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# The Future of Sustainable Food Production in Europe: A Concept Paper

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April 2023

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syngenta



## **DISCLAIMER**

The arguments expressed in this report are solely those of the authors and do not reflect the opinion of any other party.

## **THE REPORT SHOULD BE CITED AS FOLLOWS**

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# FOREWORD

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We are delighted to have worked on this paper together with our knowledge partner, the Institute for European Environmental Policy (IEEP) and are very grateful to the team involved for the openness, sincerity, constructive challenge and trust on this project. Our intent is to put forward meaningful suggestions to European regulators, to explain some of the issues as we see them, and to ask for a new regulatory approach to accelerate the delivery of more sustainable food production in Europe. That is to say that we feel new mechanisms are needed urgently to deliver on some aspects of the Farm to Fork Strategy such as “facilitate the placing on the market of pesticides containing biological active substances.” But we think there is an opportunity for the EU to go further too, by providing regulatory certainty and new, faster pathways to market for agricultural technology that is safe and delivers against sustainability criteria.

We are at a critical stage of the food system transformation, faced with the immense challenges of climate change, biodiversity losses and a food security and affordability crisis. The current agricultural production model and the surrounding regulatory environment is not delivering the outcomes needed for the environment, or moving in the direction demanded by many people. There is a clear demand for more sustainable agri-food systems and it is imperative that all actors in the chain contribute. We must collectively deliver on all these challenges and, in our view, improving yield through technology is one significant part of the solution, but it is not the only one.

More rapid change is achievable, but to achieve the political ambition of the EU Green Deal, we need to have a ‘pull’ policy and regulatory framework that encourages R&D investments that bring more sustainable approaches and technologies to the market. This can help companies of all sizes and provide confidence to invest and develop sustainable solutions and bring new technologies to market. Sticking with ‘push’ policies alone, that reduce or remove availability of products that some people wish to see removed from the market like chemical pesticides, risks all sorts of unintended consequences and could even be counter-productive for the environment.

Giving farmers a wide choice helps them deliver stronger environmental performance and grow our food safely, whether it be organic farming, rediscovering old techniques or taking advantage of new sustainable technologies such as biocontrol. By being able to select the option best suited to their lands and crops, farmers are empowered to produce sustainably in a way that is economically viable for them.

The current EU regulatory framework for agriculture does not incentivise investments for sustainability. In this paper we are pleased to put forward some thoughts for a new framework to enable new technologies to come to market in an efficient and timely manner, ensuring a high level of health protection, incentivising investment, promoting partnerships and enabling an economically viable transition that works for all.





## INTRODUCTION

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This paper considers the urgent need for change in agriculture to improve environmental outcomes and proposes a policy approach for agricultural technology, innovation, and practice. The paper focuses on what needs to be done to enable the environmentally beneficial practices, technologies and innovations that are required to make a positive difference. We look for a new enabling regulatory approach, acting as a ‘pull’ mechanism for research and development into products, services and approaches that can enable a more rapid transition to sustainable agriculture. This would provide business of all sizes clear guidance on where to maximise their effort and complement the ‘push’ mechanisms already in place in the EU relating to pesticides and genetically modified seeds.

The paper has been prepared by Syngenta<sup>1</sup>, with The Institute for European Environmental Policy (IEEP) providing input as a knowledge partner. IEEP is an independent sustainability think tank working with stakeholders across EU institutions, international bodies, academia, civil society and industry to produce evidence-based research and policy insight.

<sup>1</sup> Syngenta is a leading global crop protection, seeds and flowers business.

IEEP's motivation to work together as a knowledge partner with Syngenta on this project is a recognition of the importance of bringing large industrial and private sector investors and innovators to act with sustainability as a core principle. IEEP and Syngenta share a common goal of improving environmental performance in agriculture. IEEP's role as a knowledge partner does not however mean endorsement of all the proposals in the paper.

While Syngenta has a commercial interest in meeting market, civil society and policy demands for new approaches to crop protection and farm performance, this paper recognizes that the problem is bigger than any company, and that solutions have to work for all sizes of business. In writing this paper, we have aimed to guard against locking-in single company interests, technologies or products as well as avoid raising new problems. We aim to be the most collaborative and trusted team in agriculture. As the most geographically and culturally diverse business in the field, Syngenta is well positioned to provide farmers with the best technology and expertise to increase productivity and grow healthy, affordable and sustainable food. We measure our success not just by our business performance, but also by the benefits we bring to farmers and the environment. This commitment to sustainability is central to our Good Growth Plan<sup>2</sup>.

The process of writing this paper brought together a wide range of stakeholders, including environmental NGOs, think tanks and industry. IDDRI, TMG, Ecologic, the RISE Foundation, and a Belgian farm called Ferme du Pré<sup>3</sup> informed the development of the paper through workshops and a process of consultation. Participation in the process does not mean endorsement.

<sup>2</sup>[www.syngenta.com/en/sustainability/good-growth-plan](http://www.syngenta.com/en/sustainability/good-growth-plan)

<sup>3</sup>Ferme du Pré, farm is located in Ittre, Belgium and uses a combination of organic, conventional, and agroforestry models



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## AUDIENCE

The intended audience for this paper is primarily policy and industry actors. As a group of stakeholders in agriculture, we aim to promote a positive dialogue that meets sustainability and climate needs (via policy and good regulation).

## SCOPE

This paper is future-focused and looks to generate new ideas to shape the industrial and policy landscape. We look mainly at the European Union since the EU has one of the most advanced R&D sectors, focused on agriculture and sustainability and exports its approach around the world. Given the global nature of food supply chains we also discuss global questions in the knowledge that simply exporting Europe's environmental footprint does not address the issues at hand.

## LIMITATIONS

Systemic change in EU agricultural production is an essential component of increased sustainability in food production. However, it will not be the whole solution that delivers sustainable food systems. We recognize that production is just one component of what must be a wider policy package to tackle many things that need to change in the agri-food system and consumer behaviour.



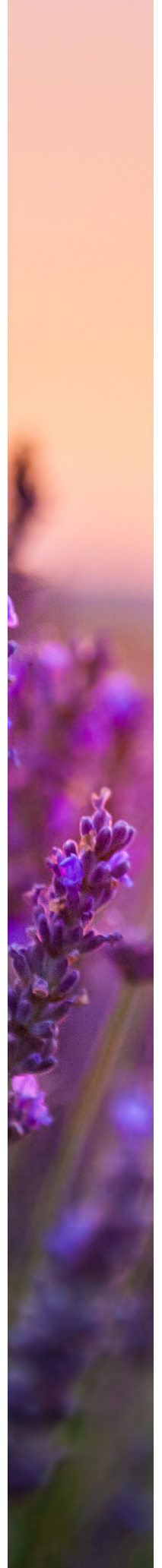
# STATEMENT OF INTENT

## why this paper, why now?

Many real challenges remain in researching and developing approaches that deliver viable sustainable agriculture and economic performance for farmers. Put simply, change needs to be made now and there is no time to waste.

We contend that the current agricultural production model and the regulatory environment surrounding it is not fit for purpose. It is failing to deliver the required outcomes for people and sustainability, including climate. Our objective is to reorientate R&D via smart regulation, towards a future that offers predictability to those looking to invest in the appropriate type and approach to R&D. This predictability is anticipated to enable more sustainable agriculture technologies and solutions, ultimately supporting our goal of a more sustainable world. Everyone would benefit if commercial R&D became centered on sustainability, including modernising proven concepts and traditional knowledge. Our focus is on promoting positive industrial participation in achieving sustainability goals, including climate objectives, by incentivizing appropriate R&D.

In summary, the next 7 years will be critical for reorientating our food system and placing it on more sustainable foundations. The last decade or more has seen heated and fractious debates across many areas in agriculture, yet with this paper we aim to break with the past. We started this process in 2020 and quickly came to understand that, only by co-creating across communities an idea that we are all comfortable with, could we hope to present a compelling call for change.





# 1

## AGRICULTURE, SUSTAINABLE FOOD SYSTEMS, AND THE CHALLENGES AHEAD

Building sustainable food systems involves looking at a wide range of factors. These include, for example, diet, affordability, pollution, supply chains, contracts along the food chain, and, of course, agriculture and rural landscape management.

Agriculture has a major impact on the environment, climate, biodiversity, and landscapes. It is also fundamentally impacted by changes in biodiversity, climate, and environmental conditions. To avoid unpredictable, rapid, and catastrophic changes and further breaching of planetary boundaries, a new approach is needed. Moreover, all parties have a responsibility to move as decisively and as quickly as possible.

Every part of the food production system must rethink and re-tool. Technology can and will necessarily support this journey, coupled with changes to techniques, methods, and farming practices. Tools driven by advances in science, such as digitalisation and robotics, have been transformative in other areas of society or economy. In farming, for example, predictive modelling can inform farm management practices and monitoring techniques for biodiversity measurement and carbon capture in real time.

We believe it is possible, with sufficient ambition and foresight, to create an adaptable agricultural industry that is fit for purpose, and to do so quickly enough to impact the twin climate and ecological emergencies in time. Part of the solution must be to engender new sustainable agricultural solutions supported and encouraged through new policies and policy instruments. Such policies and regulation can help unlock the benefits of digitalisation and other new technologies, while managing their associated risks. Agricultural research and development must be enabled to deliver on sustainability, especially biodiversity and climate change.

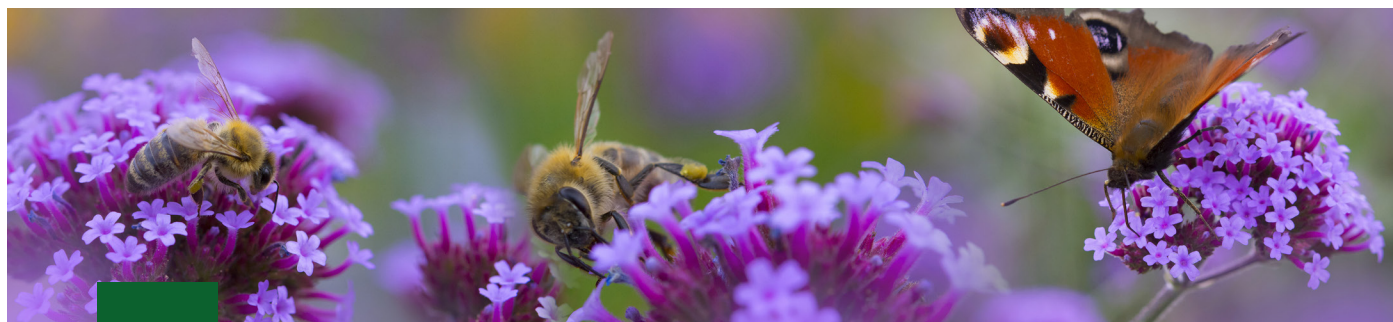


## 2

## THE NEED FOR CHANGE IS URGENT

Time is of the essence to make change happen. The environmental challenges are more frequent and extreme, including recent devastating fires and floods across Europe. Making changes in agriculture and bringing related R&D to market takes time. In agriculture, because most crops grow just once a year, development cycles are long. R&D companies need a high level of confidence in the regulatory system to enable such an acceleration.





# 3

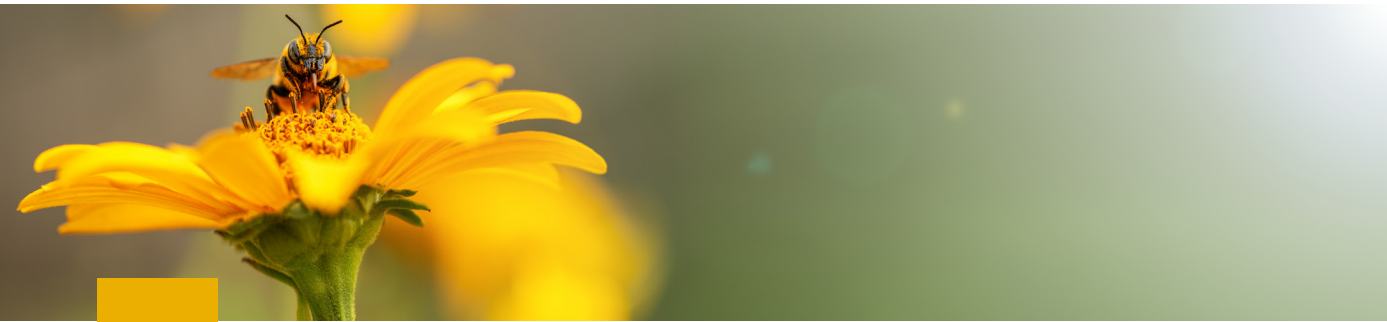
## THE TRAJECTORY TOWARDS A SUSTAINABLE FUTURE

Numerous goals have been set that provide a policy path intended to deliver the sustainable future that we are all striving for. These include Europe's Green Deal agenda and in particular the Farm to Fork Strategy, the 2050 net-zero target, the UN's Sustainable Development Goals (SDGs), biodiversity targets, and many more.

In reviewing these targets, we see two core objectives to deliver the required changes. In order of importance, these are:

- a) The absolute need to move towards a more sustainable paradigm for the management of agricultural land.
- b) A well-functioning, resilient and varied EU and global food system that supports delivery of SDGs and ensures food security.

If R&D investments are prioritised and made certain through clear objectives, this will help deliver a well-functioning EU food system that responds to SDGs and food security needs.



# 4

## LEARNING FROM PREVIOUS SUCCESS STORIES

Agriculture is not the only sector requiring urgent change, facilitated by policy action. Other sectors require, or have required in the past, fundamental change to achieve environmental or social outcomes. We live in a time where change is happening at a faster pace than before and across a diverse range of sectors. Below are a range of sectors that require or have previously required significant change, supported by EU policy intervention:

### ENERGY

The energy industry has been enabled to improve the environmental performance of its energy mix, whilst providing reliable power to homes, transport and businesses.

### AUTOMOTIVE

The battery and automotive industries have been enabled to rapidly improve energy efficiency, develop electrical powertrains and new models of charging infrastructure. Work also continues on transitioning from grey to green, via blue hydrogen for vehicles and power.

### PHARMACEUTICALS

The EU provided a new legislative mechanism to ensure that medicines that treat rare conditions are developed and brought to market, where previously it may not have been financially viable for companies to do so. EU Orphan Medicines rules have made a significant difference in ensuring that patients have the treatments they need.

Whilst the issues, background and approach differ in each sector, there is a common theme of ‘pull’ legislation that encourages new technology into the marketplace with a focus on rapid assessment / approval in order to drive adoption. A common factor is the establishment of a desired policy direction, which gives industry greater confidence to invest in research in the same direction. Pull legislation is distinct from other sectoral ‘push’ legislation, which discourages older technology and incrementally makes it harder to access the market.

European emissions standards for internal combustion engine vehicles provide a possible model for regulation in agriculture technology. Legislation pushes development in efficiency, coupled with enabling pull rules for smart charging, research into batteries, and type approval changes. The policy system has allowed both a mix of existing leading companies to innovate and disruptive technology from new companies to join the space.

There is a clear gap in relation to pull measures for products and services to support the Farm to Fork Strategy targets (these include reduction of pesticide risk and use by 50% by 2030, and at least 25% of the EU’s agricultural land under organic farming by 2030, along with other targets to reduce input use and move to more sustainable farming practices<sup>5</sup> across the agricultural spectrum). Pull legislation to encourage research and innovation in sustainable agriculture technologies and practices would help companies to invest in alternatives to pesticides such as biocontrol and to adapt their business models for the long term.

### **Biological Active Substances – An Example of where ‘Pull’ Legislation is missing**

In the Farm to Fork Strategy, the Commission committed to “facilitate the placing on the market of pesticides containing biological active substances...” by revising implementing legislation that controls pesticides. Even with a revision to the legislation, it is clear that those rules (which were really designed for synthetic chemistry) will not accelerate the development, approval, and use of biologicals in the EU enough to make the difference needed. What is needed are new rules for biologicals that are made for biologicals.

<sup>5</sup>The Farm to Fork Strategy aims to accelerate our transition to a sustainable food system that should: have a neutral or positive environmental impact, help to mitigate climate change and adapt to its impacts, reverse the loss of biodiversity, ensure food security, nutrition and public health, making sure that everyone has access to sufficient, safe, nutritious, sustainable food, preserve affordability of food while generating fairer economic returns, fostering competitiveness of the EU supply sector and promoting fair trade. Source: [www.ec.europa.eu/food/horizontal-topics/farm-fork-strategy\\_en](https://www.ec.europa.eu/food/horizontal-topics/farm-fork-strategy_en)





# 5

## AGRICULTURE IS ESPECIALLY COMPLEX

### a) The range of externalities in agriculture

Whilst examples from other sectors are useful reference points, it is important to keep in mind the **wider range of externality factors** and tensions between various parts of the food and agriculture system. The list of factors below is not exhaustive, but gives an indication of the complex nature of agriculture:

- |                                 |                                    |
|---------------------------------|------------------------------------|
| 1. Climate                      | 12. Choice                         |
| 2. Biodiversity                 | 13. Economically viable innovation |
| 3. Landscapes                   | 14. Yield                          |
| 4. Soil health                  | 15. Scale                          |
| 5. Water quality                | 16. Coherence                      |
| 6. Food security                | 17. Speed                          |
| 7. Food safety                  | 18. Affordability                  |
| 8. Innovation speed             | 19. Subsidies                      |
| 9. Competitiveness              | 20. Culture                        |
| 10. Economically viable farming | 21. Society                        |
| 11. Regulation                  | 22. Employment                     |

With these considerations in mind, a clear target or landing zone must be established, supported by enabling measures that incentivise both behavioural changes and a wave of sustainable technology (both rediscovering the old and embracing the new), and increasing understanding and acceptance.

## b) Supply chain

The agri-food chain is uniquely complex, in no small part due to its massive size, involving around 30 million people in Europe throughout farming and the supply chain.

In this paper we focus on primary production. We also recognise that change is required in transport, processing, preparation, retail, and consumption too, although we do not try to address all of the issues here. Nonetheless, an important element of improving agriculture is the need to be adaptable and rapidly accommodate changes downstream, whilst still delivering on sustainability outcomes. For example, if consumer demand radically changes towards an increased share of plant-based diets, agriculture must adapt to meet that demand and not be a limiting factor to the supply chain.



## c) Techniques and technologies

### - rediscovering the old and discovering the new

Modern agriculture exists on a spectrum between gentle encouragement of a crop grown in its natural environment and artificial systems that lack land or sunlight. All systems within this spectrum require the modification of land use and intervention by humans in the natural environment. In the EU, agriculture encapsulates the appropriation and cultivation of land, as well as the selection of crop or livestock varieties, whilst managing factors such as pests and diseases that impact on yields. In all systems, businesses and farmers make decisions and investments in response to the markets around them.



There are different views regarding how we can best address the climate and ecological emergencies. While some believe that using knowledge of intensive farming and new technology is the solution, others propose rediscovering approaches and techniques that have been successful in the past but have been forgotten over time. Farmers will decide how to approach changes to their farming practices to meet environmental requirements in EU law, including through subsidies incentivising practices that improve environmental performance.

Whilst some will move to organic farming, others will rediscover techniques and some will opt for technology-based approaches, all of which should serve towards the objectives of Farm to Fork and broader sustainability goals. Another part of the solution is increasing understanding of integrated pest management, including the use of techniques such as crop rotation that help minimise pest pressure. We would like to see more focus on outcomes that are compatible with the Green Deal and other environmental objectives such as global commitments on climate. **In our view, a mixture of rediscovered approaches and new technologies are needed to make the requisite change.**

Whilst perceptions can be changed, ideology is much harder to shift, particularly around the synthetic versus organic debate. Nonetheless, it is crucial to understand the characteristics of both. Businesses, farmers, and society need to reorientate and align through a deeper understanding as to how risks to agricultural production are managed.

For agricultural production to take place, pests and diseases must be controlled and the environment adapted to allow for production. Systemic change in EU farming is unlikely to end the debate over the relative merits of different production models and techniques. However, it should change how EU agriculture operates, which land is appropriated, which crop or livestock varieties are selected, and how pests and diseases are managed, whilst delivering the necessary output and yield of safe food and achieving improved environmental outcomes.

In our view, the path to improved performance requires moving beyond ideological stances and recognising that there are no silver bullet solutions. Focusing pragmatically on outcomes, coupled with optimising and leveraging every tool, technique and approach as rapidly as possible will yield the best results for our climate and biodiversity. This involves a mix of innovation and rediscovering approaches that have worked in the past. To be successful, it is important for all stakeholders to recognise that entrenched positions make it hard for policymakers to make the necessary compromises that move policy forward. We need real, rapid and realistic change.







# 6

## STARTING POINTS AND PRINCIPLES FOR SHIFTING THE AGRICULTURE PARADIGM

As a result of the above discussion points, we do not suggest how to balance competing and connecting factors. Rather, we outline our thoughts on what needs to happen to help deliver the change required through a series of principles and specific framework conditions.

In our view, there are already some ‘push’ policy interventions, which are meant to incrementally sunset less sustainable approaches in agriculture, and some emerging policy clarity embodied in the EU Green Deal towards a sustainable transition pathway. However, the so-called **‘pull’ policy interventions are missing. These are policy instruments which encourage, incentivise and/or enable changes of direction to bring disruptive products or services to the market as part of a transition.** Regulations are needed in relation to agriculture that encourage investment into sustainable technologies, such as biocontrol techniques, and ensure that they are placed on the market quickly as well as safely. Regulations supporting Green Deal policies are needed to enable innovations onto the market and to use land for the delivery of environmental objectives, such as the capture and storage of carbon, the restoration and conservation of biodiversity and ecosystems.

Before we move to more specific policy recommendations, these are the principles on which we are basing our approach.

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## ***Principle 1: Ideas must be bold, new thinking that genuinely disrupt the status quo***

We are of the view that new thinking is needed, specifically ‘pull’ legislation that rapidly brings to the market services and products that deliver for the environment.

2050, in some senses, is a long way ahead. However, in order to create a new paradigm that can scale, action is needed now. Regulatory processes take a long time, and it takes time also to see their effect. If we witness the implementation of ambitious new policies within the next five years, there should be sufficient time. Thus, in this context, ‘speed’ refers to such developments in the next 5-15 year time frame. In our view, market forces alone will be insufficient to meet the environmental challenges we face.

Once new regulation is in place, it will take around another 10 years for innovation pipelines and SMEs to start to produce at scale. To get where we need to be before 2050 there is little room for error.

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## ***Principle 2: Time is of the essence, but speed must not compromise health or safety***

We need to move quickly, but safely.

In the past, the rush to get new items onto the market has had negative and unforeseen secondary consequences. In agriculture, this is especially important due to the relationship between food, environment, and health. Whilst radical new thinking is needed, care and precaution must be taken to ensure that pre-market assessment is robust and sufficient to protect people and deliver environmental good.

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### ***Principle 3: Partnerships must be enabled and driven toward meaningful action***

This requires creating partnerships and a shared agenda that recognises there are tensions and trade-offs between food production, biodiversity, climate change mitigation and neutrality, and that as many parties as possible with an interest should get behind and enable transition as quickly as possible.

No single actor can find answers to all of the challenges or have a monopoly on virtue or solutions. Currently, a lot of wasted endeavour is spent fighting about issues. That energy could be more usefully deployed making a difference.

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### ***Principle 4: Incentivise capital***

Bold ideas are nothing without the means to deliver them. Incentivising SMEs and larger actors to innovate for sustainability can turn R&D research in the right direction.

Businesses are optimistic and future focused by their very nature, and positive incentives will stimulate them to continually look for opportunities to bring new products to market. Whilst sustainable transition technology is defined, embraced and incentivised by the EU in some sectors e.g., renewable energy, there is little to no incentivisation or clarity on what to strive for specifically in agriculture.

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## ***Principle 5: Transition must be economically viable***

Businesses need confidence in the regulatory systems to reassure them that there will be a return on investments, and to avoid allocating resources to assets that are limited to the past.

In the transition towards sustainability, the economic rationale for change should not be deprioritised. Protecting and restoring biodiversity and natural ecosystems can only be achieved within a system that is economically viable, ensuring both sustainable jobs and sustainable economic growth. It is also important to recall that economic sustainability is an integral component of the SDGs.

Moving a step further, we have a specific view on the need for a new regulatory framework.





# 7

## RECOMMENDATIONS FOR A NEW REGULATORY FRAMEWORK

### 7.1 Features of the transition

Reachable interim goals need to be set as many of our shared goals are large. Appropriate enforcement and measurement of progress might be required, balancing EU and national-level responsibilities.

**In summary, the transition must:**

- Reduce GHG emissions from agriculture with clear intermediate targets being set
- Support climate change adaptation
- Support delivery of the SDGs, recognising that EU approaches can have positive and negative influences and effects on these (no poverty, zero hunger, clean water, decent work and economic growth, reduced inequalities, responsible consumption and production, climate action, life below water, life on land and partnerships for the goals)
- Increase biodiversity levels on, around and linked to farmed land
- Improve soil health and reduce soil depletion
- Improve, and maintain improved, quality and supply of water
- Contribute to the delivery of food security and food safety

In working towards these goals, there are important considerations to make around the supporting environment.

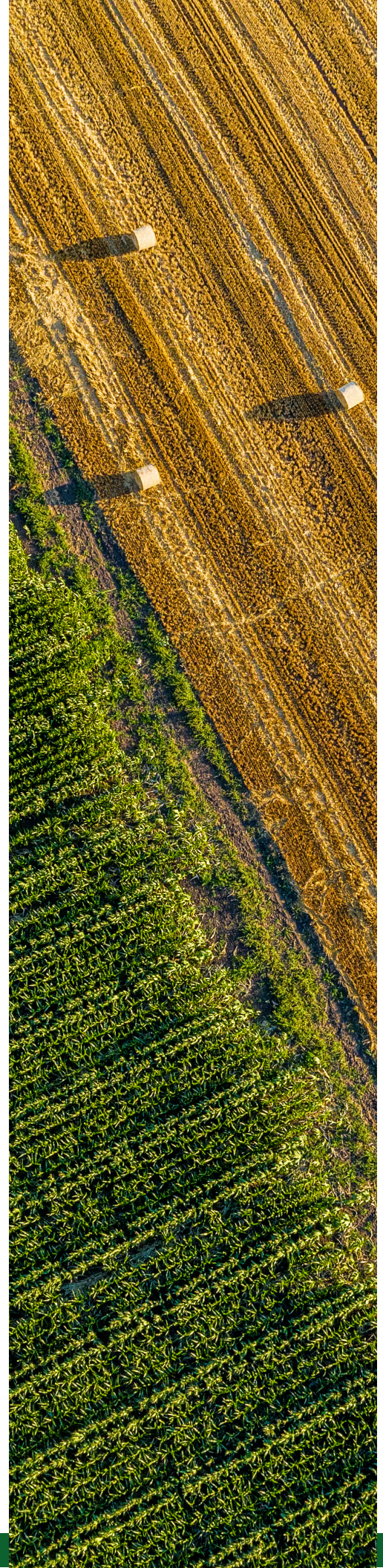
- Incentives need to get the right balance between betting on innovation, while also remaining technology-neutral and avoiding lock-in
- Farmers need to be enabled to adapt, move and change - avoiding lock-in to systems or approaches
- Greater equity is needed between actors in the supply and value chain, reducing dependency and increasing flexibility to innovate
- Consumers must be enabled to make informed choices about what they are buying. Many commentators are of the view that pricing of products should support farmers and others internalising the costs of increased environmental stewardship.

## 7.2 Considerations for what a new regulatory framework for sustainable solutions in agriculture might look like

- **Different models** of sustainable agriculture are needed (e.g., organic, regenerative, sustainable intensive, agroforestry, conservation, integrated etc.). The EU could create a modelling database that allows criteria to be defined for any new innovative product, technique, or service to meet one or more objectives (i.e., a pathway for innovation distinct from existing push legislation). These would allow for a differentiation between those products which are intended to serve environmental sustainability and those that do not – allowing them to be treated differently and processed through different regulatory pathways, unlike the common approach at present.
- Any new regulation would need to provide **meaningful and robust safety assessment** processes that do not compromise safety whilst ensuring rapid access to market for approaches that deliver with monitoring for positive and sustainable outcomes on and around farmland.
- To enter a new sustainable agriculture regulatory pathway, a solution / technology must show that it satisfies a set of **criteria based upon sustainability** in the context of climate change and biodiversity.



- The **sustainability criteria** must be established in a meaningful way and recognise the imperative to improve environmental outcomes (especially climate adaptation / mitigation), decrease land-use change pressure, maintain safety for users of technology on farms, and ensure safe food for consumers. New products and innovations, be they biological, organic, (bio)chemical, digital, plant-breeding innovation, mechanical or new disruptive technology, would move for assessment under a sustainable agriculture regulation only if they satisfy the sustainability criteria requirements.
- Generating sufficient policy coherence may require a **new ex-ante coherence mechanism** with wider scope than what is currently in place. This could take the form of a high-level food sustainability advisory board made of independent experts that would systematically assess the coherence of new EU law, revisions or initiatives that affect our food system, given the fragmented nature of the policies surrounding farming and food choices.





## 7.3 Specific recommendations for a new regulation

This section outlines desirable criteria for a new regulation to achieve, optimising safety assessment, sustainability gains, speed to market and broad adoption for techniques and technology to deliver sustainability outcomes:

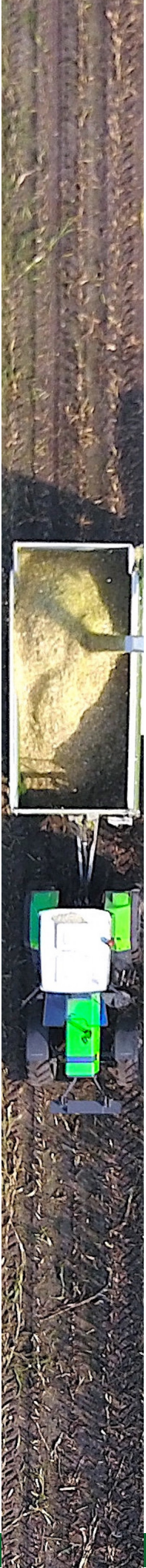
**Transparency** – The EU has recently improved transparency related to food production and product approval. Transparency is owed to society and would form an essential element of any new law in the sustainable agriculture space. Of course, appropriate (de minimis) protection is required for commercially sensitive information.

**Accountability** – Businesses applying for approval for technology or techniques for sustainable agriculture should be held accountable. It is imperative that they provide sufficient information to enable independent scientific assessment of candidate products for safety, efficacy and sustainability.

**Legitimacy** – Any new regulatory approach must be legitimate in terms of delivery for the environment. This requires support from a broad spectrum of interested parties, consumers, think tanks, Member States, EU Institutions, businesses, and farmers as primary users.

**Efficiency** – In order to bring transitional and replacement products to the market which deliver greater sustainability, any system must be efficient. This means in practice rapid, predictable assessment for approval based on necessary, reasonable data requirements that use evidence-based risk assessment and risk management.

**Policy coherence** – This is fundamental. Any enabling regulation for sustainable agriculture must deliver on policy goals in a coherent way. i.e., any products or techniques approved under the rules must deliver a positive impact on environmental objectives, be they climate, biodiversity or pollution reduction.





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### *More specific elements include:*

- A **short and predictable regulatory timeline** aiming at a maximum assessment period of 2 years from submission to approval for placing on the market;
- Proportionate, reasonable, tiered and predictable **data requirements**;
- A new regulatory framework should allow adequate characterisation of properties and risks of biologicals and other innovations for sustainable agriculture. Safety must be a given, but the **risk assessment requirements** should be tailored to the products / technologies (this differs from the current approach of adapting rules designed for chemical pesticides and reduction of their use).
- **Dedicated experts** should evaluate new innovations at all steps of the regulatory process. It is not appropriate to redeploy experts from other areas and assume they have expertise across new or different disciplines. A new regulation needs to support breakthrough innovations to complement the available toolbox of bio-based solutions. This approach can be extended in due time to other solutions for sustainable agriculture.
- A fair approach to **intellectual property** that encourages investment decisions for those companies providing innovative and efficient biocontrol solutions, balanced with reasonable licensing and scaling terms to deliver change.
- Patent protection for biologicals is limited. In addition, the return on investment is always more limited when compared to conventional synthetic pesticides, reducing the business potential of these products, while the research and development costs are high. It is therefore important to incentivise **R&D investment** through legislation as no company large or small will invest if the business case is not there. The EU orphan drug regulation provides an example of a regulation that encourages the private sector to invest in areas that would otherwise be neglected.
- Companies choose to take investment decisions if regulatory outcomes are reasonably **predictable**. Data requirements, application and interpretation of quasi-statutory guidance documents and the multi-step regulatory assessment used in relation to various products are no longer reasonably predictable. A new regulatory approach for innovation that delivers sustainability, offers the opportunity to devise proportionate assessment and approval processes.

## 8. CONCLUSIONS

In many ways, the process of creating this paper has been as important as its outcome. In the past on agriculture policy, because of the debates around pesticides, GMOs and other topics, policy debate between stakeholders has too often been polarised and polarising. The process we followed here, built on discussions between a company, environmental think tanks and environmental NGO groups, certainly did not lead to us all agreeing on every issue; but it did show a surprising degree of common thinking, especially when we focus on the future and not the present and the past.

We agree that:

- There is a role for research and innovation in determining the most appropriate mix of approaches;
- Despite the growing share of land under organic farming, Europe will need to rapidly improve the sustainability of all forms of farming into the medium term;
- While companies like Syngenta have a sizeable economic stake in the current products, they also have the capital, the expertise and the motivation to invest in future solutions;
- Compared to other areas of EU legislation which have incentivised action in the EU (for example the targets for renewable energy or electric vehicle deployment, and orphan medicines), the current regulatory framework for agriculture does not give sufficient clarity or regulatory certainty which enables available R&D capital to be directed towards solutions and products which help deliver the environmental and climate progress needed.

New EU regulation which delivers sufficient incentivisation to research and bring solutions to market is needed, and needed soon. There are policy precedents which can be learned from. 2030 and 2050 may seem 'medium-term', but because there is a time lag between the process of policy creation, the adoption of policy which sets clear signals and incentives, and then the time it takes for companies to work to find solutions and bring them to market, we need to start the process quickly.

We stand ready to play our roles in that process.





Syngenta is one of the world's leading agriculture companies, comprising of Syngenta Crop Protection and Syngenta Seeds. The company's ambition is to help safely feed the world while taking care of the planet. Syngenta aims to improve the sustainability, quality and safety of agriculture with world class science and innovative crop solutions.

Syngenta Crop Protection and Syngenta Seeds are part of Syngenta Group, one of the world's leading agriculture innovation companies, with roots going back more than 250 years. In more than 100 countries, the company strives to transform agriculture through breakthrough products and technologies that play a vital role in enabling the food chain to feed the world safely, sustainably and with respect for our planet.





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# The Future of Sustainable Food Production in Europe: A Concept Paper

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