EuChemS Contribution to the Strategic Dialogue on the Future of EU Agriculture

How can agriculture be supported within the boundaries of our planet and its ecosystem?

1. Consider and propagate relevant frameworks and scientific concepts, such as the planetary boundaries framework, while making sure that they remain compatible and interoperable with other EU initiatives and policy packages, e.g. the Green Deal or the Chemicals Strategy for Sustainability.

2. Support research and development, and incentivise the adoption of innovative methods that allow more sustainable agriculture and/or mitigate the adverse side effects of farming.

3. Not only enable, but actively facilitate dialogue between academia, industry, farmers, and policy actors.

4. Alongside our general policy advice, we would like to highlight two elements, and one substance, which play crucial roles in agriculture nowadays.

   o **Nitrogen**: The Haber-Bosch process for chemical ammonia production from airborne nitrogen quickly turned the element into a vital resource. The chemical fertilizers derived from ammonia became instrumental in feeding an exponentially growing population. However, dramatically poor nitrogen usage is complicating this life-enabling technology with life-threatening water and air pollution.

   o **Phosphorus**: Phosphate rock is a finite resource. Many reserves are likely to be exhausted before the end of this century with serious consequences for the exponentially growing global population. Poor farming practices lead to a build-up of phosphorus in agricultural soils in arable lands and large flows of phosphorus to surface water, causing eutrophication (algal blooms) in aquatic ecosystems.

We recommend that in shaping agri-food related policy, continuous attention is paid to the recent scientific developments concerning above elements, many of which is discussed in the aforementioned workshops. On a more radical note, phosphorus and nitrogen depletion will not be a priority issue if we don't have to make artificial fertilizers and use sustainable farming methods instead where you get elements in the soil through techniques such as crop rotation, green manure, etc.

5. In addition to the element of nitrogen and phosphorous, we recommend careful monitoring of the scientific developments related to **glyphosate**. Glyphosate is the active substance in the most frequently used herbicide both worldwide and in the EU. Many institutions had provided their expertise on glyphosate’s impact on health including the divergent findings of the European Food Safety Authority on one side and of the International Agency for Research on Cancer on the other, as well as reports on its adverse effects on biodiversity. We commend the European Commission’s stated commitment to revisit glyphosate decision pending research, and we recommend continued vigilance related to the topic.

   Same as for nitrogen and phosphorous, also glyphosate can be cancelled by switching to sustainable farming methods and plant protection without pesticides (crop rotation and some other techniques such as biopesticides, proper scouting etc).
How can better use be made of the immense opportunities offered by knowledge and technological innovation?

1. Prioritise research valorisation in the agri-food sector. We recommend the implementation of measures that turn innovation brought about by research into practical solutions and phase out methods that harm the environment.

2. Ensure that alternative, sustainable solutions are not only subsidised, but the transition towards them is also supported. This means not only financial support, but also education on, and promotion of alternative methods, and an overall cultural change related to farming.

3. Such awareness and change of culture can be achieved by continuous promotion of the benefits and accessibility of alternative and more sustainable methods which already exist.

4. In such communications, it is crucial to ensure that both scientific and policy developments are relayed in a widely comprehensible manner. This also helps in bridging the gap between stakeholders.

5. Consider the differences between member states and regions. In certain contexts, existing frameworks, such as the concept of “widening countries” can be used, however it is also important to acknowledge the social and cultural differences in the agricultures of different regions, and tailor messages accordingly.

How can a bright and thriving future for Europe’s food system be promoted in a competitive world?

1. Ensure that international partnerships related to the agri-food sector not only consider economic benefits, but also focus on sustainability, and mutual development and innovation. Leverage the EU’s status as a technological leader in international food partnerships.

2. Focus on the fairness of bilateral partnerships, and ensure that agricultural trade partners are also fit for the high standards under which the European agriculture sector operates.

3. Trade policy could include requirements for imports of agri-food products to be sustainable.
About the European Chemical Society (EuChemS)

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EuChemS is an umbrella organisation of 50 Chemistry related organisations, from 34 countries, representing more than 120,000 chemists.

EuChemS nurtures a platform for scientific discussion and provides an unbiased, European voice on key policy issues in chemistry and related fields.

EuChemS considers constructive dialogue between science and policymakers crucial. We believe that many of the challenges the agri-food sector faces are to be addressed with scientific considerations in mind.

Numerous issues related to farming were tackled at EuChemS Science Policy events, bringing scientists, policymakers and industry representatives together.

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