

# How can the EU Farm to Fork strategy deliver on its organic promises? Some critical reflections.

*This is the peer reviewed version of the following article:*

Moschitz, H., Muller, A., Kretzschmar, U., Haller, L., de Porras, M., Pfeifer, C., Oehen, B., Willer, H. and Stolz, H. (2021), How can the EU Farm to Fork strategy deliver on its organic promises? Some critical reflections. EuroChoices.

*which has been published in final form at <https://doi.org/10.1111/1746-692X.12294>. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Use of Self-Archived Versions.*

Heidrun Moschitz, Adrian Muller, Ursula Kretzschmar, Lisa Haller, Miguel de Porras, Catherine Pfeifer, Bernadette Oehen, Helga Willer and Hanna Stolz

The European Commission's Farm to Fork (F2F) Strategy (European Union, 2020) sets ambitious targets to transform the whole food system towards greater sustainability (see Box 1). The Research Institute of Organic Agriculture (FiBL), has a longstanding and transdisciplinary expertise in sustainable agriculture and food systems, and welcomes these steps towards more sustainability in the food system, but also critically reflects on the strategy. The F2F strategy addresses the main challenges in the EU food system such as nutrient oversupply, pesticide use, decreasing farm diversity or climate change mitigation; and it refers to core elements of a sustainability strategy in food systems, such as circular economy and integrated nutrient management plans in a context of more locally adapted solutions, improved pest management or 'carbon farming'. We, however, also identify a number of drawbacks, such as a tendency to focus on technical innovations while neglecting the social and structural aspects in transforming the food systems. As such, the strategy (European Union, 2020, p. 8) asks for making 'the best use of nature-based, technological, digital, and space-based solutions to deliver better climate and environmental results [...]'. A lot of emphasis is put on input substitution instead of system change, which could, for example include supporting regional collaboration and collective initiatives of farmers and supply chain partners in developing innovative farm and food systems at landscape level. Moreover, we find too little consideration of the fundamental changes required in education, training and extension along the whole value chain. In this reflection article we focus on two areas we identified as key for implementing and further developing the F2F strategy: the target of 25 per cent organically farmed land; and a clarification of the important role that Agricultural Knowledge and Innovation Systems (AKIS) play for achieving the ambitious targets set.

### Box 1: EU Farm to Fork Strategy

**General objective:** The Farm to Fork strategy is a key element of the European Green Deal (new EU growth strategy for 2050) aiming to make the food system healthy, fair and environmentally friendly, including food production, processing, consumption and waste prevention. Its goal is to reduce the environmental footprint of the food system while strengthening its resilience and ensuring food security. The focus is on the creation of a circular bio-based economy that can act as a blueprint for a global transition towards a more sustainable food system.

#### **Specific Targets for a sustainable food production (by 2030):**

- Achieve at least 25% of agricultural land managed under organic agricultural practices;
- Reduce the use of chemical pesticides by at least 50% and the use of hazardous pesticides by 50%;
- Reduce nutrient losses by 50% and the use of fertilisers by 20%;
- Reduce sales of antimicrobials for farm animals and in aquaculture by 50%.

**Implementing Actions:** The strategy envisages 27 specific policy actions at European level combining existing and new policy instruments ensuring the sustainable transition is deployed in all dimensions of the EU food system.



### High responsibilities for Member States

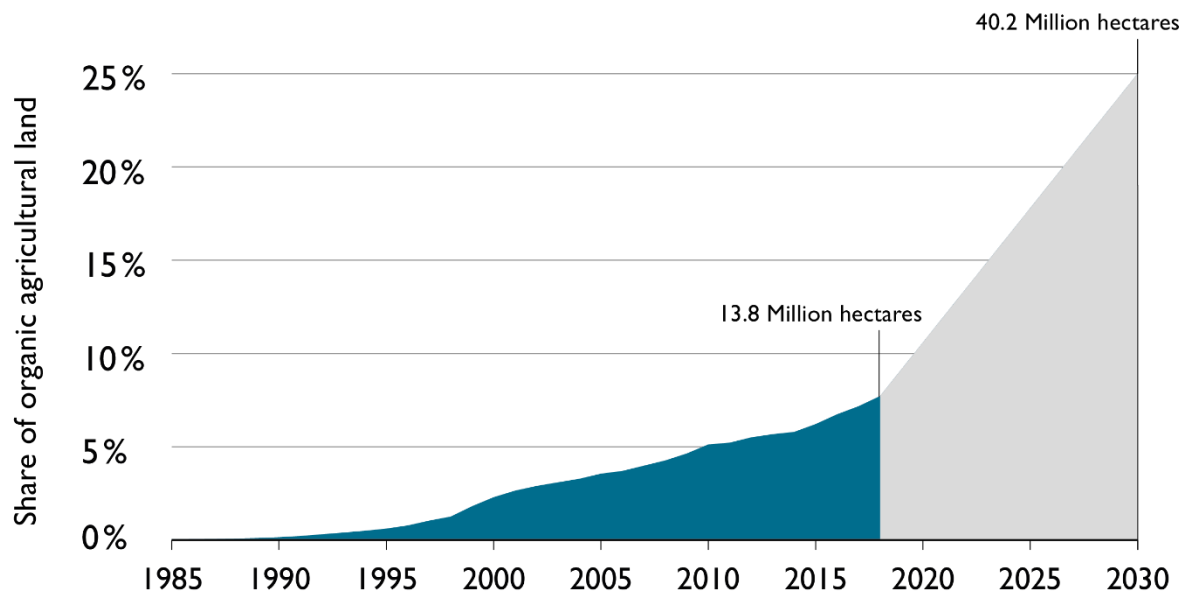
While the EU-wide targets set in the F2F strategy go way beyond past policy developments, they remain non-binding, and there is no guidance on how they may be implemented. This absence of concrete policy suggestions is on the one hand an opportunity to engage multiple actors in the implementation process to contribute targeted policies based on their expert knowledge. On the other hand, the lack of concreteness also bears some danger that actual implementation will fail due to lengthy struggles between different stakeholders and conflicting suggestions. Some more EU level guidance is thus needed; the F2F strategy's targets can only be achieved if there are EU-wide instruments that are binding for all Member States, thus setting an overall policy framework for implementation. Within the F2F strategy, the CAP maintains a central role, and the implementation strongly depends on the Member State (MS)'s National Strategic Plans and the new eco-schemes, suggesting that the F2F strategy will lead to a relative re-nationalisation of the political debates on agriculture and food systems. National debates and solutions regarding nutrient and pesticide management, organic area shares, etc. could increase the relevance of these topics to the wider public of each MS and allow for solutions tailored to national and local contexts and needs. However, not all MS seem equally well positioned (e.g. with regard to their agricultural knowledge and innovation system (AKIS)) or motivated to implement the F2F strategy's targets effectively. The EU-wide regulations related to the F2F strategy thus need to be designed such as to optimally promote a supporting institutional environment, including a strong AKIS, in all Member States. The EU should provide an overarching policy context, within which Member States can seek for nationally adapted implementation of these general rules, duly accounting for their respective special national situation.

### Ambitious goal of 25 per cent Organic requires holistic approach

A key target of the F2F strategy is to reach 25 per cent of EU's agricultural land under organic production by 2030. We identify three ways in which organic agriculture can contribute to achieving the overall goals of the F2F strategy.

- Firstly, organic agriculture is a well-established and clearly regulated farming system that has shown its ability to thrive in a market context and that has a widely proven positive performance regarding many environmental targets, such as nutrient surplus, ecotoxicity, soil fertility or biodiversity (Seufert and Ramankutty, 2017).
- Secondly, organic agriculture and its farming practices can act as a role model for sustainable agriculture, e.g. with its focus on soil fertility and conservation, ecosystem dynamics, and the presence of effective institutions for control and certification, together with its rich experience in building on local knowledge. In this way, it can inspire conventional production towards more sustainable practices (*cf.* Eyhorn *et al.*, 2019). At 25 per cent, organic agriculture would generate high visibility, providing ample evidence and understanding of how to implement such practices at larger scales.
- Third, the organic sector has developed basic structures along the whole value chain, from input provision to processing and retailing. Whilst not yet in all cases fit enough to cope with a significant enlargement of volumes (see details below), these structures offer a model on how to organise value chains from more localised and potentially more heterogeneous production, which are characteristics of more sustainable agriculture of any kind: often, a larger number of different varieties is produced, and the products tend to be more diverse, particularly regarding appearance. The 25 per cent organic land target will only be reached if the focus broadens from converting agricultural land to converting whole value chains, including input providers (seeds, plant protection, etc.), processors and retailers, through to consumers. The organic food chain has built up appropriate structures for this, including instruments and knowledge to ensure the integrity of the product along the whole supply chain. But they need to be further improved, and all involved actors, from logistics, storage, processing, and trade need to be sensitised for the specific requirements and rules of organic food production.

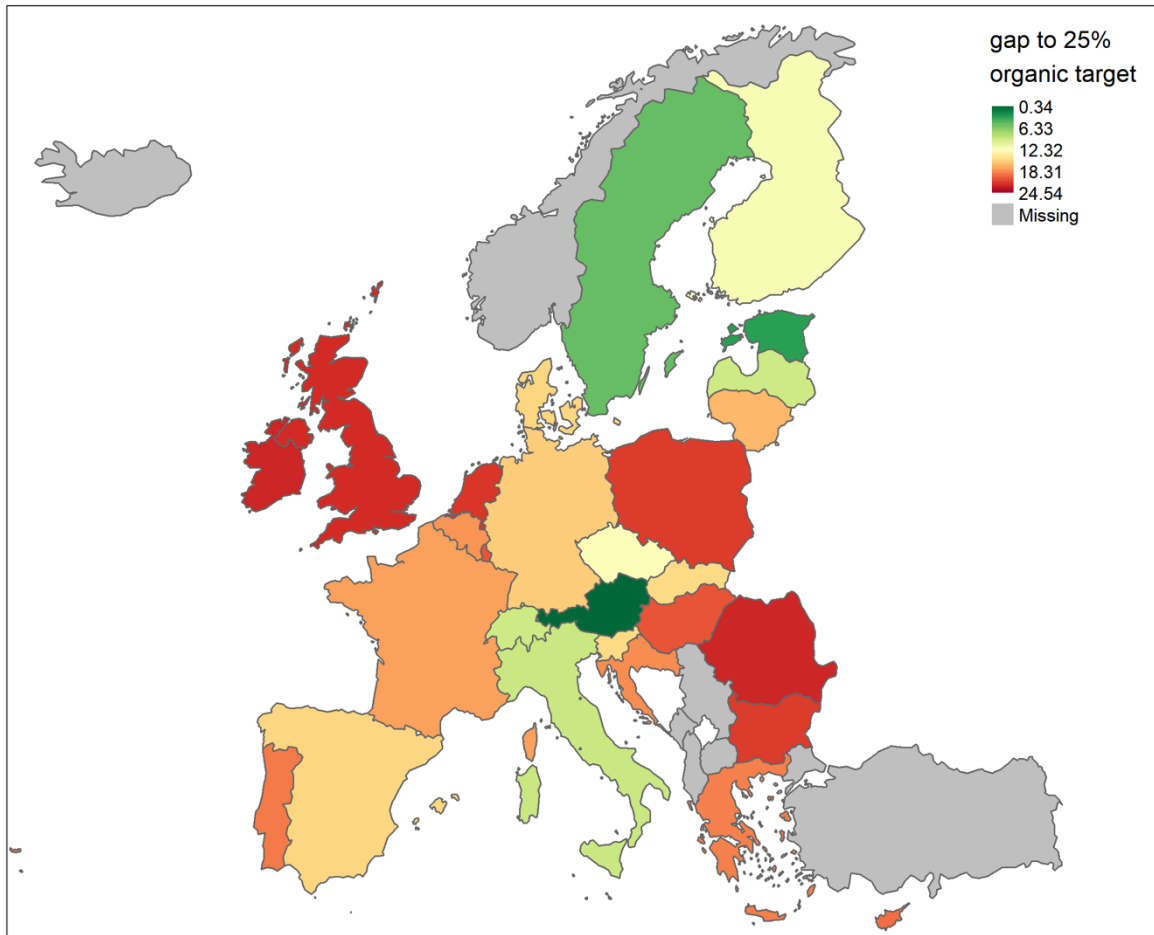
**Figure 1: Projected required growth of organic agricultural land to reach 25 per cent in the EU in 2030**



Source: FiBL-IFOAM-SOEL Surveys 2001--2020.

If policy measures remain focused only on production, we could witness collapsing markets with strongly decreasing prices for farmers. Policy measures therefore also need to consider processing and retail, and to develop the demand side. For example, in Austria a national action plan includes the goal of reaching 30 per cent of organic food in public catering in 2025, and 55 per cent in 2030. This strong public demand is partly responsible for the high share of organic farmed land in Austria, reaching almost 25 per cent in 2018 (FiBL, 2020).

**Figure 2: Map of Europe showing the gap of different countries to reach the 25 per cent target;**

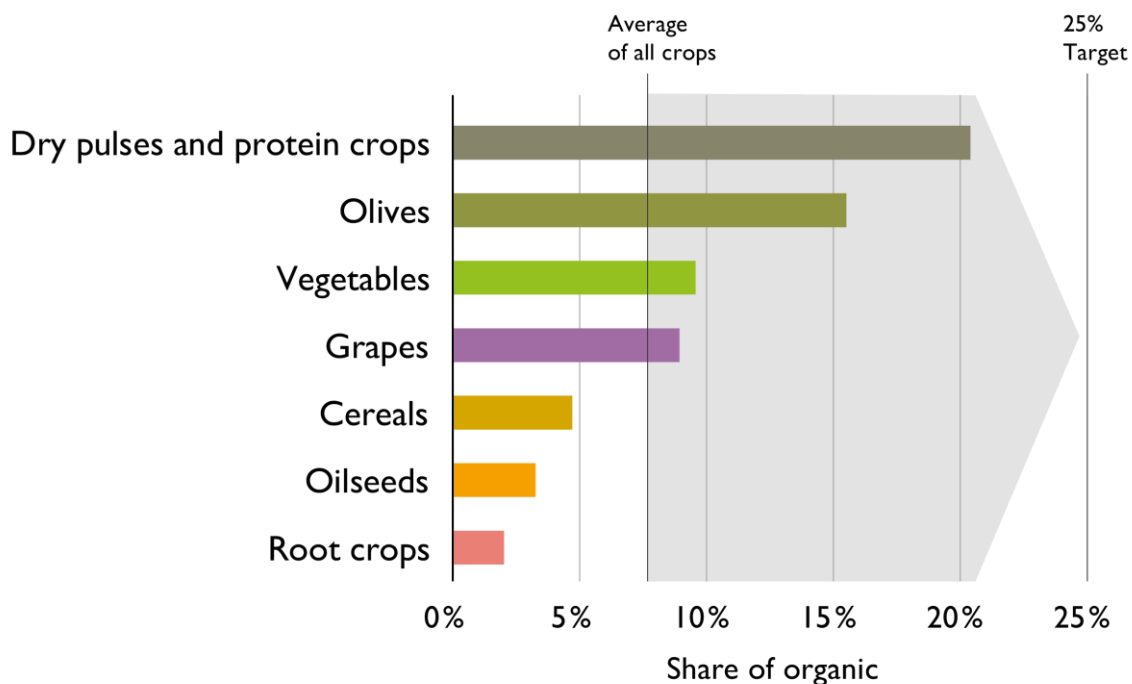


Source: FiBL (2020).

Yet, the different situations of organic farming in the MS need to be taken into account. While states such as Austria or Estonia (22 per cent) almost reach the target of 25 per cent, others (e.g. Malta 0.5 per cent or Ireland 2.4 per cent) would need a substantial transformation of their agricultural landscape and food value chains. Therefore, the goal should be twofold – increase the share of organic farmland in those countries where organic is still a niche as well as incentivising countries with a high share to go beyond the target of 25 per cent. Accordingly, an Organic Action Plan not only needs to address the whole value chain, but also needs to include flexibility for implementation accounting for the respective national situations. Besides, specific objectives for each farming sector should be formulated rather than an overall goal of 25 per cent of agricultural land. This would allow each sectoral organisation (e.g. dairy industry organisations; vegetable producers and processors etc) to actively contribute to the mission of the F2F strategy by setting individual targets, developing focused action plans and providing support to the whole supply chain. Country-specific and targeted support for all sectors of the organic industry would for example involve specific training on the management of organic production (including legal guidelines, sourcing, cost models, pricing, labelling, product development and production as quality management). In addition, support would be needed to build up new forms of marketing, as well as for consumer education to increase understanding of the added value of an organic product. Furthermore, reduced VAT for organic and sustainably produced food could promote consumption of these products. Such an Organic Action

Plan could act as a role model for other approaches to sustainable agriculture contributing to the F2F strategy's targets.

**Figure 3: Organic shares of selected crops in the EU**



Source: FiBL (2020).

Another very important building block is the full internalisation of the external costs of agriculture and food consumption, regarding environmental, health and socio-economic aspects. Such true cost accounting is mentioned only very marginally in the F2F strategy, but should be made a central part of the overall EU-wide policy framework if the ambitious goals are to be achieved. The full internalisation of external costs of unsustainable food production and consumption would significantly reduce the competitive disadvantage of currently more expensive organic products and would fit well into a market system, where a level playing field for all participants should be established; thus not allowing for costs of private operations for some participants to be a burden on the public. Albeit these ideas increasingly gain in importance (see e.g. Aspenson, 2020), it will certainly not be easy to implement, given opposing vested interests. Regarding policy instruments to achieve this, taxes on external nitrogen inputs (fertilisers, feed, etc.) and carbon taxes on fossil energy would be key steps in this direction. In any case, a code of conduct, for example for 'responsible corporate and marketing practices', as voiced in the strategy, will hardly be strong enough to meet the demand for environmental accounting along the whole value chain.

**Investments in clever capacity building are central for success**

The key role of innovation is clearly identified in the F2F strategy, but the focus is almost exclusively on nature-based, technological and space-based solutions, largely neglecting social processes. Given the complexity of agricultural systems and the multi-faceted nature of sustainability, social innovations will be at least as essential as technical ones and any solutions will involve trade-offs requiring a societal choice. For example, the target of reducing pesticides requires development of new knowledge by farmers to find other ways of managing pests, involving more preventive measures. Moreover, reduced application of pesticides could lead to reduced yields, thus economic loss for the farmer. Eco measures will only be successful if farmers gain a better understanding of ecosystem functioning and how to integrate them into farm management. Such system changes are quite different from introducing a new crop or technology. They are only successful and accepted if those who should implement them are invited to participate in their development from the beginning, so that the required changes accommodate the needs and expectations of all stakeholders (Basso and Antle, 2020; Neumeier, 2017).

Furthermore, system change needs actions at all levels of the supply chain. Producing in a more sustainable way is only successful if consumers change consumption habits. This 'shift to healthy, sustainable diets' (point 2.4 in the strategy) needs a comprehensive approach, carefully involving all relevant stakeholders, such as processors, retailers, and consumers to identify the most suitable leverage points and support changes in consumption patterns and habits. For example, recipes may need adaptations leading to different appearances e.g. colour or flavour of a product, which consumers need to become adapted to. This and the above-mentioned improvement of existing structures in the food supply chain require appropriate education of the involved stakeholders.

Remarkably, the F2F strategy hardly addresses the central role of education and training to support the required transition; a serious omission as the F2F strategy calls for a comprehensive change in policy and behaviour of producers, consumers and actors along the whole supply chain. The multi-actor processes initiated through the H2020 programme need support from the whole AKIS and beyond to achieve lasting change. Advisors need empowerment to engage in such new ways of innovation processes. Meaningful participation of stakeholders requires careful facilitation and moderation between various needs and interests, and this in turn requires a new understanding of what it means and takes to be a 'good' advisor (Brunori *et al.*, 2013). While such a new approach is partly introduced with the EU's 'Operational Groups' (composed of farmers, advisors and researchers), advisors would need more support and training to fully implement it. Moreover, in view of the required changes of the whole value chain, as mentioned above, training and education also needs to address processors and other actors along the value chain that enable them to change their practice to achieve the required transformation of the whole food system.

## **Conclusion**

The above discussed reflections lead to three major take-home messages for the different actors in the field.

- First, policy makers at EU level need to ensure a coherent framework spanning beyond the CAP to include health, environmental, economic and other relevant policy fields, leading to a comprehensive food policy. Such a policy would prevent outcomes where, e.g. agricultural policy supports meat or sugar production while health policy recommends a reduction of both in consumers' diets. A central aspect is coverage of the whole food system from

agricultural production to consumers, including all stages along the value chain. We envisage that the 'agricultural policy' dominating the debate today is replaced by a 'food policy' adding the much-needed systemic view. At the same time, national and regional flexibility should be maintained to account for different biophysical, agronomic, institutional and other situations.

- Second, to reach the target of 25 per cent organic area in 2030, the related structures along the whole value chain from input provision and processing to retailing need to be greatly strengthened and expanded. This will only be achieved if public and private actors along the value chain take responsibility. In public-private partnerships the organic industry could move beyond non-binding 'codes of conduct' to clear goal statements and implementation plans fitted to their respective sectors.
- Third, these steps can only be reached by educated and capable farmers, processors, traders, retailers etc.; it will be a mix of technical and social innovation that will mobilise people's creativity in the transformation processes. Recent elections at EU and national levels, with winning Green parties, show the growing support by society for such transformation processes to address environmental challenges; as do several public initiatives calling for more action against biodiversity loss (such as in different German Laender). This transformation is a task for the whole society, and can only happen if population-wide attitudes change; perceptions of what 'good food' consists of, what a 'healthy diet' means and what 'good agricultural practice' includes. Only then, will society as a whole will be open to invest in necessary changes to the food system. One key here is a strong engagement of the AKIS. Its proponents must be empowered to support all actors in the value chain in this process. This places a great responsibility on the Member States who need to equip their AKIS accordingly and educate advisors, researchers, knowledge brokers and others for the required change in attitudes and practice. With a view to the necessary comprehensive transformation, the AKIS should be extended to a *Food and Agricultural Knowledge and Innovation System*.

## Further Reading

- Aspenson, A. (2020). "True" costs for food system reform: an overview of true cost accounting literature and initiatives, John Hopkins University Center for a Livable Future. CLF Report: January 31, 2020
- Basso, B. and Antle, J. (2020). Digital agriculture to design sustainable agricultural systems. *Nature Sustainability*, 3(4): 254–256.
- Brunori, G., Barjolle, D., Dockes, A.-C., Helmle, S., Ingram, J., Klerkx, L., Moschitz, H., Nemes and G., Tisenkopfs, T. (2013). CAP Reform and Innovation: The Role of Learning and Innovation Networks. *EuroChoices*, 12(2): 27--33.
- European Union (2020) Farm to Fork Strategy. For a fair, healthy and environmentally-friendly food system. Available at: [https://ec.europa.eu/food/farm2fork\\_en](https://ec.europa.eu/food/farm2fork_en)



- Eyhorn, F., Muller, A., Reganold, J.P., Frison, E., Herren, H.R., Luttikholt, L., Mueller, A., Sanders, J., Scialabba, N.E.-H., Seufert, V. and Smith, P. (2019). Sustainability in global agriculture driven by organic farming. *Nature Sustainability*, 2(4): 253--255.
- FiBL (2020). *Area data on organic agriculture in Europe 2018. The Statistics.FiBL.org website maintained by the Research Institute of Organic Agriculture (FiBL)*, Frick, Switzerland. Available online at: <https://statistics.fibl.org/europe/key-indicators-europe.html>. Last accessed: 3 September 2020.
- Neumeier, S. (2017). Social innovation in rural development: identifying the key factors of success. *The Geographical Journal*, 183(1): 34–46.
- Seufert, V. and Ramankutty, N. (2017). Many shades of gray—The context-dependent performance of organic agriculture. *Science Advances*, 3(3): e1602638.

Heidrun Moschitz<sup>1</sup>, Adrian Muller<sup>1</sup>, Ursula Kretzschmar<sup>1</sup>, Lisa Haller<sup>2</sup>, Miguel de Porras<sup>2</sup>, Catherine Pfeifer<sup>1</sup>, Bernadette Oehen<sup>1</sup>, Helga Willer<sup>1</sup>, Hanna Stolz<sup>1</sup>.

<sup>1</sup>Socioeconomics Department, Research Institute of Organic Agriculture, Frick, Switzerland

<sup>2</sup> FiBL Europe, Brussels, Belgium

Contact author: Heidrun Moschitz. **Email** [heidrun.moschitz@fibl.org](mailto:heidrun.moschitz@fibl.org)

[Adrian.mueller@fibl.org](mailto:Adrian.mueller@fibl.org)

[Ursula.kretzschmar@fibl.org](mailto:Ursula.kretzschmar@fibl.org)

[Lisa.haller@fibl.org](mailto:Lisa.haller@fibl.org)

[Miguel.deporras@fibl.org](mailto:Miguel.deporras@fibl.org)

[Catherine.pfeifer@fibl.org](mailto:Catherine.pfeifer@fibl.org)

[Bernadette.oehen@fibl.org](mailto:Bernadette.oehen@fibl.org)

[Helga.willer@fibl.org](mailto:Helga.willer@fibl.org)

[Hanna.stolz@fibl.org](mailto:Hanna.stolz@fibl.org)

## Summary

The European Commission's Farm to Fork (F2F) Strategy sets ambitious targets to transform the whole food system towards greater sustainability, but we are critical about its strong focus on technical innovations while neglecting the social and structural aspects in transforming food systems. Also, the target of 25 per cent of EU's agricultural land under organic production by 2030 can only be reached if policy measures go beyond production to include processing and retail, and develop the demand side; otherwise, we could witness collapsing markets with strongly decreasing farm prices. An Organic Action Plan needs to include flexibility for implementation, accounting for the respective national situations; and specific objectives for each farming sector should be formulated. The strategy's call for a 'shift to healthy, sustainable diets' needs a comprehensive approach, involving all relevant stakeholders, such as processors, retailers and consumers to identify the most suitable leverage points and support changes in consumption patterns and habits. The Member States need to equip their AKIS accordingly and educate advisors, researchers, knowledge brokers and others for the required change in attitudes and practice. With view to the necessary comprehensive transformation, the AKIS should be extended to a *Food and Agricultural Knowledge and Innovation System*.

## **Pullquote**

“Attitudes and practices of all actors along the value chain need to change”.