such as cabbage stem flea beetle (CSFB) in OSR and pyrethroid resistant virus carrying aphids *myzus persicae* in both sugar beet and potatoes. Oilseed rape is a huge source of insect diversity – 80% of all insects in an OSR canopy are beneficial & pollinators - and it is the only large source of pollen throughout April and into May in the farmed environment. Sugar beet is vital as a break crop and as a source of domestic and highly sustainable sugar production (unlike sugar cane), and is home to many species of ground nesting birds, insects and small mammals. Losing these crops will have a devastating impact on birds, mammals, bees and our other pollinators. The loss of literally hundreds of thousands of hectares of this OSR pollen source alone will have a far greater and more devastatingly profound impact on bees than the much hyped and exaggerated risk they were exposed to from the use of neonicotinoid seed treatments. Our now enforced reliance upon a single group of insecticides, the synthetic pyrethroids, as a direct result of NGO lobbying and some purely political decisions which have been taken in recent years, mean that our potential for managing these crops is becoming ever more difficult.

- Reducing the overall use of PPPs and synthetic nutrition is further complicated with regard to the EU regulatory issues and protocols. As an example, the UK is dedicated to the development and implementation of precision agriculture, conservation agriculture, no or zero tillage, minimum tillage, controlled traffic and non-inversion tillage systems, all of which are now widely adopted throughout conventional UK crop production systems. All of these conservation focussed systems are helping to manage

our emissions, our carbon and ultimately play a huge role in the sequestration of that carbon. They are absolutely crucial systems, but they can only continue to be employed if we keep the active substance glyphosate going forward.

- Glyphosate is crucial to UK conservation agriculture and indeed to agriculture in general. Without it, as in our organic systems, we will be forced to use mechanical methods to till the soil, mechanical methods to control weeds which will most certainly coincide with times of the year when ground nesting birds and small mammals would be catastrophically disturbed. In addition, that inevitable increased use of machinery as a result of losing glyphosate, would severely compromise our ability to control carbon release and indeed continue to farm in large swathes of the main arable areas in the UK. Our carbon emissions would rise rapidly through increased and excessive machinery use, meaning that "net zero by 2050" would be an impossibility. Also, by cultivating widespread grass weeds such as couch (elymus repens) and creeping bent (agrostis stolonifera) which are stoloniferous weeds, we simply multiply the problem almost logarithmically, because their roots, if cut in half will regrow as 2 plants, so glyphosate applied to them in the programme before crop planting begins, is our best approach. In excess of 60% of the wheat growing area of the UK is at risk of these weeds alone, making arable land unprofitable and un-croppable where they are not controlled. Therefore, as things stand, without the use of glyphosate, we completely lose our ability to practice any semblance of conservation agriculture and have no options for control on quite a number of weed species.

We must ensure the UK farmed landscape and its capabilities can be maintained, therefore through our own CRD and HSE, the ECP along with highly trained on farm advisers and other professional monitoring bodies, we should make that decision based upon the impact its loss would have on food production here in the UK.

- Domestic agriculture has issues unique to the UK landscape we must bear that in mind and prioritise our home interest when it comes to this vital active substance. Ultimately, the evolution of robotics and plant breeding techniques may well mean that we will be able to manage without glyphosate in the future, owing to traits within crops and automated weeding/spraying techniques. Unfortunately, we are nowhere near close to being at that stage yet.
- Glyphosate is keeping large areas of the 4,714,000 ha of available arable production farming and is protecting **not** damaging the environment. In order to maintain our improvements and progress in environmental protection and carbon management in agriculture, glyphosate is more the solution than the problem. A court room in the US where lawyers battle it out and who win a case by simply convincing 12 lay people that their legal argument is most calculatingly believable, is NOT a technical dissection of the science of this active substance. **We must ensure the continued reregistration of this vital PPP**.

PPPs are crucial in enabling and managing the production of plentiful, safe and affordable food, so clearly they are amongst the best studied compounds in our daily lives. The risk is not zero but it is acceptable and, in accordance with all current scientific insight, the re-evaluations which take place every 10 years ensure regularly updated risk assessments and investigations into safety factors.

- The evaluation of the risk PPPs are much higher than safety factors used for other risks we face throughout our daily life, but the perception of the risk of PPPs by the general public is diametrically opposed to the risk classification made by scientists.

- By educating the public to these facts we can reintroduce trust towards the industry. Multiple actors are involved in risk communication, resulting in many conflicting messages. Scientists are considered less neutral than one could expect and some actors are framed as ideology driven with others being suspected of working on demand for non-governmental organisations (NGOs) or for the chemical industry itself.
- Neutral key opinion leaders are vitally needed as the worst that could happen would be that people believe that important risk assessments are arbitrary and that their results depend upon who pays for them. This warped perception must be addressed and must be remedied.
- AICC members would happily engage with you to bring clarity into this area.

Q. *"how much should the EU's policy direction dictate how new genomic techniques are regulated in the UK after the transition period?"*

We could and should lead the world in gene editing technology and plant breeding to further reduce pesticide and fertiliser use. We have the knowledge, the people and the technology to do so – we have world leading experts already here. Sadly, many of the constraints of public opposition are based upon misinformation from social media and pseudoscience produced by lobby groups and NGOs cherry picking statistical information and presenting it as absolute fact. This may prove to be a significantly limiting factor.

- Ultimately, the manipulation of plant and crop traits along with improving plant breeding using such technologies as CRISPR is the way we will manage and reduce our reliance upon PPP and synthetic nutrition to even more minimal levels in the future. CRISPR enables us to achieve in plant breeding over the course of 12 months what used to take 10 years, so we must embrace this advance in technology.
- Gene editing technology in plant breeding, the use of CRISPR type technologies and processes, the degrees of adoption and the scale of implementation should remain as our choice and our decision as a sovereign nation. The EU clearly has influence over this technological direction, but the UK should hold sway over that decision when it comes to post Brexit domestic use. There are pros and cons, we should decide our own fate.

FARM TO FORK STRATEGY DOCUMENT TARGET 2 - to increase by (X%) the EU organic farming area achieved by mix of measures including appropriate stimulation of demand for organic products

Organic production in the UK. DEFRAs figures show that in 2018[2], just 441.1 ththousanhectares (ha) (2.56%) is currently fully organic, with a further 32,900 ha under conversion. 441.1 thousand hectares of organically certified land is the lowest area of organically cropped land in the UK since 2002. Indeed, organically farmed areas in the UK have been falling steadily since 2010, when it stood at 667.6 K - and the 2018 numbers show it is down once again this year by 9% over the 2017 figures. This despite a concerted effort over the past decade to convince consumers of the merits of eating and producing organic food. Of that 441.1 thousand hectares certified as organic, 384.1 thousand ha of grassland, woodland or recorded as "unspecified" land use. This means that only 57,000 ha of the 441.1 thousand of registered organic farmland is producing organic arable crops. So, with all of the organic promotions and advertising, with all of the "go vegan" and "eat organic" emphasis from BBC and Channel 4[3] documentaries and a multitude of "factual"[3] programs, despite the push by television advertising campaigns and the wider availability of organic produce to consumers in retail outlets, just 1.22% of the arable crop area grows organic crops and, with

yield penalties of up to 70%[5], organic systems produce significantly less than 1% of all of our plant-based food production.

2.*DEFRA.GOV.UK table 12.1 Organic and in conversion land by region, updated sixth of June 2019, next update May 2020, email: Sarahthompson@defra.gov.uk.*

https:// assets.publishing.service.of.UK/government/uploads/system/uploads/attachment_data/file/865762/organics-statsnotice-16may19-rev_V2.pdf

3. *Channel 4's recent documentary "Apocalypse Cow" promoted the anti-meat production narrative and postulated under the guise of a scientific piece of journalism, that a vegan diet and mass-produce fermented and highly processed proteins are the only alternatives for the future of food production. Criticism was heaped on to meat production in the UK and many generalisations made about livestock farming. Channel 4 are major shareholders in the "the meatless farm company" which benefits from the sales of vegan food products which were heavily promoted in this documentary. This is not unbiased journalism but was portrayed to the public as being precisely that.*

5. *Jerry Alford, Soil Association https://www.soilassociation.org/farmers-growers/farming-news/2019/January/20/2018-organic-wheat-variety-trials/*

There is much discussion over the value and quality of the crop produced in organic systems when compared to that produced conventionally using heavily regulated cutting-edge PPPs, overseen and recommended by highly qualified and strictly regulated on-farm advisers. One benefit of becoming an organic grower, is the financial return on their reduced yields.

- In conventional agriculture for example, one ton of milling wheat is sold for around £147 per tonne (2019 harvest figures). Conversely one ton of organic milling is sold for around £270 per tonne[4], that level of support for organic crops is in itself unsustainable. Other crops are similarly more valuable, but when producing up to 70% lower yield of course they need to be worth more to the grower. Therefore, crops from organic production have to be higher priced than crops from conventional production in order to reflect the level of risk of the organic grower incurs.
- The fact that well over 80% of all organically certified land in the UK is grassland, illustrates the financial benefit in adopting an organic approach. However, if more food were to be produced in organic systems, the lower income classes would almost certainly switch to cheaper and much more unhealthy food, so therefore the potentially negative health effects of obesity et cetera, are far more important and relevant as a risk to daily health than their perceived exposure to PPPs.

4. Jerry Alford https://www.soilassociation.org/farmers-growers/market-information/price-data/arable-price-data/

There is also a huge amount of confusion surrounding accurate organic cropping yields.

- The Soil Association's own website[5] shows yields of between 1.78 and 2.80 tonnes per hectare from modern wheat varieties which, when grown in conventional systems using synthetic fertilisers and PPPs, are consistently producing a UK average in excess of 8.5 tonnes per hectare, with the prime wheat growing areas in the eastern & central belt routinely averaging between 11 and 14 tonnes per hectare. If we were to commit to producing wheat organically, getting 25% to 30% of the conventional wheat crop yield using organic protocols, means we would need to find more than 6 million ha of additional arable capable land are, which simply does not exist, simply to maintain the level of wheat production we currently enjoy the use of conventional agricultural practices.

5. *Jerry Alford, Soil Association https://www.soilassociation.org/farmers-growers/farming-news/2019/January/20/2018-organic-wheat-variety-trials/*

Q. *"how is the UK position compared to the EU, on developing innovative and sustainable food and feed products (including new feed additives) such as algae and insects? Should the UK be moving more quickly here, or proceeding with caution?"*

UK agriculture has always been open to change and diversification. It is my opinion that food production should remain our priority-in all its forms-and that innovative sources of food will always be considered, not least as important alternative revenue streams. There are however always caveats.

- QUORN which is a microprotein, made from the soil mould *fusarium venenatum* strain PTA-2684, and created through a fermentation process carried out in large sterile tanks, continues to cause significant health effects in a high number of people. Fuasarium spp in cereals and other crops are known to produce high levels of mycotoxins (Deoxynivalenol (DON) and Zearalenone (ZON)) which are secondary metabolites of the *fusarium* group of fungi, are damaging to both animal and human health. As such they are heavily regulated in milling wheat and other cereals. Those who are allergic to mould spores may also suffer allergy symptoms when they are exposed to Quorn for this reason. This is because of a process called cross-reactivity, where the proteins in one food or substance share potential allergenic characteristics with those in another food or substance. Researchers[6] reported the case of a nine-year-old girl who suffered generalised nettle rash, asthma and abdominal pain a few minutes after eating Quorn in a canteen. The study team found she was allergic to both Quorn and mould. They concluded that: "***physicians should be aware that Quorn microprotein may cause food allergic reactions in mould sensitised patients and should think of this allergen especially in vegetarian people***." (Morel-Conreanu et al, 2015). If you are sensitised to mould it is important to remember that it can form anywhere: from window frames to decaying food. Try to reduce your exposure if at all possible".

6.https://WWW.anaphylaxis.org.uk/knowledgebase/Quorn/

With this example in mind, we should be cautious about any fundamental change to how and what we eat. We should be open to all types of innovation in UK food production and in our diets, but not at the cost of damaging or restricting the domestic production of our basic food supplies, to overall UK food security or to public health. Innovation should run hand-in-hand with other established types of food production. If that innovation proves more costly to the growers, the wider environment, the health of consumers or to the wellbeing of the farmed environment than the existing alternatives then they should not be pursued. We should prioritise conventional arable crop production where production adheres to LEAF and IPM protocols and their respective pest thresholds while at the same time investigate these alternatives. Those same advisers and producers involved in the delivery and implementation of environmental awareness and ecological assessments on a daily basis, will also be involved in the pursuance and trialling of these innovative food technologies. Ensuring that UK food production, whether existing or innovative, is wholly independent of any commercial influence will prove to be the most effective and reliable way forward.

Q. *"What access, if any, have you had to discussions about the European Green Deal, and how can government support you in engagement with European partners, and should the Government follow the EU's policy approach if it meant tariff-free access to the EU single market?"*

Information has been limited in terms of both detail and availability of the *European Green Deal*. Draft proposals, policy documents and other important information pertaining to the

Green Deal and its associated detail would be welcomed by the AICC, in order for us to be a part of the decision-making process and in order for us to help in shaping the future course of UK agriculture. The independent advice sector will play a major role in taking UK agriculture forward and, as such, is dedicated to the protection of the farmed environment on all levels. We would welcome sight and involvement in all stages of the process and stand ready to advise our policy makers on major decisions. We would also welcome the opportunity to become true stakeholders in future policy matters, by engaging both at home and abroad with our ministers and counterparts as to the best route forward for all members concerned, but in particular for the good of the wider food industry and the UK farmed environs.

With regard to access to the EU single market, it is crucial that both imports and exports of agricultural produce, whether crop or livestock derived, remain tariff free – particularly once direct support payments have been removed as is the national plan. Any measures which keep UK agriculture tariff free are both welcome and absolutely crucial in our opinion and UK farmers and growers will be placed at an untenable disadvantage if any form of tariffs are imposed. This however is for our ministers to deal with. UK agriculture is relying upon the free movement of our goods and upon parity with our overseas competitors, so anything which compromises that situation would be catastrophic to domestic sustainability. We need to be able to feed ourselves first and foremost, but we also need to maintain the opportunities for export that we have relied upon for so long. We are again happy to engage in these decisions.[7]

7.AICC, (Association of Independent Crop Consultants), Independent View, PO Box 283, Petersfield, Hampshire, GU32 9GD, www.aicc.org.uk

Summary

- Crop production in the EU and UK without PPPs is not currently realistic, and modern PPPs are far more specific towards individual target pests, as a consequence, more PPPs are needed in some crops over others because of that lack of broad-spectrum targeted activity. The combination of such technically advanced modern PPPs and their state-of-the-art formulations, the regulatory bodies such as CRD, HSE, ECP which regulate and oversee their implementation alongside the increase in the delivery of truly commercially independent on-farm advice built around IPM and environmental awareness, means that conventional agriculture and UK food production has never been more ecologically and environmentally aware or responsible
- Modern UK agriculture is a true hybrid of organic and conventional, which employs all of the organic ideals such as rotation, varietal diversity, crop diversity, widespread use of animal manures, implementation of cover crops, catch crops, dedicated and calculated land management, soil management, high degrees of environmental awareness, adherence to IPM protocols and it views the use of PPPs as a last resort rather than a panacea. We are already doing all of these things in conventional agriculture, we have a conscience, but we need ALL of these tools to be available to us to deal with any issues which arise through each diverse growing season. True IPM is having all of these tools available, not necessarily using them, but having access to them should the need to protect the quality and supply of our food arise.
- The lower yields from organic farming are largely due to inadequate plant nutrition and to much less efficient crop protection strategies, compared to those employed in conventional farming systems. There is no clear science which shows that natural PPPs are better for biodiversity or for the environment and indeed many are unregulated and so largely an unknown quantity. The LD50RAT (which is a measure of the lethal dose required to kill 50% of test subjects usually rats, and is expressed as the dose in milligrams per kilogram of body weight), is a standard measure of toxicity and applies

to all compounds whether synthetic or not. Everything has an LD50 rating, the lower the number then the more toxic the compound is. Many compounds used in organic farming and indeed in everyday life are hundreds if not thousands of times more potentially harmful to us than conventional and synthetic PPPs. In addition, every PPP we use has an MRL (maximum residue level) allowed and foods are constantly monitored to ensure dose rates at the farm end are being followed. All PPPs also have ADI (acceptable daily intake) which are for a chronic dose assessed as a daily intake over a lifetime of ingestion - levels being associated by active substance. The ADI has a 100 fold safety factor built-in, so that even at a hundred times the ADI levels, over a lifetime of exposure, there are likely to be no ill effects whatsoever. All of these safety measures are in place and are heavily regulated by governmental scientists whose only job is to ensure our safety. We should trust these people.

- Glyphosate has an LD50 of 5,600 (depending upon whose data is used). That means in real terms that a 100 kg man would have to ingest in excess of 275 loaves (233 kg) of wholemeal bread every single day for life, in order to be exposed to just 1% of a dose of glyphosate (that is assuming glyphosate had been applied pre-harvest to the wheat crop, because over 90% of glyphosate used takes place before the crop is even planted), and that would still cause no adverse health effect to that individual. Copper sulphate incidentally which is widely used in organic farming as a fungicide has an LD50 of 30, nicotine has an LD50 of 50, Rotenone has an LD50 of 132, caffeine has an LD50 of 197, aspirin has an LD50 of 200, paracetamol has an LD50 of 1,900, BT toxin (organic insecticide) has an LD50 of 2,650 and table salt has an LD50 of 3,000. Hazard and risk are VERY different.
- To quickly and efficiently reduce overall pesticide and fertiliser use, the move towards a wholly independent and therefore a non-commercially influenced advice delivery sector would be a sensible start. Detaching all advice from PPP and other input sales by adopting the AICC code of conduct with that resulting independent guarantee across the entire arable landscape would rapidly achieve this aim, with no negative impact to yields or quality. This we know to be the case.
- The scope for further pesticide and fertiliser reductions in those farms already advised upon by a truly independent AICC registered adviser is limited, but there is real scope for immediate reductions in other farming systems where tied advice is used, with little or no effects to yield or quality likely.
- Organic production should remain at the current level in terms of both support and promotion in order for conventional agricultural practices to both maintain and increase our domestic production and food quality levels.
- As a consequence of another 9% fall in organically farmed areas and falling demand over the last 12 months[2], we can assume that we have now convinced as many growers and consumers as we are likely content, of the merits of producing and consuming organic produce. The improvements and drawbacks which an organic production system has on the environment are complex and overall are in relatively equal measure. The same could be said for conventional farming systems, both have positives and both have negatives, neither is perfect but conventional agriculture is far more flexible, far more adaptable, and far more able to produce sustainable, levels of quality food in the ever-changing extremes of climate that we now see becoming more and more frequent.

2.*DEFRA.GOV.UK table 12.1 Organic and in conversion land by region, updated sixth of June 2019, next update May 2020, email: Sarahthompson@defra.gov.uk*

- Safe, affordable, plentiful food supplies have never been more important to the UK. The UK should use Brexit and the issues raised by Covid19 as an opportunity to

become more self-sufficient and not less so in arable and all other food stocks, to become more environmentally aware and not less so and far more independent where any PPP, nutrition and general crop production advice is involved. In so doing we can secure our future food supplies along with a local farmed environment which is the model for others to follow. We as an industry and as a country have always pioneered and led others - we should continue to do so.

Yours very sincerely

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Ferociter independens - semper fidelis