

Strategic Dialogue on the Future of Agriculture in the European Union Consultation - CEMA Submission

4th April 2024

How can farmers, and the rural communities they live in, be given a better perspective, including a fair standard of living?

CEMA posits that farmers, in the short term, need to find the right balance between costs and income. This includes:

- Cut in **fixed costs**: interest on land loans, property taxes, salaried employees, insurance premiums and machinery depreciation
- Cut in **variable costs** of the amount of hourly labour, fuel, seed, crop insurance, fertilizer, herbicide, fungicide and pesticide by introducing new technologies proven to work in real-life conditions into their daily operations
- Cut in **semi-variable costs** like machinery-equipment which can fall into both variable and fixed expenses categories.
- **Increase in the prices for the outputs without direct product support.** Going back to ensured prices regardless of demand should certainly not to be repeated, but a minimum price based on specific parameters in Europe could make a difference. In the chain, there are issues with the price setting, and any price war in retail creates trouble for farmers. The influence of some food processors can also be questioned.
- Improve work-life balance. For all farmers this will allow to focus more on the management of the farm, the economic aspect of farming and plan in experimentation. For young farmers it would be an extra stimulus to remain or start a job in agriculture.
- European industry must be supported to help bring forward a prosperous green and digital economy, where reciprocity and fairness in international trade must be preserved. This relates also to the use of and access to new technologies, as well as the minimization of administrative burden.

To reach a fairer standard of living for farmers, a combination of measures should be implemented:

- A small increase in the prices makes a significant difference for farmers. Consumer awareness when it comes to good practices implemented in the farm remains a key bottleneck. Food quality is also an issue and needs further regulation to protect EU domestic producers.
- When it comes to variable costs, the use of smart, connected precision technology with a certain level of automation of operation will be indispensable. Further training and education of both ag advisors and farmers would certainly be an additional driver to reach the expected savings in variable costs and make farming both more competitive and sustainable.
- On the variable cost of fuel, there is a positive tendency to stop subsidizing fossil fuels. However, in a context of global competition in which European diesel tax reductions for farmers still play an important role, alternatives have to be offered and made affordable. In rural areas there is also the issue of logistics and storage of alternatives like liquid and gaseous biomass fuels. Options exist to create biomass fuels directly on farm, but problems related to the low availability and many interested parties, bring to a need for a combination of solutions, as well as the possible recognition of agriculture as a hard-to-abate sector when it comes to rights on HVO or e-fuels.
- Taxation depending on the kind of land usage and the kind of practices exercised on that land could lead to an added value for farmers, putting more pressure on other stakeholders like landowners e.g. in supporting changes in practices for sustainability, healthy soils, etc. It should be noted that the CAP subsidies are mainly per unit of land.

- Rental prices for land could also be linked to farmers profits. Prices that go up, driving the push for industrialization and housing, rather than increased wealth among farmers, is unsustainable.
- Investments in machinery are linked to the long-term profitability of farming. Farmers are confident of the added value of (smart, precision) machinery, but they need further support and means to invest or get loans. Investing in state-of-the art machinery often represents a high cost for farmers while ROI takes time. A lack of long-term vision and strategy at the national level does not fit well with such investments. The rising average age of farmers is expected to reflect into a decreased willingness to invest in new practices and new machinery.
- When it come to the machinery needed, choices can be made, e.g. smaller machinery where possible/suitable or robotics systems to support labour intensive activities or skilled labour.
- In the long-term, through investments in smart, autonomous connected machinery and other digital tools, farmers can be more acquainted with fleet control and data management, which would help them find a better work-life balance, focussing more on their farm's competitiveness and on real inspection on fields, leading to the farmer becoming the guardian of the health of his soils.

Added value can be created from farm products by adding processes, eliminating steps in the chain, or making a different use of the land. Overall, there is a tendency towards short chain principles, with products brought directly to consumers or to nearby shops. While this is not possible with every product, in particular bulk production that needs efficient large-scale processing, here are a few examples:

- Livestock farmers that are also butchers can get the premium prices for meat and processed meat themselves.
- Holders of milking cows can make cheese/yoghurt or deliver milk directly to the nearby shops and do the sterilisation themselves (completely automated mobile units that can provide this service in full compliance of all legal precautions /rules already exist).
- Farmers with livestock can use manure or manure + land waste (e.g., hay) to create biogas for direct use in an electricity plant or to upgrade to biomethane. Units for making biomethane and even very small mobile units that can move from farm to farm already exist, as well as cheap capture and storage systems.
- Land can be used for a combination of services, food and electricity production. On-farm circular economy should be additionally recognized by national governments and subsidized.

The role of farmers is evolving and multiplying, requiring additional support, training and skills. Farmers are now fleet managers, data managers, farm/system managers, soil specialists, food processors, biofuels producers, electricity producers.

Due to decades of poor choices, European land is highly degraded, more prone to erosion, salinization, etc. Good soil practices can significantly contribute to farmers' income security, also in relation to possible carbon storage credits and mitigation and adaptation measures against climate change. Smart digital tools and machinery can support farmers in this transition, but the level of uptake of these technologies is still low in Europe, and there is also a lack of training/skills. For a fair standard of living, farmers will have to be brought to a higher level of understanding and executing of agricultural practices.

For the long-term there is a need for clear decisions, offering farmers the stability and guidance to work towards their own future and to invest in their farm, their capabilities, their resilience. At the same time, flexibility should be offered in policies to ensure that new innovations can be adopted to the benefit of farmers, food production and environmental goals. It is the lack of this long-term clarity combined with the longer investment time horizon in agriculture that make farmers wary of but also incapable of getting the necessary loans.

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

All actors in the food production chain carry certain amount of responsibility on what is produced and consumed.

To answer the question there is need for a common understanding of the planetary boundaries i.e., environmental conditions as prerequisite for stable and habitable planet. Sustainable and regenerative agriculture practices play a pivotal role in mitigating the impacts of planetary boundaries breaches. These approaches prioritize ecological and social sustainability, aiming to enhance soil health (crop rotation, reduced or no tillage, organic farming), preserve biodiversity (agroforestry, IPM) and reduce the carbon footprint of food production.

Climate change brings about specific challenges such as long periods of drought, too much rain in short periods, and overall new diseases/pests. Some agricultural practices could benefit farmers by creating a steadier income and resilience against these extreme events. This higher profitability and lower risk of income loss could mean lower yields. It is not necessarily negative if the right balance is found between steady yield and higher but increasingly variable yield due to climate change. This reality has to be taken into account.

Some general considerations for regulators:

- There needs to be a balance between 'land saving' versus 'land sharing'. Land saving is put forward by some as a solution to give more space to sensitive areas and therefore increase their survival rate. In addition, there is more need for areas for buffering water to avoid flooding and retain deep water layers. Certain areas are also seen as crucial for carbon storage, like wetlands. This already creates a big pressure on the total agricultural land area, besides the already high pressure from industry and housing. The land sharing ideologies have also not completely disappeared. Currently, this translates in the push for landscape elements like tree elements and hedges besides the set-aside rules. For the farmer, the payment received for these ecosystem services & devaluation of land are the key arguments against them. For a farmer to step in, he should be treated as a landscape keeper and be paid accordingly. The value of that land should also be changed so he pays less taxes/rent for that land.
- The balance between rights and rules for industry, consumers and farmers needs to be better, as well. A different, more sustainable food system starts with different choices by consumers, which should be incentivized to change their behaviour. Educating consumers about the importance of sustainable choices, enabling them to make informed decisions and promoting awareness among citizens about the significance of sustainable agriculture and its role in respecting the planetary boundaries is key.
- There should be a clear baseline on what is expected from farmers on their land.
- Overall, there should be more flexibility on how farmers tackle issues on their land and their efforts should be rewarded on measurable results. There should a better identification of what is considered the real extremes and these should be properly addressed. In these exercises and resulting classification all stakeholders should be taken along in solving the issues. Some lands require more investments and are possibly less profitable; that should be reflected in the land value and its rental taxes, so to stimulate farmers to make the necessary changes.
- In European agriculture, the divide in the rollout of these changes is not as much due to the ability or capability of large versus small farms, but rather due to the different willingness to start the change of young versus old farmers.

Some more specific considerations:

Nitrogen problematic:

- The goal is to have less nitrogen leakage and emissions of N₂O and ammonia. That means less manure application. It also means more fertiliser (made from fossil fuel) application to compensate.
- There are also options to make fertiliser from the same manure or use the manure to make biogas/biomethane. The remaining solids are much less reactive and can be used to enrich the soils with organic matter or be further dried for use in regenerative agriculture.
- These two situations show that certain restrictions imposed do not necessarily lead to the expected result, as there are multiple options to deal with a certain problematic. **Farmers should be left freer to innovate/ experiment.**

- Novel technologies can support in understanding what a certain spot needs/can handle, precision technologies can provide as a next step the right amount to get an optimised yield with minimal impact on water/air pollution.
- It is expected that well-maintained soils will be able to retain more water and thus nutrients.
- The focus should therefore not only be on less application but also the right soil conditions and side effects of restrictions.

Plant protection:

- Plant protection against fungi, pests, competing weeds is and will remain important. Any restriction without alternatives will not be viable. A blunt cut in plant protection products will not deliver. The goals should be clearer (increase of biodiversity, less impact overall on animals, less water contamination). This can be achieved by limiting the exposure, focusing on those areas of particular concern (higher risk of run-off, leakage to the water table, vicinity of water bodies).
- There are the very generic rules on buffer strips and drift reduction with resulting reservation of farmers for the construction of necessary new drainage/infiltration structures or extension of protective areas.
- A more detailed approach is necessary, with more field/spot specific assessment on the impact and way to reduce the risks. With prescription maps, real-time sensors and precision tools (spot/patch/band) a more high-risk but more effective substance could at the end result in less risk overall and higher efficacy in treating the infestation.

Corporations in the food industry should invest in research and development of sustainable agricultural technologies and practices to reduce resource consumption and environmental impact, while governments should allocate funding for research into sustainable agricultural practices and support programs that help farmers transition to more sustainable methods, including their training and education.

How can better use be made of the immense opportunities offered by knowledge and technological innovation?

CEMA asks for European policies **not to hinder technical innovation by regulations and administration** not only for farmers but also technology providers, which have similar issues of scale. Machinery manufacturers deliver products according to individual needs with many types, and very low volumes. The accumulation of administration and excessive requirements, that are not necessarily delivering, makes European smart farming technology (including precision farming) expensive, or even prevents its placing on the market as non-viable for the volumes delivered. In addition, potential technology users must have clear risk/cost/benefit assessment of operational aspects of such technologies in a real-life environment.

CEMA has observed a lack of harmonisation and fit-for-purpose European legislation and its implementation. In this sense:

- The right regulatory tools need to be in place. Industry is not against legal actions and in particular on any updates to handle the state of the art and make it future proof, but a minimum of manpower (minimum one technical expert in the European Commission) should be assigned, or a different approach is necessary. Under type approval legislation for road circulation agricultural machinery/vehicles are at constant risk of copy-paste of non-suitable automotive rules, with hardly any efforts to adapt according to the needs of the specialized machinery.
- In future technological developments and the related regulatory adaptations, the specificities of the sector must be better considered. A good example is autonomous behaviour. The Machinery Regulation includes self-certification, which has proven to be a good facilitator for a safety framework in Europe for big and small industries. This framework allows also the integration of new technologies like autonomous driving. Now that standards to cover the safety aspects under the Machinery Regulation are under development, it is expected that there is a bright future with little bottlenecks for European agriculture.
- For more than 20 years the ag machinery industry has asked to get harmonisation for mobile machinery. These pieces of machinery are sold globally, and 27 national approvals procedures for such

low volumes meant certain markets could not be served with novel technologies. The situation is now resolved as the final deal for a regulation on the topic proves that it is possible to create a fit-for-purpose legislation for specialised machinery.

- **However, many harmonisation efforts remain dead letter.** A good example is the **lack of harmonisation in drift reduction test results and classes**. In plant protection products (PPPs), the main application risk that is in focus is on drift, with often drift reduction nozzles and other drift reduction techniques being prescribed for use. But no support was ever provided in harmonising the different national test methodologies for drift reduction nozzle wind tunnel tests. In particular, EU funding would be necessary to bring the different institutes together to investigate alignment. A legal article in the Sustainable Use Directive on mutual recognition agreements could encourage such discussions. The lack of harmonised drift classes could become also a bottleneck in the integration of smart precision technologies in the Good Agricultural Practices as Risk Mitigation Measures (see also the ongoing discussions on the Compendium on conditions of use to reduce exposure and risk) related to PPP authorisation and registration. The goal at the end is a reduction of PPP use and overall risk of exposure, which can be supported by stepping away from the worst case scenarios and move to individual field risk assessments, resulting in more options/freedom for farmers.
- **Fit-for purpose also means foreseeing the appropriate lead time to make the necessary adaptations**, in particular for small volume industries with a huge variety of designations/special designs like the agricultural machinery industry, which delivers on the specific needs of European farmers from different regions, cultural background on used practices and different climates. The Cyber Resilience Act (CRA) is a good example of an instance in which our industry was considered negligible collateral damage for the sake of the legislator's ambitious goals. The off-road industry has clearly indicated that compliance to the CRA means re-assessing all safety risks due to the many changes in hardware and software, leading to a non-avoidable re-approval of all types of vehicles/machinery, European or national. Under the current circumstances, achieving this in the short term proves unfeasible for our industry, as well as for the relevant approval authorities, who appear indifferent as it falls outside their immediate responsibility. Consequently, certain types of machinery will experience a delay in availability.
- Overall, the lack of appropriate requirements and of feasible deadlines, as well as burdensome compliance rules and costs hamper the deployment of the technological innovation potential in agriculture and should be continuous points of attention.
- There is a need for harmonized test methodologies for performance of innovative tools and technologies, thus helping farmers make decisions on buying/using such technology. Said test methodologies should fit the low volume producers and therefore be cheap/reproducible and provide a robust/reliable performance range. Within a European agricultural data space the data recorded from such machinery can be used as proof of compliance towards authorities.
- It is essential to promote demonstration activities at the farm level aimed at showing farmers how smart technology perform. Demo farms are key examples of support strategies facilitating the adoption and uptake of innovative tools and services.

Another **good example of hampering with technological innovation is the lack of freedom to use self-learning AI using Machine Learning techniques** without massive administrative burden and third-party assessment. AI will become a game changer for the agricultural machinery sector, in both development and operation of machinery, capable of dealing with higher complexity and decision problems for small volume productions.

The AI Act results from the necessity to have harmonised rules on AI. Nevertheless, a better definition of high-risk AI applications should be envisaged to address the interplay with other EU product regulation such as the Machinery Regulation.

In certain specific sectors, like agriculture, self-learning AI systems could, within certain boundaries, allow the system to adapt to the needs of the individual farmer, learning from the farmer and its specific application. The use of AI would enable farmers/agronomists to take faster and better decisions within the season.

The unclarity still present in this piece of legislation, might stall the innovation potential rather than guide it. For machinery working in agricultural fields, which can be considered low-risk environments, this is problematic. There should be alternative options based on proper risk assessment, which is currently lacking. This could create the stimulus to tap into the full innovation potential of AI in agriculture.

CEMA supports the development of a **digital agriculture** as the main accelerator for innovation:

- Already now, individual operations can be done much more precisely, and plant-individual action is possible. However, the decision-making process on where, how and when to use them, and combining them with other operations, is often done in real-time and is lagging behind. These pieces of machinery are too expensive not to be used optimally. The combination of multiple data streams from machinery, additional sensors and digital tools can generate much more useful knowledge and decision power as it brings together the expertise of different segments like from soil, plant protection, plant nutrition. Combining farm data with other information flows from weather, geo... would further enhance the options. The development of use cases, involving all relevant stakeholders on rights, quality, security, trust in data, would generate effortless data streams while offering additional services and proof for compliance.
- The development of an agricultural data space is therefore crucial.

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

Europe positioned itself as the world's no.1 in technology development and export, but also as frontrunner of implementing innovative technologies into practical application. The farming sector, with its support of innovative technologies and practices, certainly contributed to the overall food security and economic development, being almost or completely self-sufficient on a wide range of essential foods.

Putting in place policies to transform farmers from the most vulnerable to the most resilient part of the value chain would have a positive impact on the farming community.

CEMA, representing the agricultural machinery industry asks to have a seat at the table when discussions are happening, based on these characteristics:

- The industry has an overarching role within the sector since machinery is contiguous to nearly everything a farmer does within an efficient sustainable farming system.
- Through advanced machinery and the extracted information we can be integrated in the connected network of stakeholders to steer the farm and field processes. The development of the AgIN project is a good example of this.
- There is a wide range of knowledge and expertise that can be build upon. This not only extends to technical expertise, but also knowledge on how to deliver useable and reliable innovation to farmers.
- Most European agricultural machinery companies are located in rural areas and therefore are integral to generate economic activities for all people living in rural communities – not just farmers. The industry has a distribution network and dealers in rural areas and maintains great efforts in finding the right skills in support of farmers.

ABOUT CEMA

CEMA aisbl (www.cema-agri.org) is the association representing the European agricultural machinery industry. With 11 national member associations, the CEMA network represents both large multinational companies and numerous European SMEs active in this sector. The industry comprises about 7,000 manufacturers, producing more than 500 different types of machines with an annual turnover of about €60 billion and 150,000 direct employees. CEMA companies produce a large range of machines that cover any activity in the field from seeding to harvesting, as well as equipment for livestock management.

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